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Everyday our nation's hospitals are providing exceptional care and service to their patients, families and communities. The **American Hospital Association's Hospitals in Pursuit of Excellence** strategy supports hospitals in accelerating performance improvement. Through this application, we are delighted to provide you **FREE** and easy access to multiple action guides that Hospitals in Pursuit of Excellence has produced over the last 2 years.

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Maulik Joshi

Maulik S. Joshi, Dr.P.H.
President, Health Research & Educational Trust
Senior Vice President of Research, American Hospital Association
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July 2011

Dear Colleague:

As you and your colleagues in America's hospitals and health systems are transforming your organizations to face the challenges and opportunities of our rapidly changing health care delivery system, the AHA has been pleased to support your efforts through our expanding *Hospitals in Pursuit of Excellence* (HPOE) initiative. This 2011 edition of **Hospitals in Pursuit of Excellence: A Compendium of Implementation Guides** builds on earlier efforts with new guides and resources that can help you design and implement the strategies that will take your organization to the next level of performance and achieve new heights in delivering care that is safe, timely, equitable, effective, efficient and patient-centered.

This new compendium includes resources to help you meet several new and ongoing challenges:

- Review steps for implementing a systematic improvement process for **reducing inappropriate variation** in clinical care in *Health Care Leader Action Guide: Understanding and Managing Variation*.

- Learn how "Top Box" organizations are simultaneously **improving quality and efficiency** in *Striving for Top Box: Hospitals Increasing Quality and Efficiency*.

- Learn key steps that you can take to develop a strategy for **reducing preventable mortality** in *Health Care Leaders Action Guide: Hospital Strategies for Reducing Preventable Mortality*.

- Learn proven and effective strategies for **reducing health care-acquired infections** through improved hand hygiene compliance from *Hand Hygiene Project: Best Practices from Hospitals Participating in the Joint Commission Center for Transforming Healthcare Project*.

- Identify successful practices for expanding your organization's commitment to **employee health and wellness** in *A Call to Action: Creating a Culture of Health*.

- Enhance your organization's ability to collect and use patient race, ethnicity, and primary language data to design and implement strategies to **reduce disparities in care** with *Improving Health Equity Through Data Collection AND Use: A Guide for Hospital Leaders*.

- Raise the importance of **cultural competence** in the delivery of care across your organization by reviewing the key action steps in *Building a Culturally Competent Organization: The Quest for Equity in Health Care*.

- Use *A Guide to Financing Strategies for Hospitals - With Special Consideration for Smaller Hospitals* to evaluate various strategies for maintaining and expanding your organization's **access to capital**—especially for smaller organizations, but relevant to all organizations.

Also included are the executive summaries of several 2010 guides that address such ongoing challenges as readmissions, health information technology, and the health care workforce, as well as our popular Research Synthesis Reports on bundled payment, medical homes and accountable care.

As you continue to meet the challenges of delivery system transformation and reform, the AHA will continue to support your efforts through *Hospitals In Pursuit of Excellence* and our ongoing policy work. Be sure to visit www.hpoe.org for the full set of improvement resources. The AHA website (www.aha.org), *AHA News* and *AHA NewsNow*, along with *H&HN Daily* and *H&HN,* will keep you apprised of overall developments and offer access to new resources and insights from *Hospitals In Pursuit of Excellence*. Educational programs such as the Health Forum/AHA Leadership Summit and HPOE webinars will help bring to life the lessons learned and practices from the guides and reports.

Thank you for all you do every day to pursue excellence in America's hospitals and health systems.

Sincerely,

Rich Umbdenstock
President and CEO

Hospitals in Pursuit of Excellence: A Compendium of Implementation Guides
2011 Edition

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INTRODUCTION

As hospitals and health systems continue to accelerate their efforts to transform care delivery systems to meet the nation's goals for improved quality, increased efficiency, enhanced satisfaction and reduced costs, the American Hospital Association continues to support the field through *Hospitals in Pursuit of Excellence* (HPOE). HPOE is the AHA's strategic platform to accelerate performance improvement and delivery system transformation in the nation's hospitals and health systems. HPOE provides education on best practices through multiple channels, develops evidence-based tools and guides, provides leadership development through fellowships and networks, and engages hospitals in national improvement projects. Working in collaboration with allied hospital associations and national partners, HPOE synthesizes and disseminates knowledge, shares proven practices, and spreads innovation to support care improvement at the local level.

This 2011 edition of ***Hospitals in Pursuit of Excellence: A Compendium of Implementation Guides*** includes the latest HPOE guides on equity, variation, health and wellness, patient safety, and financing. Together with the AHA's recent series of Research Synthesis Reports and the executive summaries of the 2010 HPOE guides, this collection provides a wealth of resources that can help you design and implement the strategies that will take your organization to the next level of performance and achieve new heights in delivering care that is safe, timely, equitable, effective, efficient and patient-centered.

With wellness being a critical component of health system transformation, the leadership position of hospitals and health systems and their employees as role models for healthy living and fitness is more important than ever before. ***A Call to Action: Creating a Culture of Health*** is a bold call to action for hospitals and their employees to be leaders in creating a culture of health. This report highlights current practices in promoting hospital employee health and wellness, gives examples of promising practices, and provides how-to recommendations to the field.

As recent data point out, health disparities – from access to care to health outcomes – continue to disproportionately affect a growing segment of our population. While recent reports show some progress in reducing disparities, there is still much work to be done. Being culturally competent – providing care to patients with diverse values, beliefs and behaviors, and tailoring care delivery to meet patients' social, cultural and linguistic needs – is essential to reducing health disparities. And with value-based purchasing and penalties for readmissions, the ability to provide culturally competent care will directly impact the quality of care to your population and your financial bottom line. **Building a Culturally Competent Organization: The Quest for Equity in Health Care** explores several steps that hospital leaders should take to improve cultural competence in the hospital and improve the overall quality, efficacy and equity of care it delivers to its community. As data is an essential component for these efforts, ***Improving Health Equity through Data Collection AND Use: A Guide for Hospital Leaders*** explores key strategies that hospitals have adopted to collect and use race, ethnicity, and primary language data about their patients in efforts to overcome disparities in care.

As hospitals and health systems begin to develop their strategies for value-based purchasing and upcoming Medicare payment provisions related to readmissions and hospital-acquired conditions, they are making major investments in the development of more aggressive approaches to patient safety improvement and the reduction of medical errors. ***Hand Hygiene Project: Best Practices from Hospitals Participating in the Joint Commission Center for Transforming Healthcare Project*** explores several strategies that all hospitals can implement for improving hand hygiene compliance and reducing hospital-acquired infections. The ***Health Care Leader Action Guide: Hospital Strategies for Reducing Preventable Mortality*** provides a broad overview of key steps that hospital and health system leaders should take in developing an organization-wide strategy for reducing preventable mortality.

A key competency for effectively managing quality and efficiency is the ability to identify and manage inappropriate variation in the delivery of health care services. Variation arises from many interrelated factors, some within and some beyond the control of the health care system. Not all variation is undesirable or inappropriate. Distinguishing among the types of variation to determine what is acceptable and what is not is critical to arriving at a reasonable set of recommendations for action. The ***Health Care Leader Action Guide: Understanding and Managing Variation*** includes practical steps to understanding and managing variation and a list of best practices and case studies as examples and resources for hospital leaders to use for implementing key interventions. Reducing variation is a key goal of the health care organizations profiled in ***Striving for Top Box: Hospitals Increasing Quality and Efficiency***. This guide explores action steps for organizations that are seeking to improve both quality and efficiency simultaneously and achieve "Top Box" performance.

Access to external capital has become more important than ever for hospitals nationwide as reform and market changes are accelerating hospitals' need for capital to fund physician employment and integration, information technology, care coordination strategies, facility modernization and expansion, and other initiatives. ***A Guide to Financing Strategies for Hospitals - With Special Consideration for Smaller Hospitals*** explores several strategies that can help hospitals achieve the best possible capital access despite recent economic and industry trends.

With the creation of the Center for Medicare & Medicaid Innovation and the release later this year of the final rule for the Medicare Shared Savings Program that encourages the voluntary formation of accountable care organizations, hospital and health systems are carefully studying the results of recent CMS pilot projects and other private sector initiatives for direction on new models for care delivery and payment. The three ***AHA research synthesis reports on bundled payment, accountable care organizations and patient-centered medical homes*** provide important background on these concepts, summarize key conclusions learned from recent pilot projects and initiatives, and offer key questions that should be considered by hospital and health system leaders when contemplating participation in upcoming demonstration programs and initiatives. ***Early Lessons from the Acute Care Episode Demonstration*** provides an overview and summary of lessons learned to date from the CMS Acute Care Episode (ACE)

Demonstration, a CMS pilot project to test the effect of bundling Part A and B payments for episodes of care on the coordination, quality, and efficiency of care.

We are pleased to present ***Hospitals in Pursuit of Excellence: A Compendium of Implementation Guides*** as a useful resource to help guide hospital and health system leaders as they develop and execute strategies that will lead to future success. While the impact of reform and transformation may seem daunting and troubling, it is our firm belief that hospitals and health systems will find numerous opportunities to take charge of their future and lead the way toward the development of health care delivery systems that provide safer, more efficient, and effective care.

To download the materials in this HPOE compendium as well as other related resources, please visit www.hpoe.org.

A Call to Action: Creating a Culture of Health

January 2011

A report of the AHA Long-Range Policy Committee:

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Acknowledgments

The AHA Long-Range Policy Committee would like to acknowledge the following organizations and individuals for their invaluable assistance in the committee's work.

- American Society for Healthcare Human Resources Administration for promoting committee survey
- Brian Burns, Blue Cross Blue Shield of Kansas City, for presenting at April 2010 committee meeting
- Bernadette Harrity, Truman Medical Centers, for presenting at July 2010 committee meeting
- Fikry Isaac, MD, Johnson & Johnson, for presenting at April 2010 committee meeting
- Adrian Mason, tai chi instructor, for presenting at July 2010 committee meeting
- Kevin Van Dyke, Health Research & Educational Trust, for drafting committee report

Suggested Citation

American Hospital Association. 2010 Long-Range Policy Committee, John W. Bluford III, chair. *A Call to Action: Creating a Culture of Health.* Chicago: American Hospital Association, January 2011.

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An appendix contained detailed best practices, survey results and endnotes can be found at:
http://www.hret.org/whatsnew/projects/call-to-action-creating-a-culture-of-health.shtml

Executive Summary

Purpose

In 2010, as an extension of the American Hospital Association's (AHA) *Health For Life: Better Health. Better Health Care* roadmap for improving America's health care system, the AHA's Long-Range Policy Committee (LRPC) focused on the "Wellness" pillar by identifying emerging, successful practices in hospital employee health and wellness. The importance of this topic is evident in the critical role hospitals play in their communities, the financial case for creating a culture of health, the national set of public health goals found in Healthy People 2020, and the incentives to become accountable for overall population health found in the Affordable Care Act of 2010.

This report is a bold **call to action for hospitals to be leaders in creating a culture of health.** To meet this purpose, this report highlights current practices that hospitals use today with their own employees, gives examples of promising practices, and provides how-to recommendations to the field as we continue to be leaders of health in our communities.

Background

The AHA LRPC embarked on the important issue of health and wellness in January 2010. LRPC members shared their organizations' current programs and their own thoughts on promoting employee health and wellness and expanding programs to their communities. Members also heard from two external best practice organizations, Johnson & Johnson and BlueCross BlueShield of Kansas City, and fielded a survey of all hospitals to identify current and emerging best practices.

The LRPC members noted from their own employee health and wellness experiences that:

- A **range of programs** are being offered such as tobacco-free campuses, health risk assessments, Weight Watchers "Biggest Loser" programs, gym member discounts, updated cafeteria menus, and altered premium discounts based on participation.
- **Little ROI data** has been compiled to date, and most programs are less than three years old.
- **Engaging all employees** in health and wellness (i.e., getting participation from the high-risk /high-ROI populations and not just the "gym rats") is a challenge.
- **Leadership commitment** that demonstrates values and encourages staff participation is critical to success.
- Moving toward a "culture of health" and **population health management**, rather than a program-by-program approach, is essential.

The external speakers stressed the importance of creating a culture of health. Key elements needed to create this culture include:

- Leadership and commitment
- A comprehensive set of programs
- Ongoing promotion and communication
- Participation and outcome metrics
- Use of both "carrots" and "sticks" as incentives

The survey results from 876 hospitals indicated that, while most hospitals have a wellness program, there is a wide variety of hospital program offerings. Most hospitals offer health risk assessments, but more intensive one-on-one activities such as personal health coaching and a 24-hour nursing hotline are rare. The results also show that employee participation levels in wellness programs could be improved at most hospitals.

One of the top motivators for hospitals to improve their health and wellness programs is to provide an example of health to the community. Many hospital wellness programs face financial constraints and limitations that inhibit sustainability. The survey results show that one of the biggest challenges to employee health and wellness programs is motivating employees over time.

Most hospitals currently use more participation incentives than incentives based on program completion or outcomes. A sizable minority of hospitals do not currently use incentives, and very few hospitals use negative incentives. While many hospitals use participation measures such as the number of overall participants to evaluate the impact of their health and wellness programs, fewer use outcome measures, such as the number of employees with cholesterol improvement.

The survey results also demonstrate that while most hospitals struggle to measure return on investment (ROI), those that have effectively measured ROI show positive results. The literature and case studies show that demonstrating positive ROI usually takes several years.[1] Most hospitals are currently only collecting the data necessary to measure overall direct health care costs. Fewer hospitals are looking at health care costs for specific subpopulations or at employee productivity metrics such as absenteeism or presenteeism (i.e., employees who perform below capability due to illness).

Recommendations to the Field

Based on the literature, survey results, and highlighted best practices, the AHA makes the following seven recommendations to the field:

[1] Ha T. Tu and Ralph C. Mayrell, "Employer Wellness Initiatives Grow, But Effectiveness Varies Widely," National Institute for Health Care Reform Research Brief No. 1, July 2010: 1-13, http://www.nihcr.org/Employer-Wellness-Programs.pdf

Qualitative Health and Wellness Dashboard

Recommendation	Goal/Action Steps	Examples of How Hospitals Can Meet This Goal
Recommendation 1: Serve as a Role Model of Health for the Community	As part of fulfilling their mission, hospitals are beacons of trust in the community. Hospitals must create robust health and wellness programs as examples to the communities that they serve.	Hospitals can work with local employers to build an integrated, regional approach to health and wellness that shares both risks and rewards.
Recommendation 2: Create a Culture of Healthy Living	Improving employee health is more than implementing individual programs. Hospitals need to strive for a culture of healthy living for all employees, which starts at the top with the CEO and the board of trustees. Wellness should be a strategic priority for the hospital.	Health and wellness indicators can be included in dashboards, and executive compensation can be linked to meeting wellness program objectives. Hospitals can eliminate environmental inconsistencies (e.g., unhealthy foods at meetings).
Recommendation 3: Provide a Variety of Program Offerings	While health and wellness is more than a set of activities, it is important for hospitals to offer a variety of activities to promote health within their organizations.	Hospital wellness programs can include a health risk assessment (HRA), a biometric screening, and at least one intensive coaching activity, based on the risks and health status of its employees.
Recommendation 4: Provide Positive and Negative Incentives	Positive and negative incentives are effective in improving health and wellness program participation levels. Hospitals can use incentives to increase participation and to improve outcomes.	Hospitals can expand the use of incentives in order to improve participation levels. As participation levels increase, hospitals can begin to shift toward more outcomes-based incentives.
Recommendation 5: Track Participation and Outcomes	To track the success of their health and wellness programs, hospitals must first measure and increase participation and then build systems to track outcomes.	Hospitals can track participation and outcome targets (e.g., overall participants, number completing an HRA, number enrolled in a smoking cessation program, and number with cholesterol improvement).
Recommendation 6: Measure for ROI	A strong financial case accompanies the strategic case of striving for robust health and wellness programs. In order to achieve ROI, hospitals must first commit to effectively measuring ROI over several years.	Hospitals can ensure a multi-year commitment to evaluation and improvement. Hospitals can use both health care cost savings and savings due to improvements in productivity (e.g., presenteeism and absenteeism).
Recommendation 7: Focus on Sustainability	For program effectiveness, hospitals must motivate employees over time, effectively communicate, and constantly reinforce wellness as a leadership priority.	Hospital boards, CEOs, and full executive teams can communicate wellness as a long-term priority for the hospital and ensure that wellness programs have dedicated resources.

Introduction

What are Health and Wellness Programs?

Though programs vary greatly, for this report we define employee health and wellness programs to include some combination of risk identification tools, behavior modification programs, educational programs, and changes to the work environment.[2]

A robust wellness program will also be integrated with the strategic goals of the organization, supported by strong incentives for participation, and backed by a strong multi-year financial commitment to sustainability. A strong program also will have senior leadership support and include robust measures that gauge program success.

Why Health and Wellness?

In 2010, as an extension of the American Hospital Association's *Health For Life: Better Health. Better Health Care* roadmap for improving America's health-care-system "Focus on Wellness" pillar, the AHA's Long-Range Policy Committee (LRPC) focused on identifying emerging practices in hospital employee health and wellness. The importance of this topic is evident in the critical role hospitals play in their communities, in the financial case for creating a culture of health, in the national set of public health goals found in Healthy People 2020, and in the incentives to be accountable care organizations as described in the Affordable Care Act of 2010.

Hospitals and the Community

Hospitals and health systems and their employees are critical loci in their communities because of their leadership and mission. It is paramount for hospital and health system employees to lead the way and serve as role models for healthy living and fitness for their communities. Hospital health and wellness strategies and tactics are crucial to providing the environment, resources, programs, and incentives for hospital employees to serve as such role models.

[2] Ha T. Tu and Ralph C. Mayrell, "Employer Wellness Initiatives Grow, But Effectiveness Varies Widely," National Institute for Health Care Reform Research Brief No. 1, July 2010: 1-13, http://www.nihcr.org/Employer-Wellness-Programs.pdf

Financial Rationale

Overall, U.S. businesses could save $1 trillion in health benefits over the next decade through employee health and wellness programs.[3] Personnel costs are the largest expense associated with health care, and a stable, high-quality health care workforce has been shown to be essential to efficient and effective health care delivery.[4] Hospitals that self-insure have even more financial incentives in improving the health of their employees.

A recent meta-analysis of existing peer-reviewed literature on costs and savings associated with workplace disease prevention and wellness programs in whole has demonstrated significant ROI. Across all studies, costs fall about $3.27 for every dollar spent on wellness programs, and absenteeism costs fall by about $2.73 for every dollar spent on wellness programs. Overall, the literature shows that building incentives into wellness programs likely helps to raise participation among employees.[5]

In addition, wellness can be used as an effective recruitment and retention tool to address long-term provider shortages. A global comparative study of workplace wellness programs in 15 countries found that employees are 8 times more likely to be engaged when wellness is a priority in the workplace and 1.5 times more likely to stay with their organization if health and wellness are actively promoted. Wellness is essential to employee engagement, organizational productivity, talent retention, and creativity and innovation.[6]

Healthy People 2020, Health Reform, and Beyond

Finally, Healthy People 2020 provides a national framework and set of important goals for the health of our nation. The Affordable Care Act of 2010 (ACA) builds on the Healthy People framework to establish the National Prevention, Health Promotion and Public Health Council, which will coordinate and lead the activities of more than a dozen federal agencies.[7]

The ACA also includes various incentives to promote employee health and wellness programs. For example, beginning in fiscal year 2011, the legislation provides incentives for small businesses and organizations to offer comprehensive workplace wellness programs that include health awareness, employee engagement, behavioral change, and a supportive environment. The newly created Prevention and Public Health Fund will invest $12.9 billion over the next 10

[3] Dan Hieb, "Healthways: Businesses could save nearly $1 trillion through wellness programs," *Nashville Business Journal*, 9 Jun. 2010, http://www.bizjournals.com/nashville/stories/2010/06/07/daily16.html
[4] Linda H. Aiken, Sean P. Clarke, Robyn B. Cheung, Douglas M. Sloane, and Jeffrey H. Silber, "Educational Levels of Hospital Nurses and Surgical Patient Mortality," *The Journal of the American Medical Association*, Vol. 290: 1617-1623 (2003).
[5] Katherine Baicker, David Cutler, and Zuri Song, "Workplace Wellness Programs Can Generate Savings," *Health Affairs,* Vol. 29, No. 2: 304-311 (February 2010).
[6] Alistair Dornan, "The Wellness Imperative: Creating More Effective Organizations," World Economic Forum in partnership with Right Management (A Manpower Company), 2010, http://www.weforum.org/pdf/Wellness/RightMgmt-Report.pdf
[7] Howard K. Koh and Kathleen G. Sebelius, "Promoting Prevention through the Affordable Care Act," *The New England Journal of Medicine*, 25 Aug. 2010, http://healthpolicyandreform.nejm.org/?p=12171

years in health, prevention, and public health programs.[8] In addition, the ACA incentivizes prevention, an important component of wellness, by requiring group health plans and private health insurers offering group or individual health insurance to cover recommended preventive services, immunizations, and other screenings with zero enrollee cost sharing.[9]

Finally, the ACA also includes incentives for hospitals to become accountable for the care of a defined population.[10] For hospitals interested in testing accountable care organizations, wellness is an important ingredient to achieving better health for their communities.

Purpose

To meet the goals of Health For Life and the unprecedented opportunities created by the ACA, this report is intended to be a bold call to action for hospitals and their employees to be leaders in creating a culture of health. To meet this purpose, the report highlights current practices, gives examples of promising practices, and provides how-to recommendations to the field.

[8] *Patient Protection and Affordable Care Act*, Sections 10408 and 4002, United States Public Law 111–148, 23 Mar. 2010, 124 Stat. 119, http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/pdf/PLAW- 111publ148.pdf

[9] *Patient Protection and Affordable Care Act*, Section 2713, United States Public Law 111–148, 23 Mar. 2010, 124 Stat. 119, http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/pdf/PLAW- 111publ148.pdf

[10] *Patient Protection and Affordable Care Act*, Section 3022, United States Public Law 111–148, 23 Mar. 2010, 124 Stat. 119, http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/pdf/PLAW- 111publ148.pdf

Approach

To inform its recommendations to the field, the committee received feedback on the current state of hospital health and wellness programs and promising practices via two primary mechanisms:

Hospital Survey

From May to June 2010, the AHA surveyed all U.S. hospitals with an online and paper-based instrument about their employee health and wellness activities. Survey categories included wellness programs and initiatives; employee participation; use of incentives; evaluation and measurement; challenges; opportunities and motivators; and leadership assessment. Survey questions were multiple-choice restrictive, multiple-choice nonrestrictive, and scale ranking, and each question included a comment field. Survey questions were pretested with eight hospital human resource and wellness leaders. The AHA, several state hospital associations, and the American Society for Healthcare Human Resources Administration (ASHHRA) helped to promote the survey. Eight hundred and seventy-six (876) hospital human resource leaders, CEOs, and wellness leaders participated in the survey. Results were analyzed independently for accuracy by two researchers. Overall, respondents were nationally representative of all hospitals in terms of hospital size (number of beds), teaching status, and census region. Urban hospitals (65% of respondents versus 56% nationally) and hospitals that were members of a health system (56% versus 49%) were slightly overrepresented in the sample.

Speakers and Interviews

At its March 2010 in-person meeting, the committee invited two organizations to present their innovative health and wellness programs: Johnson & Johnson and BlueCross BlueShield of Kansas City. In addition, committee staff interviewed seven hospitals and health systems identified inductively through the survey process about their health and wellness activities. Phone interviews of 30 to 60 minutes were conducted with one to two individuals from each hospital. Each interview covered a specific best practice in depth, as identified through the survey process.

Findings

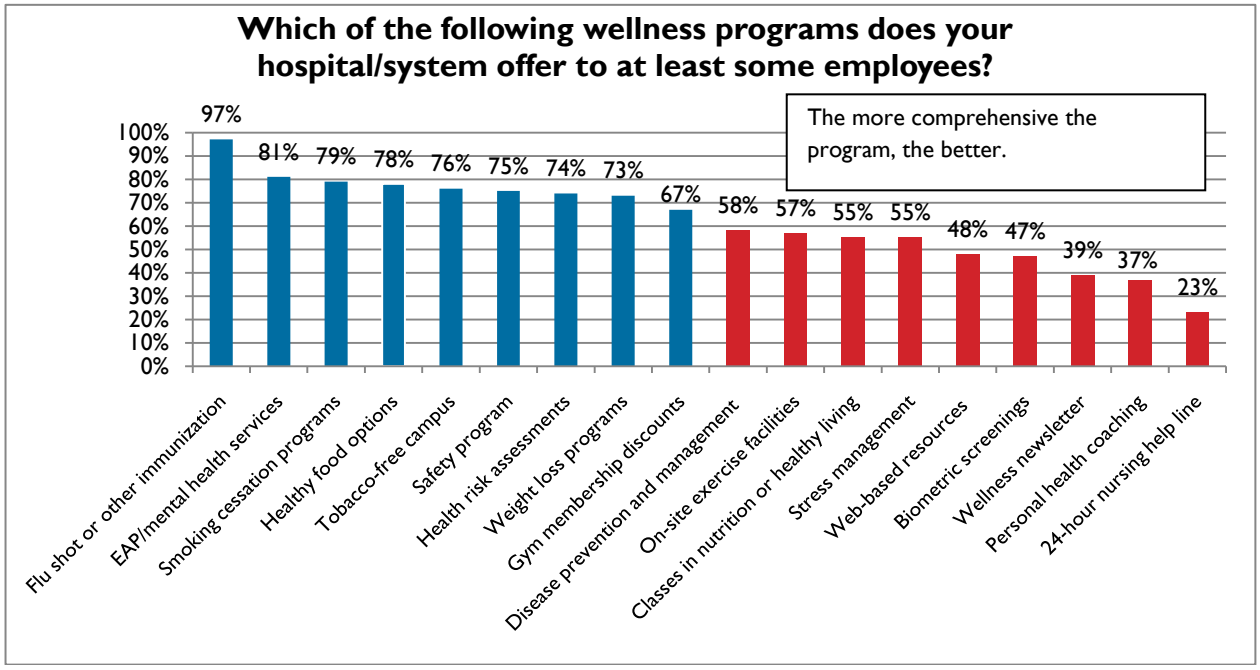
Overall, 86% of hospitals have an employee health and wellness program. Of these programs, 80% are directly administered by the hospital or health system.

Motivators

Hospitals cite a number of reasons for offering health and wellness programs. The most important motivator reported is reducing health care costs (mean of 8.92 on a scale of 1-10, with 10 indicating the most important motivator). Also reported as important motivators are improving the health of employees and reducing absenteeism/presenteeism (8.53), improving employee morale and productivity (8.40), and providing an example to the community (8.18).

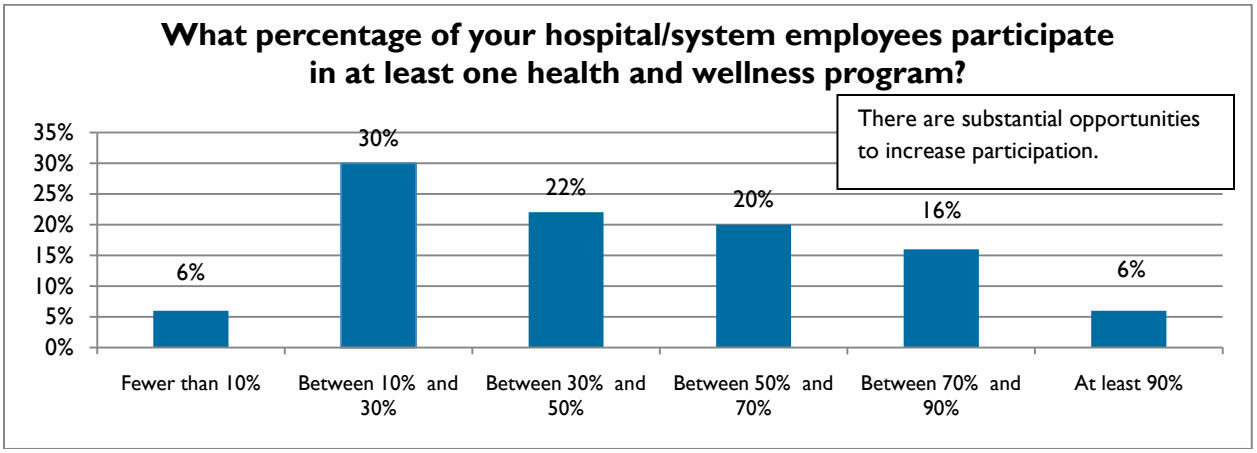
Program Offerings

Overall, hospitals offer a wide variety of health and wellness programs for their employees. Nearly all hospitals offer flu shots or other immunizations. A large majority of hospitals also offer EAP/mental health services, healthy food options in cafeterias and vending machines, a tobacco-free campus, a safety program to reduce workplace accidents, health risk assessments, weight loss programs, and gym membership discounts. About half of hospitals offer disease prevention and management programs, on-site exercise facilities, classes in nutrition or healthy living and stress management, web-based resources for healthy living, and biometric screenings. Only a minority of hospitals offer one-on-one activities such as personal health coaching and a 24-hour nursing help line. Overall, urban hospitals, hospitals with more than 200 beds, and hospitals that are members of systems are more likely to offer more intensive, behavioral-based interventions. Programs offered by at least two-thirds of hospitals are in blue below.



Participation Levels

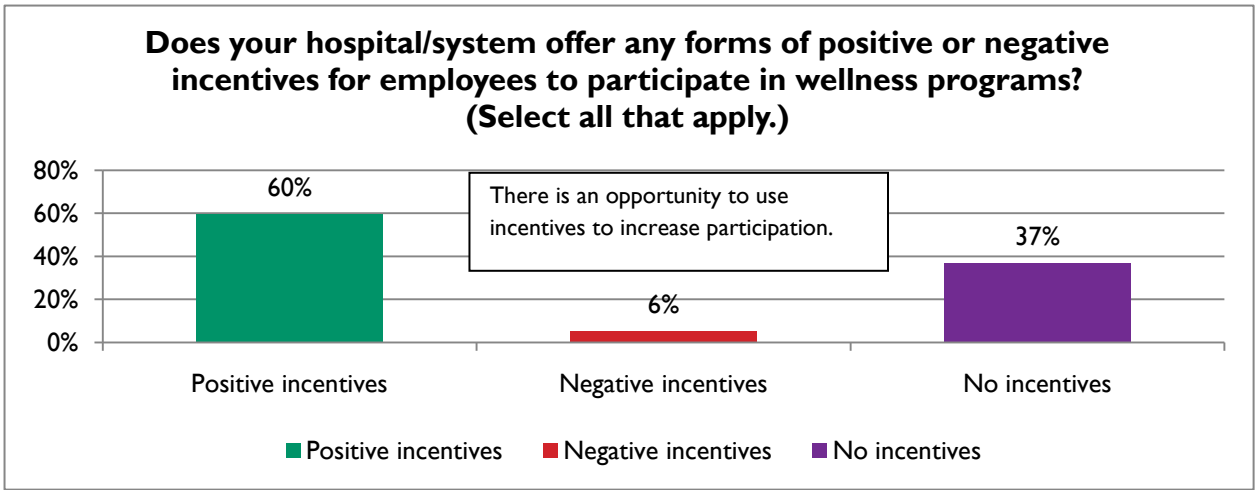
There is a wide variation in the percentage of hospital employees participating in health and wellness programs. While 30% of hospitals with wellness programs report that between 10% and 30% of their employees participate in at least one health and wellness program, 42% of hospitals report that at least half of their employees participate in one or more programs.



In addition, 77% of hospitals with wellness programs offer at least some wellness benefits to spouses, significant others, and/or dependents, and 19% of hospitals offer their health and wellness programs to the community; the majority of these hospitals do not charge for this service.

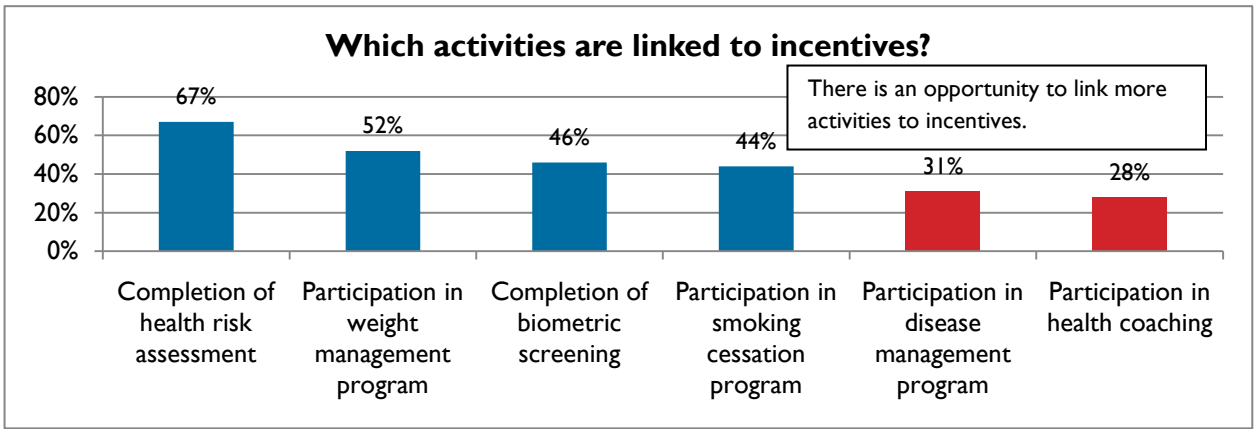
Incentives

To encourage participation, hospitals promote their wellness programs through health fairs (76%), health risk assessments (70%), and incentives (66%). The overwhelming majority of hospitals that offer incentives use positive incentives such as health insurance premium discounts or gift cards.

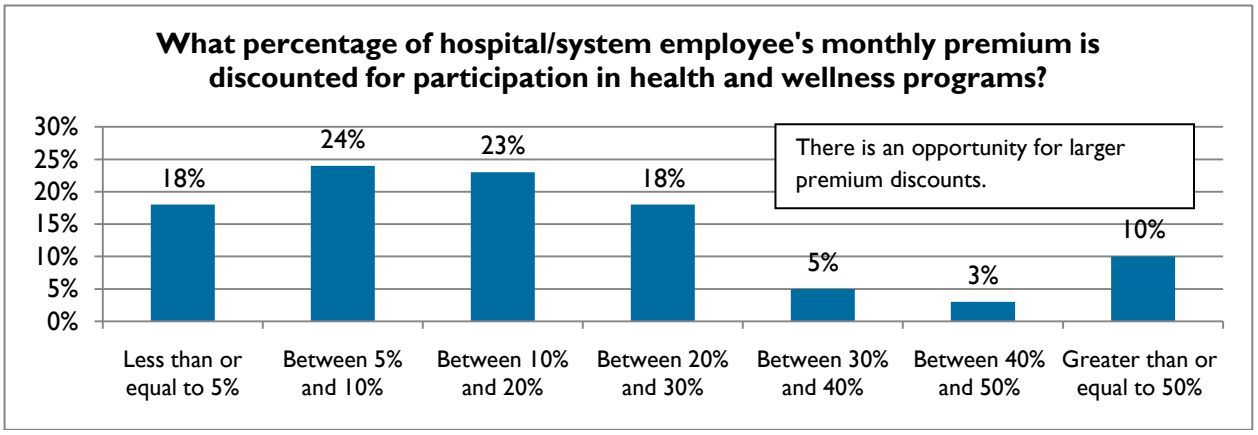


To meet wellness incentives, most hospitals require that employees participate in at least one wellness program (76%). Many hospitals also offer incentives for employees who complete a wellness program (50%) and achieve outcomes based on participation (39%).

Activities commonly linked to incentives include the completion of a health risk assessment, participation in a weight management or smoking cessation program, and completion of a biometric screening. Hospitals with more than 200 beds are more likely to utilize incentives. The most common activities linked to incentives are shown in blue below.



On average, slightly less than half (47%) of hospitals that use incentives discount between 5% and 20% of an employee's monthly premium for participating in health and wellness programs.

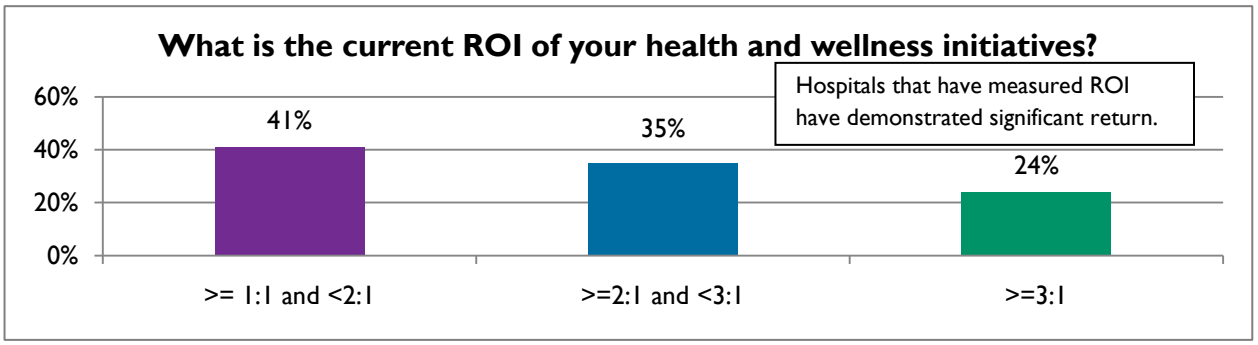


Thirty-three percent (33%) of hospitals that use incentives award employees who meet health and wellness incentives between $100 and $300 annually. An additional 41% of hospitals award $100 or less.

The median amount given to hospital employees for meeting participation incentives is $250 for hospitals that offer lower health insurance deductibles, $225 for yearly health savings account contributions, $150 for yearly subsidized health club membership, $50 for gift cards/ travel/merchandise/cash, $25 for monthly insurance premium discounts, and $10 for small tokens.

Costs/Benefits

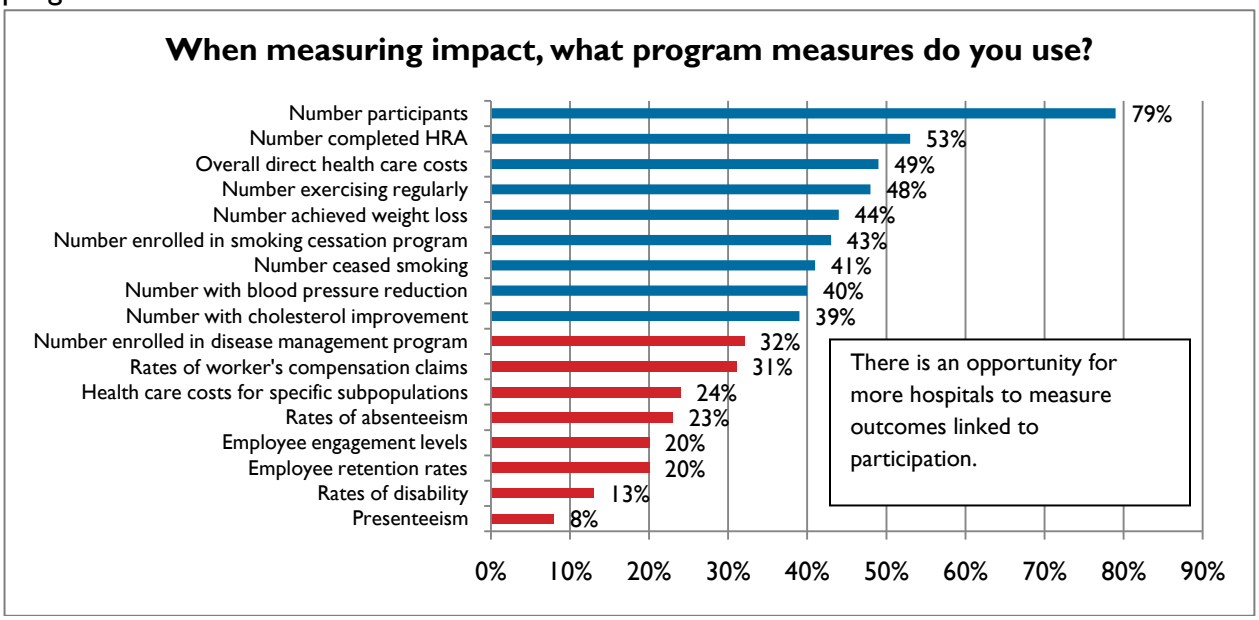
Overall, one-third of hospitals have made an attempt to measure the return on investment (ROI) of employee health and wellness programs, and only 7% have successfully measured ROI. Urban hospitals, hospitals with more than 200 beds, and hospitals that are members of a system are more likely to have attempted to measure ROI. Of those who claimed to have successfully measured ROI, the current ROI of health and wellness initiatives is distributed fairly evenly with a median between 2:1 and 3:1.



Eighty-two percent (82%) of respondents who measure ROI report that their ratio is equal to or exceeds expectations.

Measurement

Hospitals use a number of participation and outcome measures to evaluate the impact of their health and wellness initiatives. While many hospitals use participation measures or measures linked to overall direct health care costs, fewer hospitals look at health care costs for specific subpopulations or at employee productivity and engagement metrics. The most common program measures are shown in blue below.



Challenges to Adoption

Overall, hospitals note a number of challenges to program effectiveness. Motivating employees over extended time periods, financial restrictions or limitations, measuring program effectiveness, and creating a culture of health are noted as the most serious challenges. Urban hospitals and hospitals with more than 200 beds find it more challenging to communicate to their employees about health and wellness activities.

Challenges	**Mean Response (1-10)** *10 = Insurmountable Barrier*
Motivating employees over extended time periods	**6.71**
Financial restraints or limitations	**6.47**
Measuring program effectiveness	**6.45**
Creating a culture of health	**6.07**
Obtaining employee health information	4.78
Communicating with employees	3.97

Opportunities

Given that most hospitals do not measure ROI, it is not surprising that hospitals report getting better ROI data as the most important opportunity for improving health and wellness programs. Additional opportunities include providing more incentives to employees, providing new programs, and providing different types of incentives.

Opportunities	**Mean Response (1-10)** *10 = Most Important Opportunity for Organization*
Getting better ROI data	**7.37**
Providing more incentives to employees	**7.00**
Providing new programs to employees	**6.90**
Providing different types of incentives to employees	**6.85**

Leadership Commitment

Overall, respondents moderately agree that their senior leadership teams and boards of trustees view employee health and wellness programs as a vital tool for improving the health of their employees (7.91 and 7.26, respectively, with 10 representing strongly agree) and as an important factor in improving the health of their communities (7.64 and 7.12, respectively). Respondents are less confident that their employees see the value of improving their health as setting an example for the community (6.57).

Best Practices

Below is a sample of hospital health and wellness best practices. More detailed information is provided in Appendix A and can be found on the AHA Hospitals in Pursuit of Excellence website (www.hpoe.org).

Incentivizing Wellness: Truman Medical Centers

In July 2010, Truman Medical Centers implemented a "PTO for Wellness" program that allows employees to trade up to $1,800 in paid time off (PTO) hours for reimbursements for wellness-related expenses. With this program, Truman is able to infuse a projected $200,000 annually into employees' personal wellness investments, at no additional cost to the system. Truman's leaders stress the importance of giving employees a choice in how they use their benefits to meet their wellness goals and removing as many obstacles to wellness as possible.

Incentivizing Wellness: Ochsner Health System

Ochsner offers a voluntary wellness program with a significant insurance premium discount of about $500 for an employee and $2,000 for a family. Currently, 82% of employees participate in the health and wellness program. With 40-plus locations and employees with various educational levels and computer access capabilities, Ochsner finds that communication is the largest obstacle to program success.

Mission, Demonstrating ROI, and Incentivizing Health: Sentara Healthcare

In 2008, Sentara Healthcare implemented Mission: Health, an incentive-based wellness and disease management program. After two years, overall health care cost trends have lowered significantly, outcome measures have improved dramatically, and the estimated ROI is 6:1. Tying the program to Sentara's mission of health and creating significant participation incentives have been paramount to program success.

Mission and the Community: Saint Elizabeth's Medical Center

Saint Elizabeth's Medical Center has built a robust wellness program that includes a myriad of wellness offerings for staff and family members. Prevention efforts are paying off as measured by growing participation rates and overall improvement in health status. Between 2005 and 2010, Saint Elizabeth's wellness program participants realized an 11% improvement in biometric

screening levels. Its wellness committee plans, implements, and evaluates health promotion activities. The committee stresses the importance of gaining administrative support, integrating wellness initiatives into its strategic plan, and continually enhancing and improving services to meet the needs of its workforce. As the largest employer in its community, Saint Elizabeth's Medical Center tests and trials its internal wellness interventions in an effort to share resources and knowledge with other local and area employers. In doing so, Saint Elizabeth's is fulfilling its mission and improving the overall health of its community.

Demonstrating ROI: HCA

In 2008, HCA launched a diabetes pilot program at several campuses with individualized diabetes management with a certified diabetes educator. HCA calculated ROI in multiple ways, with a focus on clinical outcomes and claims-reduction data. After two years, average annual claims costs of participants were $664 less than the average claims costs of nonparticipants in a matched group. HCA cautions that hospitals should clearly define how they will measure ROI before implementing a wellness program.

Partnering with the Community: Henry Ford Health System

In 2007, Henry Ford Center for Integrative Wellness implemented an interventional, randomized, controlled trial with Chrysler employees having chronic back pain. This group wellness program eliminated back pain for 55% of participants. Group programs have now been offered to over 1,400 people at corporations and various community organizations. Henry Ford is currently developing a comprehensive health and wellness package to offer to all local employers and to community groups. Devoting significant time to data-collection methodology at the beginning was vital to accurately capturing program successes.

Recommendations

Based on the literature, survey results, and best practices, the AHA makes seven recommendations to the field. For each recommendation, the rationale is given for selection along with the specifics of how hospitals can apply the recommendation to improve their wellness program activities.

Recommendation 1: Serve as a Role Model of Health for the Community

Goal/Action Steps:

As part of fulfilling their mission, hospitals are beacons of trust in the community. Hospitals must create robust health and wellness programs as examples to the communities that they serve.

Examples of How Hospitals Can Meet This Goal:

Hospitals can work with local employers to build an integrated, regional approach to health and wellness that shares both risks and rewards.

Recommendation 2: Create a Culture of Healthy Living

Goal/Action Steps:

Improving the health of employees is more than implementing individual health and wellness programs or activities. Hospitals need to strive for a culture of healthy living for all employees, which starts at the top with the CEO and the board of trustees. Wellness should be a strategic priority for the hospital.

Examples of How Hospitals Can Meet This Goal:

Health and wellness indicators can be included in board dashboards, and executive compensation can be linked to meeting health and wellness program objectives. Hospitals can eliminate environmental inconsistencies (e.g., unhealthy foods at meetings).

Recommendation 3: Provide a Variety of Program Offerings

Goal/Action Steps:

While health and wellness is more than a set of activities, it is important for hospitals to offer a variety of activities to promote health within their organizations.

Examples of How Hospitals Can Meet This Goal:

Hospital wellness programs can include a health risk assessment, a biometric screening, and at least one intensive coaching activity, based on the risks and health status of its employees.

Recommendation 4: Provide Positive and Negative Incentives

Goal/Action Steps:

Positive and negative incentives are effective in improving health and wellness program participation levels. Hospitals can use incentives to increase participation and to improve outcomes.

Examples of How Hospitals Can Meet This Goal:

Hospitals can expand the use of incentives to improve participation levels. As participation levels increase, hospitals can begin to shift toward more outcomes-based incentives.

Recommendation 5: Track Participation and Outcomes

Goal/Action Steps:

To track the success of their health and wellness programs, hospitals must first measure and increase participation and then build systems to track outcomes.

Examples of How Hospitals Can Meet This Goal:

Hospitals can track participation and outcome targets (e.g., overall participants, number completing an HRA, number enrolled in a smoking cessation program, and number with cholesterol improvement).

Recommendation 6: Measure for ROI

Goal/Action Steps:

A strong financial case accompanies the strategic mission of striving for robust health and wellness programs. To achieve ROI, hospitals must first commit to effectively measuring ROI over several years.

Examples of How Hospitals Can Meet This Goal:

Hospitals can ensure a multi-year commitment to measurement, evaluation, and improvement. When measuring ROI, hospitals can use both health care cost savings and savings due to improvements in productivity (e.g., presenteeism and absenteeism).

Recommendation 7: Focus on Sustainability

Goal/Action Steps:

For program effectiveness, hospitals must motivate employees over time, effectively communicate, and constantly reinforce wellness as a leadership priority.

Examples of How Hospitals Can Meet This Goal:

Hospital boards, CEOs, and full executive teams can communicate wellness as a long-term priority for the hospital and ensure that wellness programs have dedicated resources.

Recommendation #1: Serve as a Role Model of Health for the Community

As part of fulfilling their mission and vision, hospitals are beacons of trust in the community. Hospitals must create robust health and wellness programs as examples to the communities that they serve.

Hospitals should have a strong ownership and responsibility over the health of the communities that they serve. According to wellness expert Dee Edington, it is critical to engage the wider community, because when people leave work and go back into an unhealthy community, it will minimize or eliminate all successful efforts in the workplace.[11]

Those on the cutting edge of wellness, such as the Cleveland Clinic, view their hospitals as living laboratories that reward healthy behavior. They believe that a wellness philosophy can spread from the hospital to the community to the state to the nation. In Minnesota, a regional collaborative has helped share risk and reward and provide an incentive for investing in the long-term health of a mobile workforce.[12]

The survey results show that one of the top motivators for hospitals to improve their health and wellness programs is to provide an example to the community. Seventy-seven percent (77%) of hospitals with wellness programs offer at least some wellness benefits to spouses, significant others, and/or dependents, and 18% of hospitals offer their health and wellness programs to the community; the majority of these hospitals do not charge for this service. Henry Ford Health System's experience highlights the potential of working with local employers and community groups on wellness initiatives.

How Do Hospitals Meet this Goal?

- Hospitals can use their wellness programs as pilots to export to the whole community as part of a population-based approach to health care.
- Hospitals can offer health and wellness program benefits to all dependents of employees.
- Hospitals can work with local employers to build an integrated, regional approach to health and wellness that shares both risks and rewards.
- Hospitals can provide free wellness programs at local community centers.

[11] Alwyn Cassil, "Innovations in Preventing and Managing Chronic Conditions: What's Working in the Real World?," HSC Issue Brief 132, Center for Studying Health System Change, June 2010, http://www.hschange.com/CONTENT/1130/

[12] Alice Park, "This Doctor Does Not Want to See You," *Time Magazine,* 17 Jun. 2009, http://www.time.com/time/specials/packages/article/0,28804,1903873_ 1903925_1903787,00.html

Recommendation #2: Create a Culture of Healthy Living

Improving the health of employees is more than implementing health and wellness programs or activities. Hospitals need to strive for a culture of healthy living for all employees, which starts at the top with the CEO and the board of trustees. Wellness should be a strategic priority for the hospital.

Effective wellness programs have been shown to be customized, integrated, comprehensive, diversified, linked to an organization's business strategy, and championed by senior leaders and unit level managers throughout the organization.[13] Overall, wellness is about organizational effectiveness, not just health and wellness, and should be linked to talent recruitment and retention. As such, effective wellness programs will set ambitious goals, track progress toward those goals, and align the organization around those goals.[14]

The survey results and case studies demonstrate the importance of creating a culture of health and wellness that goes far beyond a list of programs. Changing culture, especially when dealing with individual behaviors and attitudes toward personal activities such as exercise and healthy eating, takes time and is cited as significant challenge by most hospitals.

How Do Hospitals Meet this Goal?

- Hospitals can promote a holistic approach to wellness.[15] Regardless of how robust their employee health and wellness programs are, hospitals can focus on improving their culture through wellness education and leadership commitment to healthy living. Hospitals can also remove environmental inconsistencies, such as unhealthy foods at meetings, in vending machines, or in the cafeteria.
- Commitment to culture change starts at the top, with the CEO and the board of trustees. Health and wellness indicators can be included in board dashboards, and CEO compensation can be linked to meeting health and wellness program objectives. Wellness priorities can be integrated and aligned with other strategic priorities.
- Hospitals can consider creating a wellness department led by a chief wellness officer who reports directly to the CEO. Wellness can be an organizational strategic priority with dedicated staff. Unit-level champions can be enlisted to help spread the culture change.
- It is important for hospitals to make changes to the work environment to promote healthy behavior. When planning new capital expenditures, hospitals can consider their effect on wellness.

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[13] Caralyn Davis, "Hospitals cut costs with on-site staff wellness programs," Fierce Health Finance, 28 July 2010, http://www.fiercehealthfinance.com/story/hospitals-cut-costs-onsite-staff-wellness-programs/2010-07-28

[14] Alistair Dornan, "The Wellness Imperative: Creating More Effective Organizations," World Economic Forum in partnership with Right Management (A Manpower Company), 2010, http://www.weforum.org/pdf/Wellness/RightMgmt-Report.pdf

[15] Faiza Elmasry, "Moving for Money: Financial payouts encourage hospital workers to exercise, eat better," voanews.com, Voice of America, 16 July 2010, http://www.voanews.com/english/news/american-life/Moving-for-Money-98594004.html

Recommendation #3: Provide a Variety of Program Offerings

While health and wellness is more than a set of activities, it is important for hospitals to offer a variety of activities to promote health within their organizations.

According to the survey results, there is a wide variety of program offerings by hospitals. While 74% of hospitals offer health risk assessments (HRAs), compared to 55% of all firms nationwide with more than 200 employees,[16] fewer than half of hospitals (47%) offer biometric screenings to employees. More intensive one-on-one activities, such as personal health coaching (37%) and a 24-hour nursing hotline (24%), are offered by even fewer hospitals.

How Do Hospitals Meet This Goal?

- All hospital wellness programs can include a health risk assessment (HRA) and a biometric screening.

- HRAs and biometric screenings only add real value if they are followed up by effective health coaching and participation in wellness programs.[17] Hospitals can implement at least one intensive coaching activity, based on the risks and health status of its employees.

- All hospitals can have smoke-free campuses and offer healthy food options. Hospitals are also encouraged to go a step further and make smoking cessation mandatory for all smokers and subsidize and/or only offer healthy food options in all hospital cafeterias and vending machines.

- Hospitals cannot view their wellness programs as static offerings. Ever year, wellness program offerings can be reevaluated, and if necessary, adjusted to meet the evolving needs and preferences of employees.

[16] *The Kaiser Family Foundation and Health Research & Educational Trust Employer Health Benefits: 2010 Annual Survey,* http://www.hret.org/reform/projects/employer-health-benefits-annual-survey.shtml

[17] Ha T. Tu and Ralph C. Mayrell, "Employer Wellness Initiatives Grow, But Effectiveness Varies Widely," National Institute for Health Care Reform Research Brief No. 1, July 2010: 1-13, http://www.nihcr.org/Employer-Wellness-Programs.pdf

Recommendation #4: Provide Positive and Negative Incentives

Positive and negative incentives are effective in improving health and wellness program participation levels. Hospitals can use incentives to increase participation and to improve outcomes.

The survey results show that employee participation levels in wellness programs can be improved at most hospitals. Overall, most hospitals currently use more participation incentives than incentives based on program completion or outcomes. The survey results also show that a large minority (37%) of hospitals do not currently use incentives, and very few hospitals use negative incentives. Three out of four hospitals that offer incentives do not offer more than $300 in yearly incentives.

How Do Hospitals Meet this Goal?

- Hospitals can expand the use of incentives in order to improve participation levels. The literature shows that financial incentives are linked strongly to increased program participation.[18] For example, Ford Motor Company increased HRA participation from 4% to 85% by offering a $600 deductible differential.[19] Most recently-surveyed benefits consultants and wellness vendors believe that at least $100 is needed to motivate a single behavior.[20]

- Hospitals can experiment with various types of incentives and accurately measure their effect on participation and outcomes. Under ACA, the maximum reward or penalty allowed will increase from 20% to 30% of total cost of coverage by 2014, with an option for the federal government to raise this level to 50%.[21] If hospitals have no previous experience with offering incentives, they can start with positive incentives and, if necessary, move to negative incentives to increase participation.

- According to a recent survey, across industries, more firms are moving toward program completion and outcomes-based incentives.[22] As participation levels increase, hospitals can begin to shift toward more outcomes-based incentives.

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[18] Katherine Baicker, David Cutler, and Zuri Song, "Workplace Wellness Programs Can Generate Savings," *Health Affairs,* Vol. 29, No. 2: 304-311 (January 2010).

[19] Ha T. Tu and Ralph C. Mayrell, "Employer Wellness Initiatives Grow, But Effectiveness Varies Widely," National Institute for Health Care Reform Research Brief No. 1, July 2010: 1-13, http://www.nihcr.org/Employer-Wellness-Programs.pdf

[20] Ha T. Tu and Ralph C. Mayrell, "Employer Wellness Initiatives Grow, But Effectiveness Varies Widely," National Institute for Health Care Reform Research Brief No. 1, July 2010: 1-13, http://www.nihcr.org/Employer-Wellness-Programs.pdf

[21] *Patient Protection and Affordable Care Act*, Section 2705, United States Public Law 111–148, 23 Mar. 2010, 124 Stat. 119, http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/pdf/PLAW- 111publ148.pdf

[22] Francesca Lunzer Kritz, "Healthcare perks may be harder to come by," *Los Angeles Times*, 19 April 2010, http://articles.latimes.com/2010/apr/19/health/la-he-your-money-20100419-25

Recommendation #5: Track Participation and Outcomes

To track the success of their health and wellness programs, hospitals must first measure and increase participation and then build systems to track outcomes.

According to the survey results, there is a wide variation in the percentage of hospital employees participating in health and wellness programs, with 42% of hospitals reporting that at least half of their employees participate in one or more programs.

The survey results also show that hospitals use a variety of participation and outcome measures to evaluate the impact of their health and wellness initiatives. While many hospitals use participation measures such as the number of overall participants (79%), fewer use outcome measures such as the number of employees with cholesterol improvement (39%).

How Do Hospitals Meet this Goal?

- Hospitals just beginning to develop robust wellness programs can first focus on measuring and increasing participation levels. Once participation targets are achieved, then hospitals can move on to tracking outcomes. Tracking outcomes before meeting participation targets risks creating a robust wellness program for only a small subset of employees.

- Hospitals can track participation targets in a number of ways, including the following metrics: number of overall participants, number completing an HRA, number exercising regularly, number enrolled in a smoking cessation program, and number enrolled in a diabetes management program.

- Hospitals can track outcome targets in a number of ways, including the following metrics: number who achieved weight loss, number who ceased smoking, and number with cholesterol improvement.

Recommendation #6: Measure for ROI

A strong financial case accompanies the strategic mission of striving for robust health and wellness programs. To achieve ROI, hospitals must first commit to effectively measuring ROI over several years.

The literature and case examples demonstrate overall ROI across industries for employee health and wellness programs, and that wellness is correlated with improvements in innovation, engagement, retention, productivity, and performance.[23] The survey results show that while most hospitals struggle to measure ROI (93%), those that have effectively measured ROI show positive results. The literature and case studies show that demonstrating positive ROI usually takes at least several years.[24] Most hospitals are currently only collecting the data necessary to measure overall direct health care costs (49%). Fewer hospitals are looking at health care costs for specific subpopulations (23%) or at employee productivity metrics such as absenteeism (23%) or presenteeism (8%).

How Do Hospitals Meet this Goal?

- Since finding a ROI normally takes at least several years, hospital leaders can ensure a multi-year commitment to measurement, evaluation, and improvement.

- If hospitals have no experience measuring ROI for their wellness programs, one solution is to start off small by robustly measuring ROI for a subset of wellness activities. Once ROI is effectively demonstrated for specific programs, hospitals can build on this success to garner the organizational commitment to measuring ROI for all wellness activities.

- It is important for hospitals that have not yet measured ROI to focus attention on finding effective metrics for their institutions. When measuring ROI savings, hospitals can use both health care cost savings and savings due to improvements in productivity (e.g., presenteeism and absenteeism). These "hard" and "soft" ROI numbers can be reported separately and collectively and shared with all employees.

- For validity, when measuring ROI of specific interventions or programs, hospitals can match employees who have undergone an intervention (e.g., diabetes management) with employees with similar behavioral and demographic characteristics who did not participate in the intervention.

[23] Alistair Dornan, "The Wellness Imperative: Creating More Effective Organizations," World Economic Forum in partnership with Right Management (A Manpower Company), 2010, http://www.weforum.org/pdf/Wellness/RightMgmt-Report.pdf

[24] Ha T. Tu and Ralph C. Mayrell, "Employer Wellness Initiatives Grow, But Effectiveness Varies Widely," National Institute for Health Care Reform Research Brief No. 1, July 2010: 1-13, http://www.nihcr.org/Employer-Wellness-Programs.pdf

Recommendation #7: Focus on Sustainability

For program effectiveness, hospitals must motivate employees over time, effectively communicate, and constantly reinforce wellness as a leadership priority.

The survey results show that two of the biggest challenges to employee health and wellness programs are motivating employees over time and managing financial constraints or limitations that inhibit sustainability. Getting better ROI data, providing more and different types of incentives to employees, and providing new programs to employees are cited as opportunities to overcome these challenges.

How Do Hospitals Meet this Goal?

- Addressing sustainability is paramount, and hospitals can approach wellness as a constant activity, not a once-a-year event. It can be communicated from the board, CEO, and full executive team that health and wellness is a long-term priority for the hospital.

- Wellness programs can have dedicated resources (i.e., FTEs) to constantly communicate with staff, educate, and incentivize participation. It is vital to measure success and demonstrate results from the beginning. Appropriate resources can be devoted to data collection and analysis. Hospitals can use multimodal communication strategies, including email and text messages, to reach all employees and dependents of different ages and social and economic backgrounds.

- If implementing a full program at first is not possible, hospitals can start small, effectively measure improvements in health and improvements and ROI, effectively communicate success to all employees, and build on that success to expand to a full range of activities.

- Hospitals can change their wellness programs and incentives over time to maintain high levels of participation. Wellness programs should be varied enough to meet different preferences and needs of different groups of employees. Each program can be customized to meet the needs of the hospital and community that it serves.[25]

[25] Ha T. Tu and Ralph C. Mayrell, "Employer Wellness Initiatives Grow, But Effectiveness Varies Widely," National Institute for Health Care Reform Research Brief No. 1, July 2010: 1-13, http://www.nihcr.org/Employer-Wellness-Programs.pdf

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Building a Culturally Competent Organization: The Quest for Equity in Health Care

June 2011

INSTITUTE FOR DIVERSITY in Health Management
An affiliate of the American Hospital Association

HRET
HEALTH RESEARCH & EDUCATIONAL TRUST
In Partnership with AHA

Building a Culturally Competent Organization: The Quest for Equity in Health Care

Special thanks to Yolanda Robles, president of CulturaLink, Inc., for her contributions to this guide.

Suggested Citation
Health Research & Educational Trust, Institute for Diversity in Health Management. Building a Culturally Competent Organization: The Quest for Equity in Health Care. Chicago, IL: Health Research & Educational Trust. June 2011.

Accessible at www.hret.org/cultural-competency

Executive Summary

Cultural competency in health care describes the ability of systems to provide care to patients with diverse values, beliefs and behaviors, including the tailoring health of care delivery to meet patients' social, cultural and linguistic needs. A culturally competent health care system is one that acknowledges the importance of culture, incorporates the assessment of cross-cultural relations, recognizes the potential impact of cultural differences, expands cultural knowledge, and adapts services to meet culturally unique needs. Ultimately, cultural competency is recognized as an essential means of reducing racial and ethnic disparities in health care.

This guide serves to explore the concept of cultural competency and build the case for the enhancement of cultural competency in health care. It is recommended that hospital leaders undertake the following seven tasks within their organizations and answer the associated self- assessment questions:

1. Collect race, ethnicity and language preference (REAL) data.

- Do you systematically collect race, ethnicity and language preferences of all your patients?

2. Identify and report disparities.

- Do you use REAL data to look for variations in clinical outcomes, resource utilization, length of stay, and frequency of readmissions within your hospital?
- Do you compare patient satisfaction ratings among diverse groups and act on the information?
- Do you actively use REAL data for strategic and outreach planning?

3. Provide culturally and linguistically competent care.

- Have your patient representatives, social workers, discharge planners, financial counselors and other key patient and family resources received special training in diversity issues?
- Has your hospital developed a "language resource," identifying qualified people inside and outside your organization who could help your staff communicate with patients and families from a wide variety of nationalities and ethnic backgrounds?
- Are your written communications with patients and families available in a variety of languages that reflect the ethnic and cultural makeup of your community?
- Based on the racial and ethnic diversity of the patients you serve, as well as those in your service area, do you educate your staff at orientation and on a continuing basis about cultural issues important to your patients?
- Are core services in your hospital, such as signage, food service, chaplaincy services, patient information and communications, attuned to the diversity of the patients for whom you care?

4. Develop culturally competent disease management programs.

- Does your hospital gather information to determine conditions of high prevalence within your community's minority populations?
- Does your hospital offer disease management programs that effectively address these conditions?
- Do your disease management programs address the barriers to care that are particularly challenging for minority patients?

5. Increase diversity and minority workforce pipelines.

- Does your organization have a mentoring program in place to help develop your best talent, regardless of gender, race or ethnicity?
- Are search firms required to present a mix of candidates reflecting your community's diversity?
- Do your recruitment efforts include strategies to reach out to racial and ethnic minorities in your community?
- Do you acknowledge and honor diversity in your employee communications, awards programs and other internal celebrations?
- Does your human resources department have a system in place to measure diversity progress and report it to you and your board?

6. Involve the community.

- Has your community relations team identified community organizations, schools, churches, businesses and publications that serve racial and ethnic minorities for outreach and educational purposes?
- Do you have a strategy to partner with community leaders to work on health issues important to community members?

7. Make cultural competency an institutional priority.

- Has your board set goals on improving organizational diversity, providing culturally competent care and eliminating disparities in care as part of your strategic plan?
- Is diversity awareness and cultural competency training mandatory for all senior leadership, management, staff and volunteers?

This information, coupled with the case studies from high-performing hospitals, will help guide hospital leaders as they seek to improve the quality, efficacy, and equity of care within their own institutions through advances in cultural competency. In addition, this guide provides self-assessment checklists for hospital leaders and a list of relevant cultural competency resources.

Introduction

Minorities currently represent approximately one-third of the United States population. Minorities are anticipated to represent the majority of the population in 2042 and will eventually comprise up to 54 percent of the population in 2050.[1] With a general population that is becoming more diverse, the health of our nation is increasingly dependent on our ability to keep minority populations healthy. Despite this fact, minorities frequently encounter more barriers to care, greater incidence of chronic disease, lower quality of care, and higher mortality rates than white Americans.[2] This fact carries significant ethical and practical implications for care of an increasingly large proportion of our nations' population.

In response, the provision of culturally competent care has the potential to improve health care access, promote the quality of medical outcomes and eliminate disparities in the care delivery process. Cultural competency is becoming the preferred tool among health care providers seeking to manage the complex differences in the ways in which patients express pain, seek and follow medical advice, and participate in their own healing process. At the patient level, the presence of culturally competent employees builds trust, provides patient confidence and reduces costs associated with various types of medical errors. Moreover, at the provider level, advancements in cultural competency can improve quality scores, which are increasingly associated with reimbursement rates.

Minimizing racial and ethnic disparities requires not only culturally competent clinicians but also leaders who create an organizational context in which cultural competence is enabled, cultivated and reinforced. Health care organizations in the United States require leadership that is firmly committed to the concepts of diversity and cultural competency.[3] It is in this interest that this guide provides information to hospital leaders, aligned with the following objectives:

- To provide health care leaders and policymakers with a basic literature review regarding the value of embracing culturally competent care as a tool to improve the quality of medical outcomes;
- To provide case studies from the high-performing hospitals that participated in the Institute for Diversity's "The State of Health Care Disparities and Diversity: A Benchmark Study of U.S. Hospitals" and have employed culturally competent care strategies to create a competitive difference in their markets;
- To share seven key steps necessary to build a culturally competent organization;
- To encourage health care leaders to elevate culturally competent care as a priority in the strategic planning process.

With this information, hospital leaders can improve the quality, efficacy, and equity of care by increasing cultural competency within their own institutions.

Review of Literature on Culturally Competent Care

A significant body of research exists within the field of cultural competency in health care. The following sections provide a brief overview of the literature relating to the needs for and benefits of improving cultural competency within the hospital setting.

Culturally Competent Model for Care Delivery

The delivery of high-quality primary health care requires an in-depth understanding of the sociocultural background of patients, their families and their environments.[4] Such an understanding is commonly referred to as cultural competency.[5] Cultural competency in health care describes the ability of systems to provide care to patients with diverse values, beliefs and behaviors, including tailoring delivery to meet patients' social, cultural and linguistic needs.[6] Ultimately, cultural competency is recognized as an essential means of reducing racial and ethnic health care disparities[7] and improving equity of care.[8]

This knowledge, coupled with major demographic shifts in the U.S. population, underscores the necessity of making all health care organizations culturally competent.[9] A culturally competent health care system is defined as one that acknowledges the importance of culture, incorporates the assessment of cross-cultural relations, recognizes of the potential impact of cultural differences, expands cultural knowledge, and adapts services to meet culturally unique needs.[10] Key means of achieving culturally competent care delivery consist of increasing the diversity of the health care workforce and leadership (including trustees and senior management), as well as incorporating strategies to promote diversity within all hiring and recruitment practices. [11] In addition, providing compassionate, patient-centered care will further require health care leaders to assess the existence of bias, stereotypes and prejudice in their own behaviors.[12]

The Importance of Culturally Competent Governance

One critical mechanism for improving cultural competency is the engagement of hospitals' governing bodies.[13] Hospital governance is responsible for identifying and actualizing the institution's core mission and values. In this interest it is essential that hospital governance embrace the concept of cultural competency to ensure that the delivery of culturally and linguistically appropriate care is ingrained within the organization's mandate. Once this is achieved, the delivery of culturally competent care can become an area of priority for hospital executives.[14] This, in turn, provides a strong incentive for executives to enact policies and procedures to improve cultural competency, like diversity management programs, and to ensure that necessary resources, such as interpretation services, are made available. More than any other entity, the governance structure must reflect and promote those practices that earn the public's trust and ensure a delivery process that is safe and equitable.

The Importance of Cultural Diversity in Leadership

As the United States becomes more culturally diverse, it becomes increasingly important to expand minority recruitment efforts in health care to meet the needs of this changing population.[15] Moreover, anecdotal evidence suggests that the lack of diversity in health care leadership can result in policies and procedures that do not adequately meet the needs of diverse populations.[16] Therefore, the goal of managing diversity is to enhance the hospital workforce, promote customer satisfaction, and to further improve organizational performance.[17] Managing diversity is not a social requirement. Rather, diversity management represents a business requirement that will grow in intensity as the general population, and accordingly the patient population, continues to become more racially and ethnically varied.

Regulations, Standards, Laws and Public Trust

There is a strong regulatory and legal framework for promoting culturally competent care. This framework was first established by Title VI of the Civil Rights Act of 1964, which stated that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Enforcement of Title VI for health care programs is the responsibility of the Department of Health and Human Services Office for Civil Rights (OCR) and is governed by their regulations and guidelines. In this context, the unequal treatment of racial, ethnic and linguistic minority patients is unacceptable, and efforts to remedy this situation, such as implementing culturally competent care, are duly warranted.

Following the inception of Title VI, several other government actions have reinforced the need for cultural competency in health care. In 2000, the Office of Minority Health (OMH) of the Department of Health and Human Services published national standards for culturally and linguistically appropriate services (CLAS) in health care. The 14 CLAS standards address the appropriate use of language services in the delivery of culturally competent care as well as other forms of organizational support to ensure cultural competency. The CLAS standards were offered by OMH as a guideline for federal and state regulators and private accreditors of health care organizations in an effort to achieve a higher level of cultural competency in health care delivery by upgrading and standardizing expectations. The CLAS standards do not have the force of law in and of themselves, but they are being used increasingly by regulators and accreditors, such as The Joint Commission, in fashioning their standards.

Also in 2000, presidential Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency," was issued. This Executive Order offered specific guidance on language services that must be provided under all federal agency service programs to ensure equal access for limited English proficiency (LEP) persons. The Executive Order requires that each federal agency adopt a language services plan consistent with Department of Justice guidelines to ensure that adequate language services are provided by the agency's programs and by organizations receiving federal funds under those programs. Those providing services under Medicare and Medicaid meet Title VI OCR regulations prohibiting discrimination on the basis of national origin and follow OCR guidelines for LEP populations.

Most recently, the 2010 Patient Protection and Affordable Care Act (ACA) further elaborated the need for cultural competency within the health care setting. Section 1557 of the ACA extends existing federal laws prohibiting discrimination by requiring covered entities (i.e., health plans offered through state insurance exchanges) to provide information in a culturally and linguistically appropriate manner. Moreover, Section 4302 of the ACA strengthens federal data collection efforts by requiring that all federally funded programs collect data on race, ethnicity, primary language, disability status and gender.

The Business Case for Equity

The promotion of equity in health care has a direct impact on hospital outcomes. Systemic cultural competence can improve the efficiency of care by helping patients access the appropriate services in a timely fashion.[18] Moreover, the elimination of linguistic and cultural barriers can aid in the assessment of patients and reduce the need for unnecessary and potentially risky diagnostic tests.[19] Additionally, reducing disparities and increasing diversity can increase patient satisfaction scores.[20]

There is a strong economic argument for undertaking appropriate efforts to eliminate unwarranted variations in care when one considers the potential impact that disparities in care can have on readmissions, medical errors, extended length of stay and the potential legal liabilities should the provision of unequal care be challenged in court. It should be noted that improvements in cultural competency confer other potential business advantages as well. These advantages include appealing to minority consumers, increasing competitiveness for private purchaser business, and improving organizations' abilities to respond to the demands of public purchasers.[21] Conversely, failure to improve diversity and cultural competency may harm hospitals' patient and employee bases.

Steps for Building a Culturally Competent Organization

The following steps provide a series of seven actions that hospital leaders can undertake to promote cultural competency within their own institutions. Case studies are also provided in some instances to demonstrate the practical application of such principles.

1. Collect Race, Ethnicity and Language Preference (REAL) Data.
   Gathering data on race, ethnicity and language preferences is a necessary first step in addressing inequalities in care as it enables providers to identify disparities in care or outcomes and then take appropriate steps to eliminate them.[22] It is imperative that hospitals collect accurate data in order to understand the populations that they serve, to tailor the delivery of care to their patients, to obtain feedback regarding their performance on quality measures across patient populations, and to develop appropriate quality improvement interventions when so warranted.[23] There is also a strong need for standardization in data reporting so as to minimize inconsistencies that might bias potential findings. For this reason, using the Health Research & Educational Trust's Disparities Toolkit is recommended for collecting and reporting race and ethnicity data. The Toolkit can be modified to meet most challenges that arise across geographic locations and sensitivity issues encountered in cross-cultural communication. Furthermore, staff must be trained, and in some cases "scripted," to respectfully ask a patient to self-report his or her racial or ethnic identity.

SELF-ASSESSMENT

- **Do you systematically collect race, ethnicity and language preferences of all your patients?**

CASE STUDY: AnMed Health
With diverse communities come language translation issues. Medical interpretation and translation services are costly and therefore pose a challenge to most health care organizations. In response, AnMed Health, a 533-bed hospital based in Anderson, South Carolina, sought to establish customer-focused, cost-efficient communication programs.

Accurate data is essential to the appropriate growth and development of any new business venture. Medical interpretation and translation services are no different. In 2002, AnMed Health assembled a multidisciplinary process-improvement team to develop a system that is currently used to record every patient's race, ethnicity, national origin and language preferences in the medical record during the admissions process.

This information is important, as cultural and linguistic differences may significantly impact the interaction between patient and caregiver and, ultimately, impact the quality of care, treatment outcomes, and satisfaction of the patient. Admissions personnel receive culturally appropriate scripts and in-service training to build their confidence with this sensitive line of questioning. In partnership with its Medical Resource Management department, the Diversity and Language Services department has designed and implemented several technical strategies, or focus studies, that give AnMed Health the ability to quantify services, improve data collection, and monitor the improvement of service quality to LEP patients.

First, all medical interpretations are documented on an Interpretation Services Report and executed by the attending interpreter. A second strategy is the Interpretation Service Satisfaction tool, a survey conducted by telephone. This tool includes a prompted series of questions, generated upon completion of each patient encounter and designed to assess the patient's satisfaction with the interpretation support provided. There are two benefits of this tool: it provides specific information for the interpreter so that he or she may identify areas for improvement, such as accuracy or technique, and it also provides an opportunity to clarify discharge information for the patient. The third and most innovative strategy was created for the organization's obstetrical LEP patients. LEP patients are preregistered at the women's health department, and the information is input into the MIDAS+™ system, providing interpreters with essential information available to caregivers 24 hours per day. In the event of a premature delivery or miscarriage, this information helps ensure accurate and timely communication at a critical time.

AnMed Health has received national recognition for its model language program and is also the first health system in South Carolina to use Deaf-Talk video conferencing technology to improve communication with deaf and hard-of-hearing patients. By utilizing these and other new strategies as they are developed, AnMed Health meets the language interpretation challenges associated with providing service to a diverse community.

2. <u>Identify and Report Disparities.</u>
   Hospitals must plan for and commit resources to the evaluation of medical interventions. Hospital leaders should use quality measures to generate reports stratified by race, ethnicity and language group to examine disparities in clinical processes and patient experiences.[24] Such reporting and performance review has been shown to improve the quality of care provided to patients as it enables the organization to gauge its performance on dimensions of care and services to eliminate disparities.[25] It is further recommended that these evaluations apply qualitative and quantitative methods; include formative and summative assessment; employ action research; use participatory and empowerment approaches; and consider a broad range of outcomes including societal,

environmental, psychological, behavioral/attitudinal change, community capacity, social capital, and quality of life aspects.

SELF-ASSESSMENT

- **Do you use REAL data to look for variations in clinical outcomes, resource utilization, length of stay, and frequency of readmissions within your hospital?**
- **Do you compare patient satisfaction ratings among diverse groups and act on the information?**
- **Do you actively use REAL data for strategic and outreach planning?**

3. Provide Culturally and Linguistically Competent Care.

The provision of culturally and linguistically competent care has the potential to improve health care access, quality and outcomes, and to reduce disparities in care.[26] Adopting activities to enhance patients' access to culturally and linguistically appropriate services is essential for reducing disparities and reaching the ultimate goal of building a health care system that delivers the highest quality of care to every patient, regardless of race, ethnicity, culture or language. Culturally and linguistically competent services should include: cultural competency training for providers, staff and volunteers in patient contact roles; established protocols for serving LEP patients; interpreter services; translators; a bilingual workforce; diverse community health educators; and the use of multilingual signage, etc.[27]

According to the Institute of Medicine report *Unequal Treatment,* increased levels of cultural competency and enhanced patient-provider communications have the potential to improve the accuracy of diagnoses, prevent patients from exposure to unnecessary risk diagnostic procedures, enable providers to better obtain true informed consent, and enable patients to participate in shared decision-making practices.[28] Furthermore, cultural competency training has also been shown to improve the knowledge and attitudes of health care professionals who care for racial, ethnic and linguistic minority patients.[29] Conducting a community or market assessment ensures awareness of the various groups being served by the hospital. Further investigation of the community profile may reveal the epidemiological information necessary to promote prevention and wellness programs that can reduce readmissions and improve the health of the community.

SELF-ASSESSMENT

- **Have your patient representatives, social workers, discharge planners, financial counselors and other key patient and family resources received special training in diversity issues?**
- **Has your hospital developed a "language resource," identifying qualified people inside and outside your organization who could help your staff communicate with patients and families from a wide variety of nationalities and ethnic backgrounds?**
- **Are your written communications with patients and families available in a variety of languages that reflect the ethnic and cultural makeup of your community?**
- **Based on the racial and ethnic diversity of the patients you serve, as well as those in your service area, do you educate your staff at orientation and on a continuing basis about cultural issues important to your patients?**

- **Are core services in your hospital, such as signage, food service, chaplaincy services, patient information and communications, attuned to the diversity of the patients for whom you care?**

4. Develop Culturally Competent Disease Management Programs.
   To effectively reduce racial disparities in care, quality improvement interventions need to include disease management programs that effectively address conditions of high prevalence within minority populations.[30] Disease management programs should be tailored to meet the medical needs of minority and other high-risk patients. Accordingly, the development and implementation of such interventions must also address the barriers to care that are particularly challenging for minority patients (i.e., limited English proficiency, diverse health beliefs) while simultaneously addressing more general barriers that will improve the quality of care for all patients.[31]

SELF-ASSESSMENT

- **Does your hospital gather information to determine conditions of high prevalence within your community's minority populations?**
- **Does your hospital offer disease management programs that effectively address these conditions?**
- **Do your disease management programs address the barriers to care that are particularly challenging for minority patients?**

5. Increase Diversity and Minority Workforce Pipelines.
   It is important to create a workforce that is as broad and diversified as the patient population that it serves. Health care leaders should recognize the benefits of diversity management, which include better marketing to consumers and the improved management of a multicultural workforce. Further societal benefits are also associated with increased workforce diversity. For instance, it has been demonstrated that racial and ethnic concordance between patient and provider is likely to enhance communication and understanding, provide opportunities for building trust and improve adherence to the medical treatment plan.[32,33] There is also evidence that underrepresented minority providers are more likely to practice in underserved communities,[34] thereby increasing access to care for those living in such areas.

SELF-ASSESSMENT

- **Does your organization have a mentoring program in place to help develop your best talent, regardless of gender, race or ethnicity?**
- **Are search firms required to present a mix of candidates reflecting your community's diversity?**
- **Do your recruitment efforts include strategies to reach out to the racial and ethnic minorities in your community?**
- **Do you acknowledge and honor diversity in your employee communications, awards programs and other internal celebrations?**
- **Does your human resources department have a system in place to measure diversity progress and report it to you and your board?**

CASE STUDY: Sparrow Hospital
Sparrow Hospital is a 733-bed hospital located in Lansing, Michigan, and part of the Sparrow Health System. Recognizing the need for diversity management, Sparrow Hospital wanted to ensure that all efforts were made to create an environment that better reflected the communities that Sparrow serves. From the board of directors to the executive leadership team, diversity management would become the impetus to achieve these results.

Sparrow's efforts were started by its vice president of human resources, who positioned diversity as a business priority. To provide leadership in this area, Sparrow embarked on a national search to recruit a subject-matter expert with a proven track record for diversity management. This diversity director helped align the institution's diversity goals with its organizational goals. The director also educated hospital leaders on topics pertaining to diversity management and on integrating diversity goals into division, department, functional and individual goals.

As a result, a systemwide diversity and inclusion program is now led by the Diversity and Inclusion Council. The council evaluates and makes recommendations on educational and classroom coaching, and provides activities and events to support a more culturally competent workplace. In addition, Sparrow has revamped internal processes relating to retention and transfer, which include updated exit interview processes, support for employee relations, a new mentoring program, and a Service Excellence Department that works closely with patients and patient advocates. The hospital's materials acquisition staff currently attends career fairs to create sourcing options intended to identify quality candidates of color. Sparrow currently monitors its current workforce against available reports provided by U.S. Census data. The organization currently is at 13.65 percent minority representation, and the regional eight-county availability is 11.4 percent.

By aligning diversity and inclusion goals into an established organizational process from the top down, Sparrow Hospital has successfully internalized a system to maintain a culturally competent internal environment—one that accurately reflects the community it serves.

6. Involve the Community.
   Strategies to effectively reduce disparities in care must engage the broader public through community-based activities and programs. By establishing functional relationships within the community, hospitals can build a bridge to patients in need of care.[35] Exercising cultural competency is essential because barriers to care and solutions to eliminating inequities in care vary widely by religion and culture. Therefore, interventions must be tailored to the community's specific needs and must also reflect the community's demographic and socioeconomic makeup and cultural values, while also remaining functional within the confines of existing infrastructure and support services. One approach is creating a community-based diversity advisory committee. This committee could work with hospital staff to develop programs that would resonate with the community's ethnic groups and also help the hospital to improve the inclusiveness of existing programs.

SELF-ASSESSMENT

- **Has your community relations team identified community organizations, schools, churches, businesses and publications that serve racial and ethnic minorities for outreach and educational purposes?**
- **Do you have a strategy to partner with community leaders to work on health issues important to community members?**

CASE STUDY: Lancaster General
Lancaster General Health is a 640-bed regional health care system located in Lancaster, Pennsylvania. Lancaster General Hospital is tasked with providing care to a very diverse and unique patient population, as Lancaster County is home to approximately 27,000 Amish people.

Practices and customs among Amish people can vary greatly, but in general, guiding principles for Amish daily life also influence health care and safety practices. These principles include doing God's will, separating from the world, giving mutual aid and having self-sufficiency. Therefore, the Amish attempt to maintain and restore good health, but they may not naturally seek extra measures to ensure proper safety because of their religious beliefs. Safety is an issue because there are approximately 5,305 farms in Lancaster County—many of which are worked by the Amish—and farmers typically encounter accidents and other health-related issues. According to the Pennsylvania Department of Agriculture, in 2007 there were 29 farm-related deaths in Pennsylvania, and 16 of these deaths (55 percent), including 3 children, occurred in Lancaster County.

Relationships and trust with leaders in the Amish community are the key elements needed to effectively implement educational strategies. In collaboration with the Amish Safety Committee and the Lancaster County Safe Kids Coalition, Lancaster General Health implements Farm Safety Day Camp twice a year. Since the Amish community became part of the planning process, Lancaster General is able to create meaningful educational opportunities accepted throughout the Amish community. Designed for people who live and work on farms, the Farm Safety Day Camp teaches simple, practical steps to decrease the likelihood of death and injury. Amish and other farmers volunteer to provide experiential modules on how to identify safety hazards and how to implement simple safety measures that families can apply at home and on the farm. Approximately 50 volunteers from the community donate their time and resources to help plan and educate families during these events. Since 2005, over 800 participants have been educated at Farm Family Safety Day events. The success of these events is measured by the number of attendees, survey feedback, and the behavior changes that families intend to implement.

The experience working with the Amish Safety Committee has helped Lancaster General build relationships and develop trust in the Amish community. This trust has opened doors to addressing other health issues that Amish people have previously been unwilling to discuss, such as prevention, early detection and proper use of integrative medicine. Lancaster General is now working to track early entry into care in hopes of decreasing late-stage disease rates within the Amish population.

This year Lancaster General also facilitated health educational sessions for more than 200 Amish women, held in an Amish home. In addition, the hospital established nine points of contact with businesses owned or frequented by Amish families, to use for providing health education fact sheets tailored to the Amish community. A community outreach nurse visits the sites on a quarterly basis to review distribution of the fact sheets, get feedback from the business owners and hear recommendations for future health topics. Lancaster General has also initiated an Amish Health Promoter Program to continue efforts to build trust and cultural competence in serving the Amish community.

7. <u>Make Cultural Competency an Institutional Priority.</u>
   For an institutional cultural competency initiative to be effective, it must involve the entire organization and stem from a companywide commitment.[36] Equity strategies have to be part of the overall strategic plan, and equity initiatives should be incorporated into the overall strategic vision. Efforts to address equity must address issues of evaluation, planning, implementation, communication sustainability and dissemination. In approximately 40 years, racial and ethnic

minority populations will constitute a majority of the total U.S. population.[37] As this occurs, the provision of culturally competent care will move from being merely an appropriate measure to representing a national priority and a business necessity.

SELF-ASSESSMENT

- **Has your board set goals on improving organizational diversity, providing culturally competent care and eliminating disparities in care as part of your strategic plan?**
- **Is diversity awareness and cultural competency training mandatory for all senior leadership, management, staff and volunteers?**

CASE STUDY: Barnes-Jewish Hospital

For diversity efforts to succeed in a large organization, the organization's leaders must be intrinsically involved by providing a vision for diversity and inclusion programs and becoming involved in their development and implementation. Barnes-Jewish Hospital, a 1,200-bed teaching hospital affiliated with the Washington University School of Medicine in St. Louis, Missouri, applied these principles as it worked to provide more culturally competent care throughout the hospital.

Barnes-Jewish leadership is engaged in several efforts to promote diversity and inclusion. For example, diversity and inclusion practices are included as a component of the hospital's strategic plan under the people and service categories. Hospital leaders have participated in planning and implementing several aspects of the plan's development, including recommending that the board of directors develop the Center for Diversity and Cultural Competence. Barnes-Jewish leadership agreed to an initial allocation $1.56 million to establish the center and also participated in several hours of diversity and inclusion training. Since opening the center, Barnes-Jewish leadership has committed more than $3.2 million dollars to its diversity efforts.

In addition, Barnes-Jewish leadership committed to an organizational assessment to evaluate its efforts to become a more diverse and inclusive organization. This evaluation provided a roadmap for Barnes-Jewish in further developing and implementing strategies for diversity and inclusion. In 2008, the entire executive leadership team, along with more than 22 members of the hospital's Diversity and Inclusion Council, participated in a three day off-campus training session with the National Conference for Community and Justice to identify and understand barriers to and facilitators of diversity and inclusion. In April 2010, Barnes-Jewish executive and senior leadership teams spent an additional eight hours learning how to integrate cultural competence and inclusion in everyday work.

Barnes-Jewish is experiencing a culture change in regard to diversity. The program's impact is reflected in the diversity scores from an employee engagement survey, which indicates an increase in workforce diversity in recent years. Diversity outcomes have also improved between 2007 and 2010. In addition, diversity scores at the management level have increased from 11 percent to 14 percent from 2007 to 2010.

Conclusion

Hospital leaders are encouraged to embrace cultural competency interventions as an important step toward reducing disparities in health care. Promoting culturally and linguistically appropriate care, expanding diversity within hospital leadership, institutionalizing cultural competency into hospitals' central missions, collecting race, ethnicity and primary language data, and increasing the diversity of the leadership, governance and workforce at hospitals—all represent methods that health care leaders should use to improve the equity of care. Through these initiatives, hospital leaders can help improve the quality, efficacy, and equity of care within their own institutions.

Additional Resources

Resource	Description	Address
Hospitals in Pursuit of Excellence	This website provides evidence-based guides for hospital quality improvement efforts aimed at reducing disparities.	http://www.hpoe.org/topic-areas/health-care-equity.shtml
HRET Disparities Toolkit	The HRET Disparities Toolkit is a web-based tool that provides hospitals, health systems, clinics and health plans with information and resources for systematically collecting race, ethnicity and primary language data from patients.	www.hretdisparities.org/
Institute for Diversity in Health Management (IFD)	The Institute for Diversity provides several resources for managing diversity in the health care field	www.diversityconnection.org
IFD Summer Enrichment Program	IFD's Summer Enrichment Program places promising graduate students in internships in a hospital setting	www.tinyurl.com/InstituteSEP
Does Your Hospital Reflect the Community It Serves? A Diversity and Cultural Proficiency Assessment Tool for Leaders	This AHA document provides a resource to help hospital leaders assess diversity and cultural competency activities within their institutions.	www.aha.org/aha/content/2004/pdf/diversitytool.pdf
Minority Trustee Candidate Registry	The AHA, along with its Institute for Diversity in Health Management and Center for Healthcare Governance, has created an online registry of candidates from diverse backgrounds who are interested in serving on the board of their local hospital or health system.	www.americangovernance.com/americangovernance_app/candidatesProgram/index.jsp?fll=S1
Indicators of Cultural Competence in Health Care Delivery Organizations: An Organizational Cultural Competence Assessment Profile	This document presents an analytic framework for assessing cultural competence in health care delivery organizations and identifies specific indicators that can be used for measurement.	www.hrsa.gov/CulturalCompetence/healthdlvr.pdf
Improving Quality and Achieving Equity: A Guide for Hospital Leaders	The Disparities Solution Center offers a guide for hospital leaders interested in promoting equity and reducing health care disparities.	www2.massgeneral.org/disparitiessolutions/guide.html

Resource	Description	Address
Advancing Effective Communication, Cultural Competence, and Patient- and Family-Centered Care A Roadmap for Hospitals	In this document, The Joint Commission offers a series of resources to enhance cultural competency and communication.	www.jointcommission.org/Advancing_Effective_Communication/
Institute of Medicine (IOM)	The IOM book *In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce* builds the case for enhancing the diversity of America's health care workers.	http://books.nap.edu/openbook.php?record_id=10885&page=1

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Executive Summary

Racial and socioeconomic inequity persists in health care quality. An exploratory interview with four hospitals substantiated by a review of the literature reveals that hospitals are collecting race, ethnicity, and primary language data about their patients. Leading hospitals are now moving beyond data collection to analyzing and using the data to develop targeted interventions for improving access to care for underserved populations. All hospitals are encouraged to follow their lead and, in an era of greater emphasis on community health improvement, devote the necessary resources and infrastructure to use their data in efforts to overcome disparities in care.

The exploratory interviews did identify key strategies that hospitals have adopted to streamline the data collection process:

Key Strategies for Collecting Patient Race, Ethnicity, and Language Data
1. Engage senior leadership
2. Define goals for data collection
3. Combine disparities data collection with existing reporting requirements
4. Track and report progress on an organization-wide basis
5. Build data collection into quality improvement initiatives
6. Utilize national, regional, and state resources available
7. Review, revise, and refine process and categories constantly

A review of literature highlighted several approaches for using the patient data collected by hospitals:

Leading Practices for Using Patient Race, Ethnicity, and Language Data
1. Use an equity scorecard or dashboard to report organizational performance
2. Inform and customize the language translation services you provide
3. Review performance indicators such as length of stay, admissions, and avoidable readmissions
4. Review process of care measures
5. Review outcomes of care
6. Analyze provision of certain preventive care

To meet the needs of their diverse populations, hospitals and health systems will need to bridge the gap between collecting meaningful patient data and reviewing the data to identify inequities in health care provision and utilization, and to implement simple yet effective interventions to improve care for patients.

I. Introduction

Racial and socioeconomic inequity persists in health care quality. The 2001 report from the Institute of Medicine (IOM), *Crossing the Quality Chasm*, stressed the importance of equity in care as one of the six pillars of quality health care, along with efficiency, effectiveness, safety, timeliness, and patient-centeredness.[1] Equity in care can be defined as provision of care that does not differ by geographic location, socioeconomic status, gender, ethnicity, and other patient characteristics. The IOM followed its 2001 report with another report in 2002, *Unequal Treatment,*[2] which found that multiple factors may contribute to disparities in health care. There is therefore no single solution for addressing disparities in health care. The authors of the report offered multiple recommendations for reducing disparities by increasing awareness of the issue, data collection, and research.

According to the 2010 *National Healthcare Disparities Report (NHDR)* released by the Agency for Healthcare Research and Quality (AHRQ), racial and ethnic minorities continue to receive lower quality of care, as measured by performance on core quality measures.[3] Also, in the 2009 *NHDR*, AHRQ and the Department of Health and Human Services noted three major implementation strategies to accelerate the reduction of health care disparities.[4]

1. Train health care personnel to deliver culturally and linguistically competent care for diverse populations
2. Raise awareness of disparities using research and data
3. Form partnerships to identify and test solutions

For years, hospital leaders have realized that reducing disparities in care is the right thing to do. Today, it has become a necessary component of quality and, as such, will have an increasingly greater impact on reimbursement.

Effectively addressing the issue of disparities in health care will require a two-fold approach from health care leaders. The first step—collecting data on patients' race, ethnicity, and primary language—is focused on gaining a complete understanding of the community served by the hospital and the characteristics of patient population. Data collection, if done properly, can facilitate the second step, which involves analyzing quality-of-care and health outcomes data using patient demographics to specifically identify disparities and implement actions to reduce such disparities. Hospitals that currently collect data on patients' race, ethnicity, and primary language encounter barriers in using the data to develop evidence-based strategies for improving health equity.

According to a 2006 study, 78.4 percent of nonfederal acute care hospitals collect information on the race of their patients, and half of these hospitals collect information on patient ethnicity (50.4 percent). State mandates provide a major motivation for hospitals to collect patient data, as mandates currently are in place in 19 states. Additionally, certain culturally and linguistically appropriate services (CLAS) outlined by the Office of Minority Health are required for hospitals to qualify for certain types of federal funding. Most hospitals that currently collect patients' race, ethnicity, and primary language data do so to

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[1] Institute of Medicine, Committee on Quality of Health Care in America, *Crossing the Quality Chasm: A New Health System for the 21st Century (*Washington, DC: National Academy Press, 2001).
[2] Institute of Medicine, Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care,* B. D. Smedley, A. Y. Stith, A. R. Nelson, eds (Washington, DC: National Academies Press, 2002).
[3] *2010 National Health Quality and National Healthcare Disparities Report (*Washington, DC: The Agency for Healthcare Research and Quality, 2011). http://www.ahrq.gov/qual/nhdr10/nhdr10.pdf
[4] *2009 National Health Quality and National Healthcare Disparities Report (*Washington, DC: The Agency for Healthcare Research and Quality, 2009). http://www.ahrq.gov/qual/nhdr09/Key.htm

fulfill reporting requirements and are unsure of how to mine the data for trends in their patient population and develop interventions to address inequities identified in care.[5]

System-level and patient-level barriers to collecting and using patient race, ethnicity, and primary language data include:[6]

- Lack of standardization of race, ethnicity, and language categories
- Lack of staff understanding of why data is collected
- Information technology limitations
- Staff discomfort about data collection
- Patient privacy concerns

Health care leaders could reap major benefits by making the reduction and elimination of health care disparities an organizational priority. In addition to being the right thing to do, eliminating inequities in health care could have implications for health outcomes, organizational finances, and regulatory compliance.

Quality implications. Disparities in care can have a detrimental effect on the quality of care that is provided to patients. Patients who are racial and ethnic minorities may be more prone to medical errors; they may also have longer hospital stays and more frequent avoidable rehospitalizations, and experience other adverse health outcomes.[7] According to the Joint Commission, language barriers, coupled with low health rates and cultural barriers, contribute to adverse events.[8] Racial and ethnic minorities are also less likely to receive evidence-based care for certain conditions, which explains the disparities in health outcomes and management of patients with conditions such as diabetes, congestive heart failure, and community-acquired pneumonia.[9]

Financial implications. Disparities may increase the cost of care, including through excessive tests to compensate for communication barriers, medical errors, increased length of hospital stay, and avoidable rehospitalizations. The financial implication is further compounded in that payers are linking financial penalties to these outcomes. For example, pay-for-performance contracts now include provisions to address racial and ethnic disparities, a trend that is expected to gain widespread acceptance over time. Additionally, payment reform also features a disincentive for readmissions for certain conditions if they occur within a certain period of time.

Regulatory and accreditation implications. The Joint Commission has released new disparities and cultural competence accreditation standards, and the National Quality Forum has released cultural competence quality measures. Several provisions to reduce disparities were included in the Affordable Care Act. All these national efforts have further enhanced the need for providers to take another look at health care disparities in their organizations and identify solutions to provide more equitable care.

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[5] M. Regenstein, D. Sickler, *Race, Ethnicity, and Language of Patients: Hospital Practices Regarding Collection of Information to Address Disparities in Health Care,* National Public Health and Hospital Institute, 2006.

[6] Institute of Medicine, Subcommittee on Standardized Collection of Race/Ethnicity Data for Healthcare Quality Improvement Board on Health Care Services, *Race, Ethnicity, and Language Data: Standardization for Health Care Quality Improvement*, C. Ulmer, B. McFadden, D. R. Nerenz, eds. (Washington, DC: National Academies Press, 2002).

[7] J. R. Betancourt, A. R. Green, R. R. King, A. Tan-McGrory, M. Cervantes, M. Renfrew, *Improving Quality and Achieving Equity: A Guide for Hospital Leaders,* The Disparities Solutions Center, Massachusetts General Hospital, 2009. http://www.rwjf.org/pr/product.jsp?id=38208

[8] P. M. Schyve, "Language Differences as a Barrier to Quality and Safety in Health Care: The Joint Commission Perspective," *Journal of Internal Medicine,* November 2007; 22 Suppl 2:360-361.

[9] Betancourt et al., *Improving Quality and Achieving Equity*.

A growing collection of resources—in the form of guides, toolkits, research studies and other content—is now available to assist hospital leaders in the development and execution of targeted interventions to improve access to care for underserved populations. *Hospitals in Pursuit of Excellence*, the AHA's strategic platform for accelerating performance improvement and delivery system transformation, has collected these resources and is making them available on a dedicated web page at http://www.hpoe.org/topic-areas/health-care-equity.shtml.

II. Key Strategies for Collecting Patient Race, Ethnicity, and Language Data

In an effort to provide health care leaders with examples of how hospitals with different characteristics and varying patient populations have overcome barriers to collecting and using patient race, ethnicity, and primary language data, we interviewed and profiled the activities of four hospitals. Several of the hospitals profiled stated similar concerns about having limited resources and staff available at their institutions to dedicate to disparities data collection and analysis. However, this barrier did not prevent the organizations from moving forward with efforts to examine and improve the processes for collecting meaningful data about their patients.

The hospitals interviewed identified multiple challenges in using the data they collect to develop and implement targeted interventions for their patients. There were multiple reasons for this. First, several of the hospitals were still in the process of strengthening their data collection systems to collect meaningful patient demographics data. Second, the process of mining the data for trends required more resources than most of the hospitals had. Similarly, these hospitals recognized that developing system-wide interventions is resource-intensive and requires consideration during the regular strategic and operational planning process. All the hospitals did express interest in simple, actionable interventions that they could implement in response to disparities in health outcomes identified in their patient population. Although only one hospital has made significant progress in analyzing patient data for trends in utilization and health care outcomes, all the hospitals provided lessons for hospitals that are currently looking to standardize their data collection process and develop an organization-wide culture around collecting patient race, ethnicity, and primary language data.

Common key strategies emerged from the hospitals profiled as shown in the following table.

Key Strategies for Collecting Patient Race, Ethnicity, and Language Data

Strategy	Rationale
1. Engage senior leadership	- Helps to make efforts a priority for the organization - Maintains sustainability and accountability
2. Define goals for data collection	- Communicates to clinicians and staff that the effort does not end with data collection
3. Combine disparities data collection with existing reporting requirements	- Streamlines activities across multiple departments - Builds on existing hospital/system efforts - Ensures broad-based input
4. Track and report progress on an organization-wide basis	- Periodically disseminating information on patient demographics serves to further engage leadership and staff as they see the diversity in the patient population increase
5. Build data collection into quality improvement initiatives	- Ensures accountability for accuracy and consistency in collecting data
6. Utilize national, regional, and state resources available	- Eliminates the need to start from scratch and presents a learning opportunity, with tools and guidance from various national organizations, such as HRET, NQF, and the Joint Commission, and state governmental agencies, such as state departments of public health
7. Review, revise, and refine process and categories constantly	- Ensures that data collected is relevant - Helps facilitate incremental changes, which could include moving from data collection to data analysis and use

Case Study 1:
Heywood Hospital

Gardner, Massachusetts

Overview

134 beds
Not-for-profit
General, medical, surgical
Annual admissions: 5,768
Annual emergency visits: 18,101
Diversity of patient population: 96% White, 3% Hispanic or Latino, 2% Black or African American, 1% Other
Contact: Barbara Nealon (nea.b@heywood.org)

Background

Heywood Hospital is a medium-sized facility located in an urban area about two hours west of Boston, Massachusetts. Unlike other hospitals in the Boston area, Heywood's geographic area of Gardner, Massachusetts, has very little racial and ethnic diversity. Despite the apparent lack of diversity in its patient population, the hospital has actively collected and used racial, ethnic, language, and religious data and preferences of their patients. Through this collection effort, Heywood has discovered pockets of socioeconomic and minority groups who can benefit from specialized services.

In 1999, the hospital established a multicultural task force with interdisciplinary representation from executive management, information services, telecommunication, nutrition, plumbing services, mental health, social work, and food service. In addition to being multidisciplinary, the task force is also multiracial and multicultural. The executive champion of the task force is the human resource director. The multicultural task force was interested in assessing diversity in the hospital's patient population and determining if the organization's staff reflected the diversity of its patient base.

Heywood Hospital views collection of race, ethnicity, and primary language data as a part of care provision and a critical component of the performance improvement process. As such, the effort has received widespread support from senior management.

Progress

Prior to 1999, when the task force was established, Heywood Hospital only provided interpreter services for American Sign Language. Since then, the diversity of residents in the hospital's geographic area has changed as more people migrated to the area. In 2002, Heywood developed an in-house interpreter program, which offers video relay for deaf and hard-of-hearing patients, a phone interpreter, and in-house interpretation. In the past few years, multicultural services at Heywood Hospital have had a tremendous impact:

Service Provision

- Prior to establishing its in-house interpreter program, Heywood had 56 hospital encounters with the deaf or hard-of-hearing population. A year after establishing the program, the hospital had 252 encounters, followed by 556 and 800 encounters in subsequent years. Last year, the hospital serviced 1,422 encounters with limited English proficiency patients, including deaf patients. The primary language of Heywood patients, after English, is Spanish, followed by American Sign Language.
- Once Heywood started providing Spanish interpretation, it received more demand for the service. Through serving patients, the hospital's staff has become culturally sensitive to the array of dialects within the Spanish language. The hospital provides interpreter services for Vietnamese, the third most frequently used language by its patients, and has just linked up with

the executive director of a Hmong community group to interact and determine the group's needs.

- Heywood has generated attention for increased education in specific patient populations. For example, in 2008, the hospital found that all admissions for one of its smallest minority groups were for chemical exposure. Staff and clinicians were able to link the admissions to workplace conditions and collaborate with community leaders to promote healthy behaviors in the workplace.

Process Change

- To diversify the hospital's staff base, multicultural services worked with human resources staff, volunteer services, and medical staff to self-identify, just as with patients. This information is also used to determine potential staff to be trained as interpreters.
- Heywood Hospital mandates cultural competency training for all new hires and trains its staff on cultural competency issues on an annual basis. The hospital also provides interpreter training annually. For example, April is diversity month at Heywood, and the hospital uses the opportunity to educate staff on specific topics impacting various patient populations.
- The work of the multicultural team is tied to the quality improvement process, so the team reports progress to senior management.

Successes

- The greatest success is establishing a program that is recognized by executive management.
- As staff members have become culturally competent, the hospital has seen an increase in the number of minority patients who seek care at Heywood. The hospital is also able to attract diverse staff and volunteers.
- The local community respects Heywood Hospital and looks to the hospital as a resource for cultural competency issues.

Challenges

- Financial limitations prevent allocating more resources to equity efforts.
- Staff stereotypes about patients still exist; additional staff training is needed to sensitize staff to the importance of providing optimal customer service to all patients regardless of background.
- The "unknown" category in patient race and ethnicity data currently hovers around two percent. The hospital is improving efforts to decrease this number so no patient will be unknown.
- Moving to the next step after identifying trends in patient race, ethnicity, and primary language data is required. It will involve a combination of translating materials into patients' preferred languages, providing specific services for patients, and going out into the community to connect with community leaders and provide education.
- Getting the information technology department on board and convincing them to prioritize the data collection efforts is also a continuing challenge.

Lessons Learned

- Be willing to learn. Heywood Hospital has utilized available resources from the Joint Commission, American Hospital Association/Health Research & Educational Trust, the Massachusetts Department of Public Health, and other state collaborators.
- Combine the disparities data collection and use with existing reporting requirements. This process will ensure streamlining efforts across multiple departments and facilitate broad buy-in. State initiatives, regional programs, and payer policies have also served as facilitators to data collection and use at Heywood Hospital.
- Continually engage executive leadership. The CEO of the hospital is a member of the multicultural task force and reports back to the hospital's board of trustees.

Case Study 2:
San Mateo Medical Center

San Mateo, California

Overview

350–400 beds
County hospital and clinics
General, medical, surgical, primary, and long-term care
Annual admissions: 4,000
Annual emergency visits: 35,500
Annual outpatient visits: 240,000
Diversity of patient population: 59% Hispanic or Latino, 15% White, 9% Asian/Pacific Islander, 5% Black or African American
Contact: Jonathan Mesinger (jmesinger@co.sanmateo.ca.us)

Background

San Mateo Medical Center (SMMC) is a large public health care system that operates outpatient clinics throughout San Mateo County, including an acute care hospital and long-term care facilities. The medical center is also one of 19 member hospitals of the California Association of Public Hospitals and Health Systems (CAPH).

Until a year ago, SMMC collected basic race and ethnicity data required to meet state and federal requirements and used the race and ethnicity classifications required by the Health Resources and Services Administration (HRSA) and the state. In the past year, SMMC has been focused on moving toward collecting patient race, ethnicity, and primary language data (referred to as R.E.A.L. data by the hospital and CAPH) and has worked to modify patient registration to ensure that the medical center is collecting patient demographic information that will yield meaningful data. As part of the new model, SMMC defined a list of 30 granular race and ethnicity classifications. The revised list will help capture the information needed for reporting purposes and, most importantly, capture meaningful patient demographics information that can be used for assessing and improving quality of care and reducing disparities.

Progress

To identify the list of race and ethnicities to be included in the registration process, SMMC sought the input of its cultural competency committee, a multistakeholder group. This committee was able to provide guidance on the appropriate ethnicities to include in the list and solicit feedback and recommendations from various departments and the community.

Process Change

- SMMC will revise the registration process to move away from front-line staff verbally asking patients about their race and ethnicity. The process caused problems because patients are reluctant to divulge information and staff is hesitant to invade patients' privacy. The medical center plans to shift to a self-administered questionnaire, so patients have more privacy and confidence in responding to the questions.
- To allow patients to self-identify, SMMC selected a list of races and ethnicities from among an Office of Management and Budget list of 300, which was representative of the community it serves. The new list is comprehensive but not burdensome for patients or the SMMC data system. The granular list was also informed by the languages included in patients' requests for interpretation.

Challenges

- Staff training is essential, since the data collected is only as good as those collecting it. Staff training will enable staff to overcome reservations about collecting R.E.A.L data from patients and motivate staff to participate in quality improvement.
- The new system involved changing the online system for registering patients, which required considerable work from the information technology department. Getting IT to prioritize the project has been challenging but also is improving gradually as the initiative gains system-wide focus.

Lessons Learned

- Set a well-defined goal for collecting patient race, ethnicity, and primary language data. SMMC was able to define the goal for the R.E.A.L. data initiative as an approach to collecting patient demographics that will enable the medical center to compare patient health outcomes and reduce disparities. This approach facilitated leadership buy-in.
- Solicit broad multistakeholder and multidepartmental involvement in data collection efforts. SMMC involved multiple departments in identifying the granular list of races and ethnicities to be collected, ensuring the categories are relevant and representative. Multistakeholder involvement also helped ensure that the effort fulfilled the needs of departments involved in data collection and reporting requirements to the state and other funding sources. And involving multiple departments eliminated duplicative efforts.
- Build on momentum established by state and regional initiatives. The California Health Care Safety Net Institute, quality improvement partner of CAPH, has been actively pushing the initiative to collect and use R.E.A.L. data. This effort has elevated the initiative to the attention of the senior leadership of SMMC, who are associated with the CAPH and very aware of the need to collect the data.
- Establish and report metrics for R.E.A.L. data collection and use. The quality leadership team at SMMC is actively involved in pushing data collection and use and has included written data collection as a metric to be reported as part of the Medi-Cal (California's Medicaid program) waiver application. As such, SMMC has to meet specific metrics for data collection and for qualifying for certain kinds of federal funding. This reporting requirement has been effective in garnering system-wide attention to data collection.

Case Study 3:
Lehigh Valley Hospital/Lehigh Valley Health Network

Allentown, Pennsylvania

Overview

500 or more beds
General, medical, surgical
Annual admissions: 65,400
Annual emergency visits: 163,000
Annual outpatient visits: 1.7 million
Diversity of patient population (including newborns): 80.8% White, 8.6% Hispanic or Latino, 4.7% Unavailable or refused, 3.6% Black or African American, 1.2% Multiracial, 0.9% Asian/Pacific Islander, 0.1% Native American
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Background

Lehigh Valley Health Network (LVHN) includes two full-service hospitals—Lehigh Valley Hospital with two clinical campuses in Allentown, Pennsylvania, and Lehigh Valley Hospital-Muhlenberg in Bethlehem, Pennsylvania—as well as several community health centers, a network of primary and specialty physicians, and other services. The health network is located in east central Pennsylvania, approximately 50 miles north of Philadelphia and 80 miles west of New York City. The largest municipality in the health network's service area is home to a large Hispanic population and currently has a majority minority population distribution.

In 2006, the senior leadership of LVHN organized a patient-centered experience retreat for hospital staff and providers, community organizations, and former patients and family members to speak honestly about their hospital experience in the network. Feedback from the community revealed that despite the high quality of care provided by the network, patients' cultural, religious and ethnic needs were not being met. The retreat served as a tipping point for the cultural competency work of the network and also garnered senior leadership buy-in. Under the guidance of senior leadership, the organization endorsed a strategic plan, which included as objectives understanding the importance of collecting patient demographics to identify disparities and standardizing the collection of patient race, ethnicity, and primary language data.

In October 2008, the organization standardized collection of patient race and ethnicity data. LVHN also provided registrar education and worked with information services to identify the race and ethnicity categories to collect. In January 2011, LVHN revised the data collection process for patient race and ethnicity data to comply with new federal requirements.

Progress

The change made to the registration process enabled LVHN to collect race and ethnicity in separate fields. Prior to that change, the organization had one field for both patient race and ethnicity. The revised categories gave patients the option of refusing to answer the question or indicating that they are unsure of their racial background.

Process Change

- The health network eliminated the use of the "some other race" category in order to collect meaningful data. Prior to 2008, the "some other race" category received the second largest

response for certain quality indicators that were tracked Currently, the "unavailable or refused" category represents 4.7 percent of health network admissions.

Challenges

- Getting staff buy-in was challenging but critical. LVHN engaged Health Research & Educational Trust consultants to provide training to the supervisors of registrars to help supervisors understand the standardized process for patient data collection and the rationale for change, and answer questions about legality. Several in-house training sessions were held to educate the registrars about the new process.
- Refining the race and ethnicity category descriptions to help members of minority populations (specifically Latino, Arabic, and Caribbean populations) self-identify the appropriate category for them.
- Currently, the network has limited resources for reviewing and analyzing the data for trends. A small collaborative was assembled, including members of the health network's health studies and quality departments, to identify methodologies to analyze these data.

Lessons Learned

- Provide staff training, especially registrar education, which is critical for collecting meaningful data. Training registrars to understand the rationale for data collection will better prepare them to field questions from patients and encourage patients to provide accurate and complete responses.
- Work with community partners to gain insight into the cultural differences and diversity that exist between various ethnic groups. LVHN has several partnerships with community residents and organizations that provide insights to the health network regarding cross-cultural care delivery.
- Use various approaches to facilitate leadership buy-in. LVHN's leadership council continues to make cross-cultural care a priority of the organization and has senior leaders who serve as executive champions for the cultural competency work. Also, the senior management council has annual goals tied to equitable health care delivery.
- Learn from other departments and units that have successfully incorporated cultural competency in a cross-cultural environment. For example, the HIV unit at LVHN is much further along in having bilingual and cross-cultural staff deliver care to their patients.
- Recognize that it takes time to attain the kind of organizational culture change that makes providing cross-cultural care a part of everyday operations at an organization.

Case Study 4:
Baylor Health Care System
Dallas, Texas

Overview

North Texas integrated health care system with:
- 26 owned, leased, affiliated, and short-stay hospitals
- 130+ primary care, specialty care, and senior health centers
- 17 ambulatory surgery centers
- 450+ employed physicians in HealthTexas, BCHS-affiliated physician network

Not-for-profit
Annual admissions: 120,000
Contact: James Walton (jameswa@baylorhealth.edu)

Background

Baylor Health Care System (BHCS) is a large, integrated health care system based in Dallas, Texas. It includes 26 owned, leased, affiliated and short-stay hospitals as well as more than 100 ambulatory facilities that serve northern Texas. The system has more than 4,500 affiliated physicians, including more than 450 employed physicians who are part of HealthTexas, its affiliated physician network.

In 2006, BHCS established the Office of Health Equity (OHE) with the purpose of reducing variation in health care access, care delivery, and health outcomes due to:
- Race and ethnicity
- Income and education (i.e., socioeconomic status)
- Age
- Gender
- Other personal characteristics (e.g., primary language skills)

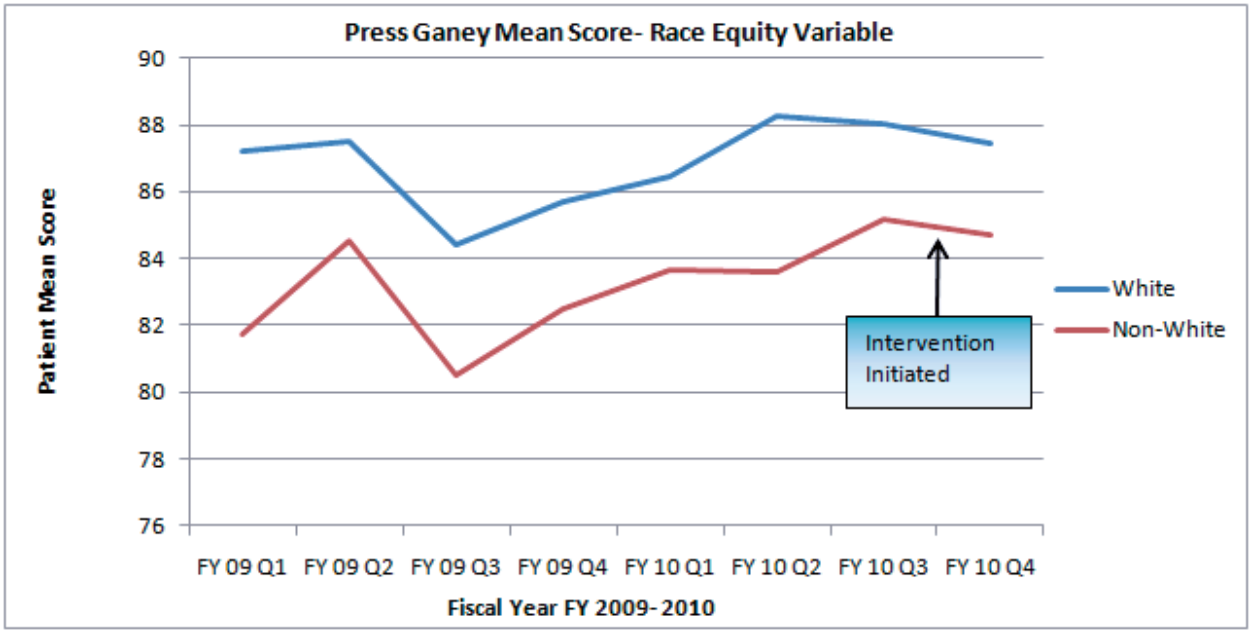
OHE identifies and tracks these variations by producing an annual "BHCS Health Equity Performance Analysis" (HEPA) that reports data on:
Inpatient performance measures:
- Quality of care measures (Joint Commission core measures)
- Experience of care measures (patient experience/satisfaction)
- Outcomes measures (inpatient mortality and 30-day readmission)

Outpatient performance measures:
- Quality of care measures (diabetes, asthma, and chronic heart failure processes of care)

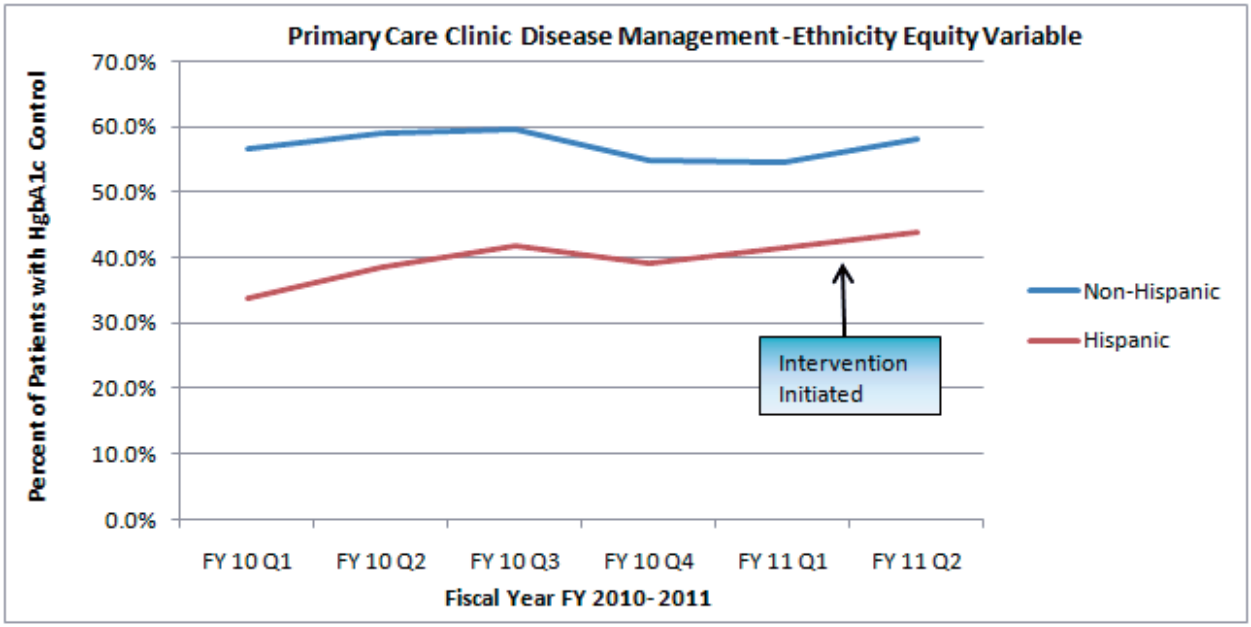
To produce the BHCS HEPA, the first step is to accurately collect race, ethnicity, and primary language data within BHCS hospitals and ambulatory care points of care. Additional variables are routinely collected including insurance status, age, and gender.

Subsequently, the equity measures are aggregated into several dichotomous variables:
- Race: white vs. nonwhite
- Ethnicity: Hispanic vs. non-Hispanic
- SES (socioeconomic status) proxy: commercially-insured vs. self-pay/Medicaid

For each variable, the percentages of eligible patients and the differences between each dichotomous variable are calculated. Differences are tested for statistical significance at a p <= .05. The OHE produces and reports the HEPA in easy-to-read graphics, trending performance over time. For illustration purposes, the following sample graphs are provided from the 2010 BHCS HEPA report showing (1) BHCS ED patient satisfaction by race and (2) BHCS diabetes care management for Baylor's ambulatory clinics by ethnicity (diabetes control: HgbA1c<7%).



Being able to track measures over time allows for documenting performance trends. In the patient satisfaction example, the consistency of the disparity in satisfaction between white and nonwhite patients over two fiscal years points to an opportunity for developing health equity improvement initiatives to reduce the disparity.



In the diabetes care management example, the graphic illustrates a persisting disparity in diabetes care within a cohort of Baylor's primary care practices. When presented to the physicians' quality improvement committee, these data became a powerful tool for creating organizational prioritization and improvement momentum.

The annual HEPA report resides on the BHCS intranet, and the system uses the report to focus resources and efforts to reduce observed disparities and improve the quality of care among the patients and communities it serves.

Progress

In 2010, the OHE launched its first hospital-based health equity improvement strategy. This pilot intervention is a collaboration between OHE and the leadership and staff of two hospitals within the health care system. As part of this work, the staffs are using a continuous quality improvement process with rapid cycle improvement identifying possible causes of observed racial and ethnic differences in patient experience and testing workflow solutions to reduce and eliminate the disparity.

Additionally, in 2011OHE launched its ambulatory care health equity improvement work with Baylor's employed physician organization, HealthTexas Provider Network. Since 2009, patients have self-declared their race, ethnicity, and primary language at the point of service, and the data have been analyzed to identify disparities in care. In 2010, data on diabetes care management pointed to significant differences in the percentage of non-Hispanic and Hispanic patients with superior diabetes control (HgbA1c levels less than 7%), with Hispanics meeting the management goal significantly less often than non-Hispanics. Within the last 24 months, physicians within the network were placed at financial risk for selected quality of care measures. One outcome has been an expressed interest in understanding if a physician's or clinic's overall performance in diabetes care is affected by disparities in a particular subpopulation's achievement of key diabetes care management measures.

As a result of this work, an important and promising project has been launched exporting lessons learned from a successful OHE health equity pilot, the Diabetes Equity Project (DEP). The DEP, funded

by the Merck Foundation for the past two years, is providing diabetes self-management education and patient advocacy for some of the area's underserved populations in partnership with five Dallas County charity clinics. Early results have been encouraging, significantly increasing the number of nonwhite patients attaining superior diabetes control (HgbA1c<7%). Leveraging these results, a recent decision by the HealthTexas Provider Network Quality Committee extended the DEP to four private practice clinics experiencing low diabetes care management performance among Hispanic patients, launching this initiative during the second quarter of 2011.

III. Leading Practices for Using Patient Race, Ethnicity, and Language Data

Even though the majority of hospitals and health care systems collect patient race, ethnicity, and primary language data, many organizations are challenged in using the data to provide equitable patient-centered care. Several valid reasons exist for why organizations have been unable to mine their current data to identify trends in care patterns and provide targeted interventions for specific groups of patients.

The following table highlights leading practices that some organizations have adopted for using the demographics data that they collect about their patients.

Leading Practices for Using Patient Race, Ethnicity, and Language Data	
Practice	**Details**
1. Use an equity scorecard or dashboard to report organizational performance	- Using a dashboard that captures performance on key quality indicators stratified by patient race, ethnicity, and socioeconomic status is an effective tool if updated and reported regularly to senior leadership of the hospital. The dashboard is able to capture progress made in certain areas as well as identify areas of focus. The dashboard also serves to identify patient populations that may be at increased risk for adverse outcomes.
2. Provide interpreter services	- Communication gaps between providers and patients are often a source of medical errors and may lead to costly and excessive testing. They can also result in delay of necessary care. Collection of patient data can help identify areas where trained and professional interpreter services are needed.
3. Review performance indicators such as length of stay, admissions, and avoidable readmissions	- Stratifying average length of stay, admissions, and readmissions by patient demographics can help identify any trends associated with specific patient groups, which then can be addressed to improve key performance indicators and quality of care.
4. Review process of care measures	- Analyzing performance on key process of care measures can identify gaps in care, which could be linked to specific patient groups.
5. Review outcomes of care	- Reviewing outcomes will help identify any trends, especially poor outcomes that are linked to certain patient groups.
6. Analyze provision of certain preventive care	- Analyzing delivery of certain services by race and ethnicity will help identify areas where specific groups are receiving less preventive care, especially screening.

IV. Conclusion

Federal, state, and regional activities over the past few years have highlighted the importance of collecting and using patient race, ethnicity, and primary language data to improve health care equity. Though hospitals have collected this data for years, new requirements have necessitated another look at how the data is collected and the quality of the data collected. The exploratory interviews outlined here reveal several key lessons for organizations looking to improve their data collection and utilization processes:

- Focus on improving registration and information systems to capture more comprehensive demographic information about patients
- Consolidate and standardize efforts across departments to reduce duplicative activities
- Identify internal champions to help advance equity strategy goals and engage effective management
- Develop partnerships with community organizations that can provide insights into the cultural differences in the community served, to better inform strategies to reduce disparities
- Identify and track inpatient and outpatient performance measures and aggregate the measures in dichotomous variables based on race, ethnicity and, if desired, socioeconomic status
- Use a continuous improvement process to identify possible causes of observed racial and ethnic differences in patient care and test workflow solutions to eliminate the disparity

The recurring theme echoed by the hospitals interviewed and others in the field highlights the need for more guidance on how to review data for trends and develop simple interventions that can be implemented immediately to improve care for patients.

Appendix: Resources

- *Assuring Healthcare Quality: A Healthcare Equity Blueprint.* National Public Health and Hospital Institute, September 2008. http://www.naph.org/Main-Menu-Category/Our-Work/Health-Care-Disparities/Equity-Blueprint.aspx?FT=.pdf
  Recommended strategies and practices that can be tailored to individual hospitals as a starting point for designing and implementing interventions

- Betancourt, J.R., Green, A.R., King, R.R., Tan-McGrory, A., Cervantes, M., Renfrew, M. *Improving Quality and Achieving Equity: A Guide for Hospital Leaders.* The Disparities Solutions Center, Massachusetts General Hospital, 2009. http://www.rwjf.org/pr/product.jsp?id=38208
  A guide that presents the rationale for addressing racial and ethnic disparities in health care and highlights model practices from hospitals and leaders who are actively engaged in addressing disparities.

- Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.* National Academies Press: Washington, DC, 2001. http://www.nap.edu/openbook.php?isbn=030908265X
  Institute of Medicine report that explores how racial/ethnic minorities experience the health care environment and examines how disparities in treatment may arise in health care systems. Offers recommendations for improvements in medical care financing, allocation of care, availability of language translation, community-based care, and other areas.

- *Cultural Sensitivity: A Pocket Guide for Health Care Professionals.* Oakbrook Terrace, IL: Joint Commission Resources, January 2008. http://www.jcrinc.com/Books-and-E-books/CULTURAL-SENSITIVITY-A-POCKET-GUIDE-FOR-HC-PROFESS-PK-OF-5/1370/
  Quick guide to health care needs, expectations, and perceptions of a variety of racial/ethnic groups.

- Hasnain-Wynia, R., Pierce, D., Haque, A., Hedges Greising, C., Prince, V., Reiter, J. (2007). *Health Research & Educational Trust Disparities Toolkit*. www.hretdisparities.org
  Free web-based tool that provides hospitals, health systems, clinics, and health plans information and resources for systematically collecting race, ethnicity and primary language data from patients. Includes scripts, rationale, and a section focused on deaf and hard-of-hearing populations.

- Hasnain-Wynia, R., Yonek, J., Pierce, D., Kang, R., Greising, C. H. *Hospital Language Services for Patients with Limited English Proficiency: Results from a National Survey*, 2006. http://www.hret.org/resources/1550998119
  Describes current practices and common barriers as well as the specific resources and tools needed to provide language services to LEP patients.

- Hospitals in Pursuit of Excellence – American Hospital Association. Web page on health care equity. http://www.hpoe.org/topic-areas/health-care-equity.shtml. This web page lists a variety of resources to assist hospital leaders in the development and execution of targeted interventions to improve access to care.

- The Joint Commission. *Advancing Effective Communication, Cultural Competence, and Patient- and Family-Centered Care: A Roadmap for Hospitals*. Oakbrook Terrace, IL: The Joint Commission, 2010. http://www.jointcommission.org/assets/1/6/ARoadmapforHospitalsfinalversion727.pdf) This guide is designed to assist hospitals in integrating concepts and ideas from the fields of communication, cultural competence, and patient- and family-centered care in order to improve their efforts to delivery high quality care.

- Mead, H., Cartwright-Smith, L., Jones, K., Ramos, C., Woods, K., and Siegel, B. *Racial and Ethnic Disparities in U.S. Health Care: A Chartbook.* The Commonwealth Fund, March 2008. http://www.commonwealthfund.org/Content/Publications/Chartbooks/2008/Mar/Racial-and-Ethnic-Disparities-in-U-S--Health-Care--A-Chartbook.aspx
  Provides data on the U.S. population by race/ethnicity, income and language and identifies disparities in health status and mortality, access to health care, and quality. Also documents strategies that may lessen or eliminate disparities in health and health care.

- *National Standards for Culturally and Linguistically Appropriate Services in Health Care.* U.S. Department of Health and Human Services, Office of Minority Health, March 2001. *http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=2&lvlid=15*
  National standards developed to ensure that all people entering the health care system receive equitable and effective treatment in a culturally and linguistically appropriate manner.

- Weinick, R. M., Flaherty, K., Bristol, S. J. *Creating Equity Reports: A Guide for Hospitals*. The Disparities Solutions Center, Massachusetts General Hospital, 2008. http://www.massgeneral.org/disparitiessolutions/resources.html
  A guide that provides a framework for equity reporting and shares lessons learned from the experiences of several U.S. hospitals.

hospitals in pursuit of excellence
Accelerating Performance Improvement

Hand Hygiene Project: Best Practices from Hospitals Participating in the Joint Commission Center for Transforming Healthcare Project

November 2010

Joint Commission Center for Transforming Healthcare

American Hospital Association

HRET
HEALTH RESEARCH & EDUCATIONAL TRUST
In Partnership with AHA

Hand Hygiene: Best Practices from Hospitals

http://www.hret.org/hand-hygiene/index.shtml

Hand hygiene was chosen by eight leading hospitals for the first Robust Process Improvement (RPI) project by the Joint Commission Center for Transforming Healthcare. The Joint Commission had surveyed the hospitals and asked, "What is the number one patient safety challenge?" Hospitals prioritized the challenges, and hand hygiene ranked first on the survey.

Many health care-associated infections (HAIs) are transmitted by health care personnel, and hand hygiene is a primary means to reduce these infections. In 2002, the estimated number of HAIs in U.S. hospitals was approximately 1.7 million, with more than 98,000 deaths annually, according to the CDC.

The Eight Participating Hospitals

Mark Chassin, MD, Joint Commission president, chose the eight hospitals to participate in the hand hygiene project. These hospitals all had "well-established RPI infrastructure at their hospital," said Melody Dickerson, RPI black belt, the Joint Commission. All eight hospitals use Lean Six Sigma methodologies, and it was a requirement that the eight hospitals follow the same methodology throughout the project.

The Joint Commission standard for hand hygiene has changed as a result of the hand hygiene project. Previously the standard called for hospitals to demonstrate hand hygiene compliance at a rate greater than 90 percent. A hospital that failed to comply would receive a Requirement for Improvement (RFI) and have 90 days to show improvement to 90 percent. "Because of this project, we now know how difficult it is to reach 80 percent, let alone 90 percent," said Dickerson. "Now the standard says the hospital needs to work to improve compliance," she explained.

The eight hospitals are:

- Cedars-Sinai Medical Center, California: 950 beds, teaching
- Exempla Lutheran Medical Center, Colorado: 400 beds, nonteaching
- Froedtert Hospital, Wisconsin: 486 beds, teaching
- The Johns Hopkins Hospital, Maryland: 1,041 beds, teaching
- Memorial Hermann The Woodlands, Texas: 252 beds, nonteaching
- Trinity Health-St. Joseph Mercy Health System, Michigan: 537 beds, teaching
- Virtua, New Jersey: 270 beds, nonteaching
- Wake Forest University Baptist Medical Center, North Carolina: 872 beds, teaching

In December 2008 representatives from these hospitals met to work on a charter and define the scope of the project, which is the first step in the five-step Six Sigma methodology: *define, measure, analyze, improve, control*. Most of the hospitals had tried tackling hand hygiene before participating in the Center's project. For the participating hospitals—and for most hospitals beginning a similar project—the baseline data results, using non-biased hand hygiene observers or secret shoppers, were surprising in that the hand hygiene compliance demonstrated was much less than previously thought. Most hospitals thought their compliance rate was about 70 percent to 90 percent, when it was actually less than 50 percent. As one hospital champion observed, "Where we thought we were and where we were, were two different things."

From April 2008 through August 2010, the participating hospitals defined and measured hand hygiene, analyzed data, and improved processes and workflow using Lean Six Sigma. The hospitals helped identify

15 major root causes of failure to clean hands and worked on developing targeted solutions for each root cause or contributing factor.

Results

- As of August 2010, all eight participating hospitals reported hand hygiene compliance rates at about 82 percent, and they are still monitoring the process to determine sustainability of their results.
- Many of the hospitals have reported a decline in HAIs as their hand hygiene compliance rate has increased.
- Solutions developed by the hospitals are part of the Targeted Solutions Tool™ (TST), a web-based tool provided free to Joint Commission-accredited organizations. The TST allows organizations to customize solutions to address their specific barriers to excellent performance.

Defining and Measuring Hand Hygiene

One of the first steps in this project was defining hand hygiene compliance. Hand hygiene was defined as washing (or cleaning) hands with an alcohol-based foam or gel or soap upon entry and exit of a patient care area or environment.

Data collection—particularly *how* data was collected—was critical to the project. Hospital managers realize if people know they are being monitored, they will adjust their behavior accordingly. Most hospital hand hygiene teams decided it was important to have secret observers collecting baseline data. According to Dickerson, most organizations will find it easy to gather hand hygiene data using the TST since it provides the user with the data collection tool, data entry programming, self-supported observer training module and real-time reporting of compliance rates complete with charts that can be downloaded and printed for display.

In this project, information was gathered by using hand hygiene observers and just-in-time coaches. Rather than just collecting compliance information, the hand hygiene observers collect data on the observed factors that can lead to hand hygiene non-compliance such as health care personnel entering a room with their hands full of supplies. The just-in-time coaches begin data collection two weeks after the observers have begun collecting compliance data, since this effort can be considered a form of intervention. Coaches approach the health care worker when a non-compliant event occurs to gather non-observed factors of hand hygiene failures such as the perception of the health care workers that hand hygiene was not required or that they were distracted. Just-in-time coaching data is kept separate from the compliance data since staff members can become familiar with people in a coaching role, which could skew the data. The observed and non-observed factors information is what provides the information needed to generate targeted solutions.

Although any staff member in an organization could be trained to be a hand hygiene observer, members of the leadership team are encouraged to participate as just-in-time coaches. Staff members should be trained as hand hygiene observers using the TST's education module. They also should hold job positions that call for them working in the area they are observing for some period of time during the day or night. Leadership team members who could serve as just-in-time coaches include charge nurses, fellows and preceptors as well as medical directors, unit managers and respiratory supervisors. Ultimately, a hospital's goal is to engage all staff to do just-in-time coaching, which will lead to sustained improvements.

Additionally, some barriers to hand washing are things not noticed by the person who failed to wash their hands. Just-in-time coaching can help capture the root causes of failure to wash hands. If personnel

failed to wash their hands, coaches ask why and help identify observed contributing factors. Just-in-time data was kept separate from baseline observational data. Staff members can become familiar with people in a coaching role, which could skew the data.

Analyzing Data

Data analysis identified root causes and also pinpointed particular groups that struggled with the problem more than others. Many of the root causes were surprising because they weren't thought to be an issue. For example, dietary workers have their hands full while delivering trays of food and may think they do not need to wash their hands since they are not touching the patient. But these health care personnel are touching the patient environment. Rethinking and standardizing the work processes allowed the workers to complete the task while minimizing the number of times they would need to wash their hands but still perform the task as efficiently as possible.

Another surprising example was at Cedars-Sinai Medical Center. The surveillance team cultured everything in the patient environment and discovered that privacy curtains—required around all patient beds in California—were colonized with multi-drug resistant organisms in some rooms. According to chief medical officer Michael Langberg, MD, the information "stunned" them. "Patients in the room did not have infections, but the organisms were sitting on the privacy curtains," he said. Even if health care personnel were doing effective hand hygiene before walking in the room, they might touch the curtains without realizing it. The hospital swapped out every curtain and changed how and when they cleaned them. Subsequently, zero such organisms have grown on the curtains, said Langberg. This hospital also addressed the potential spread of germs on lab coats by adding hooks outside patient rooms, which allows health care personnel to easily remove their coats before entering a room.

Improving Processes and Workflow with Lean Six Sigma

All participating hospitals used Lean Six Sigma methodology to examine processes and workflow of health care personnel and identify targeted solutions. A main objective was helping health care personnel incorporate hand washing in their routines, so it would be automatic and not a separate task they would forget to do.

Like most of the other participating hospitals, Exempla Lutheran Medical Center had used Lean Six Sigma for improvement processes for years but not for infection control issues, according to Amber Miller, RN, infection prevention manager. Miller explained that previous hand hygiene projects at Exempla Lutheran and other hospitals focused on posters and glow powder. "We taught people more how to wash hands than how to incorporate washing hands in the workflow," she observed. "With Lean and Six Sigma, we created a standardized work plan so that we do the same thing every time and eliminate waste." The team visited every unit and department to talk about each staff member's role in hand hygiene compliance and when they do hand hygiene within their particular tasks—room cleaning processes, food delivery, changing a light bulb, etc.

By bundling supplies and tasks, health care personnel have fewer opportunities to be in patient rooms and fewer opportunities when they need to wash their hands, likely increasing compliance. "We looked at workflow and how to standardize it, so we decreased ins and outs of patient rooms," said Miller. Changing the location of dispensers to fit in people's workflow also increased compliance.

Using Lean Six Sigma methodology "helped focus our work," said Katy Hoffman, RN, St. Joseph Mercy Health System (SJMHS) nurse manager. "If we didn't have assistance, we would have gone in a million different directions." Russell Olmsted, epidemiologist with infection prevention and control services,

agreed: “Using Six Sigma gave us a process or framework to address initiatives. It was data-driven and gave us data for action.”

At Memorial Hermann The Woodlands, the hand hygiene team comprised of directors and managers from nursing units and ancillary departments held a brainstorming session to list every possible issue they could think of involving hand hygiene, said Tricia Kingdon, Six Sigma black belt. After the team prioritized factors using a cause-and-effect matrix, data was collected on seven issues thought to have the most impact on hand hygiene compliance, including workers having items in hand, wearing gloves and not touching the patient.

One process that Memorial Hermann focused on was arterial blood gas draw. Previously, respiratory therapists were assigned specific patients and drew the specimen, went to the lab with gloves in hand, left the specimen, re-gloved and then went to another patient’s room to draw a specimen and repeat the process. Some therapists washed their hands and some didn’t. To understand and refine the process, “we were physically standing in the ICU and role playing to follow the process,” said Kingdon. The process was streamlined by designating one person to draw the specimen and exit the patient room with gloves on and specimen in hand. That person hands off the specimen to someone already in the gas lab wearing the appropriate protective equipment. The person who drew the specimen then cleans hands and immediately goes into the next patient room. “We did not add staff. The staff now follows a different process. Instead of two separate therapists going in and out of rooms collecting specimens, one therapist draws the specimen while the other therapist runs the tests,” said Rob Varro, supervisor, respiratory services, noting the more efficient process for respiratory units.

Kingdon, like many others involved in the project, marveled at how many times nurses cross the threshold of a room in an 8- to 12-hour shift. “We’re asking nurses to wash their hands 200 times a day,” said William Parks, MD, chief medical officer at Memorial Hermann The Woodlands. “Nurses probably cross the threshold an excess of 170 times a day.” Robert Sheretz, MD, epidemiologist, Wake Forest University Baptist Medical Center (WFUBMC), said calculations suggest that nurses are required to wash their hands more than two hours per shift, if one hand-washing event equals 15 seconds.

Examining the workflow process has made people more efficient, observed Kingdon. They now ask themselves, “What do I need before I go into this room?” so they do not go in and out of patient rooms unnecessarily, she added. Anne Tyner, RN, nursing clinical systems (NCS) project specialist at WFUBMC, concurred: “Some of the challenges we had were work processes that led to an increased number of hand hygiene events. The higher number of events, the more likely someone will make an error. It is important to make things as logical as possible to get the task done, whether it involves placement of the dispenser or workflow processes or equipment.”

At Virtua, streamlining workflow meant putting hand hygiene items in one place. “You don’t have to think, where are gloves, trash, and hand gel,” said Gina Cavalli, RN, nursing director. “They are in the same place in every room.” Working with environmental services and transport staff, “we walked their process and asked, ‘Where is the best place for a gel dispenser?’ ” Food service people and phlebotomists have a container with hand gel on their carts, which works best for them, Cavalli added.

Using Technology

Four of the eight participating hospitals used technology to monitor hand hygiene compliance. Typically, health care personnel wear an infrared (IR) badge that has an IR signal. With this type of device, when the provider washes his or her hands, a light on the dispenser flashes and records, “Badge X is next to this sensor.” For a unit like Nelson 8 at the Johns Hopkins Hospital, technology will help locate staff as

they care for patients on the unit. Unlike an ICU where the physicians remain on the unit, Nelson 8 has "many multidisciplinary groups coming and going every day," said Laura Winner, RN, Lean Sigma director. The 28-bed surgical unit provides care to orthopaedic, trauma and spine patients with an average length of stay of about three days. The patient turnover on the unit is high, and workflow is busy. The unit is currently testing RIFD badges and asset tracking. That same technology is being tested in the Johns Hopkins simulation center to determine its reliability in measuring hand hygiene performance. In the near future, this technology may provide real-time hand hygiene feedback to individuals.

Since June 2010, Virtua has been piloting technology and sensors worn by all health care providers. "Technology is making us look at our process," said Kate Gillespie, RN, Six Sigma black belt. Though the hospital is still fine-tuning that technology, Gillespie believes that in the long term, using technology will be helpful. "We cannot sustain secret observers," she said. But having the technology has shown them their observations were "not that far off." "We can see a correlation," she added.

WFUBMC also focused on using an electronic method to monitor and increase compliance for hand hygiene. Health care personnel wear a real time location system tag equipped with infrared recognition that is activated when entering a patient care area. The tracker on the hand sanitizers, sinks, or pumps reads the tag and reports the activation. Tony Oliphant, RN, nurse manager, emphasized that the goal for the technology is that it does not interfere with the workflow. The badges are being modified so as not to hinder work. "We didn't want to change the way people enter and exit rooms," Oliphant said.

The new technology and its possibilities are "monumental in nature," said Shayn Martin, MD, WFUBMC. "We are creating a system to track providers to perform hand hygiene on a scale that is substantially greater than our existing systems. It is continuous. It allows us to build reports for individual compliance." He added, "We should be 100 percent compliant with hand hygiene. We want to be sure the system is highly accurate, does not give false data and does not impose on workflow." Though using this technology "sounds big brother-like," Martin acknowledged, "the last thing we want is to create an environment that makes people nervous and makes it harder to do their job….[The technology] is a way to approach 100 percent [compliance]."

Linking Hand Hygiene Compliance to Reducing HAIs

Studies show that an increase in hand-washing compliance can be correlated to a decrease in health care-associated infections. Though it is difficult to link a reduction in HAIs directly to improved hand hygiene compliance, many of the participating hospitals have seen a decline in HAIs as their hand hygiene rate of compliance increased.

One hospital had seen a "plethora of infections that we did epidemiology on and found were linked" to hand hygiene and acquired in the hospital. At the time, hand hygiene compliance was low. "In heath care, everyone is there for the health of people. To have a bad outcome that could have been linked to hand hygiene was an 'eye opener,' " said an infection control team member. As hand hygiene compliance increased, the infection cluster went away.

Parks from Memorial Hermann The Woodlands, pointed out, "Hand hygiene is one multifactorial component in decreasing HAIs. It is not going to be any single thing." Nevertheless, a driving force behind Memorial Hermann's hand hygiene policy was being "alarmed" at the number of infections that could potentially be transmitted to patients. According to Parks, the hospital has decreased ventilator-associated pneumonia and other infections and is "working diligently" to decrease MRSA and *C.difficile* in the ICU. At WFUBMC, the medical/surgical pilot unit has had no HAIs for the past five of six months.

Main Causes of Failure to Clean Hands

The following ten root causes were observed across the eight participating hospitals.

- Ineffective placement of dispensers or sinks
- Hand hygiene compliance data are not collected or reported accurately or frequently
- Lack of accountability and just-in-time coaching
- Safety culture does not stress hand hygiene at all levels
- Ineffective or insufficient education
- Hands full
- Wearing gloves interferes with process
- Perception that hand hygiene is not needed if wearing gloves
- Health care workers forget
- Distractions

Ineffective placement of dispensers or sinks
At Virtua, a big "aha" moment was discovering their dispensers were not standardized or visible, said Gillespie. "Sometimes dispensers were not even filled," she added. The hospital changed the type of dispensers and their location and painted walls to make them more visible and less likely to fade in the background. These simple changes increased compliance.

Froedtert Hospital made sure dispensers were placed in the workflow, and located them right at the patient's door for use by health care personnel when entering and exiting. "We also put dispensers in high-touch places in the unit, by telephones in the hallway, by elevators, and by other high-touch objects," said Beth Lanham, RN, Lean Six Sigma director at Froedtert. The hospital also added more dispensers throughout the unit for staff to use.

Memorial Hermann The Woodlands has more than a thousand mounted dispensers, located inside and outside every room, and automatic dispensers by elevators. "If you don't make it convenient right there at that second, no one is going to go around the corner and wash their hands," said Parks, the chief medical officer. "It must be available in the flow of what the employee is doing." The hospital has experimented with automatic dispensers and dispensers that can be operated with one hand. Explaining that you "have to go through the micro of this before you can get to the macro," Parks said the hospital is modifying their dispensers so they are self-dispensing, which is projected to save the health system about $400,000. These automatic dispensers put out a measured dose of hand rub, and each self-contained unit has a leak guard and a clear product that does not congeal. Washing with soap and water is still available and required to kill toxins such as *C.difficile*.

Other hospitals also changed the location of their gel and soap dispensers. SJMHS had constructed a new patient tower with convenient hand-washing stations and alcohol-based hand rub dispensers inside each new single-patient room. But when surveyed, health care personnel indicated they considered the set-up insufficient. Personnel who moved between patient care units asked that dispensers be placed in the corridor between every two rooms. The hospital made the change, which satisfied health care personnel and offered an additional visual queue to perform hand hygiene. This intervention has been expanded to other units and divisions at SJMHS.

Virtua made sure to "have gel in the pathway" of health care practitioners and their work, said Sheila Simms, administrative director of medical/surgical critical care. WFUBMC implemented a more formal process if a dispenser was empty, recognizing that filling empty dispensers promptly was a problem. The

dispensers are now filled on a regularly scheduled basis. The hospital also placed additional dispensers in the pilot areas to help ensure that placement matched workflow.

Hand hygiene compliance data are not collected or reported accurately or frequently

One of the biggest problems with improving hand hygiene is lack of data, observed Sheretz, WFUBMC epidemiologist. Sheretz developed the content for training observers at WFUBMC so their observations were accurate and consistent. "When you have that data, you can focus on what you need to do to improve," he said. "Sometimes the issue is administrative, sometimes it's educational, and sometimes it's a group that wasn't aware."

Most of the participating hospitals use staff members who volunteer to be hand hygiene observers. "We tried to use physical therapists, pharmacists, and environmental services cleaning staff," said Miller of Exempla Lutheran. "These people are out and about, and staff members are used to them floating around [on the unit]." She looks forward to the promise of using technology for tracking compliance. "With secret shoppers, we're only capturing a snapshot. The technology piece will be the gold standard," she added. According to Christina Olsen, RN, nurse educator, Froedtert Hospital, "We identified staff members and specially trained them to collect valid and reliable observations. They did observations throughout shifts when they could fit in time." Froedtert also used secret observers from disciplines outside the pilot unit, such as transport and dietary.

SJMHS used its own quality coaches for data collection. According to Robert MacDonell, system performance improvement leader, three to six staff members on each nursing unit, or at least one on each shift, are picked as quality coaches. The quality coaches help monitor quality and patient safety metrics—not just adherence with hand hygiene—in addition to caring for patients. They monitor and collect data and then send the data to the manager. "These people are known to their peers—they are known to be quality coaches," said MacDonell. "What is not known is when they are collecting data or about whom." He explained that when nurses are helping other staff with a patient, they also may be observing and watching things like hand hygiene. Rolland Mambourg, MD, vice president for medical affairs, added, "The quality coach is doing real-time observation collection…that is accurate. " Hoffman, the nursing unit manager, explained that the quality coaches, who also are bedside nurses doing direct patient care, have specific training materials and an observation sheet on their clipboards. Their involvement helps the hospital observe everyone, even in private rooms when the door is closed.

Lack of accountability and just-in-time coaching

Holding each other accountable is important. According to one unit manager, "There is a lot of peer pressure, with everyone reminding everyone." She added, "Everybody has accountability…physicians, therapists, nurses. We learn from each other."

At Cedars-Sinai Medical Center, the goal of 100 percent compliance in hand washing is part of every health care provider's evaluation. Staff members are held accountable if they are non-compliant, not for punitive reasons but for patient safety, said Susan Rivera, RN, nurse manager. In most hospitals, coaching, mentoring or counseling is provided for non-compliant staff members. But after additional reminders, staff who continue being non-compliant may receive more formal reprimands from managers and senior administrators. At Cedars-Sinai, one of the participating hospitals using technology to help monitor compliance, staff on the test unit now can check their own compliance data electronically.

Hospital leadership plays an important role in modeling behavior for all staff. According to Richard Riggs, MD, medical director, Department of Physical Medicine and Rehabilitation at Cedars-Sinai, "We're clear

with trainees that this is a core requirement. When they are caught not sanitizing their hands on rounds, we stop and make everyone do it. You must have leaders on the unit who walk the walk." Jennifer Blaha, master black belt, performance improvement, concurs: "Folks in our department are champions. Everyone mimics, and everyone drives the culture. If a physician director does it, it trickles down."

Just-in-time coaching is a key component to ensure accountability in Johns Hopkins Hospital's neurosciences critical care unit (NCCU). Anonymous observers record hand hygiene performance—both compliance and non-compliance—and describe the person they are monitoring. Typically within 24 hours, just-in-time coaches go back and talk with the non-compliant taff member and ask: "What were the circumstances?" They discuss with the staff member what to do differently next time.

Several hospitals stress including accountability in a supportive environment. SJMHS uses unit-based dashboards to summarize and display performance and team feedback to "encourage, support and problem solve to move toward a goal," said Mambourg. He added, "If someone is having difficulty, we talk to them to help. We have tried to create an encouraging and supportive, non-punitive atmosphere. Health care workers are highly motivated people. They will change if we help them."

Safety culture does not stress hand hygiene at all levels

Exempla established an accountability policy based on the rule that it is unacceptable to not wash hands in the hospital. Leading up to Exempla Lutheran's accountability policy was ensuring all systems worked. The hospital established a policy for how frequently dispensers are checked and for replacing and refilling them. "We did not do accountability until we got that right," Miller added. Exempla Lutheran's accountability policy for hand hygiene is modeled on its attendance policy. The policy is progressive: the first warning is verbal, then written, final written warning, and the last warning leads to termination. "Our administration was very supportive of the policy with the caveat that it needed to be equal for everyone, including physicians," said Miller.

Physicians may be the most challenging group to comply, said Parks of Memorial Hermann The Woodlands. "We need a rule that encompasses everybody and holds everybody accountable," he observed. "We can have all the secret observers and changes in nutrition and phlebotomy, but until we have a policy that has some teeth in it and act upon it, it is not going to happen."

"Administration made the commitment and adopted a policy regarding accountability," added Kingdon. Memorial Hermann's policy was sent to the nurse practice council for input, and the council made the policy even stiffer than originally proposed. The policy stipulates the number of incidents of non-compliance with hand hygiene and what action will be taken. The actions escalate for every three incidents. Since hand hygiene compliance is so important, it is incorporated into the hospital's Managing Performance and Behaviors at Work policy.

At SJMHS, the hand hygiene project "is happening in an environment that we have tried to create—improving safety and quality of service that we deliver," said Mambourg. "The infrastructure is in place because we are engaged in a lot of patient safety and quality improvement activities." Mambourg added that having quality coaches on every floor, having a qualified Six Sigma team and a vice president for quality all contributed to "trying to change to a culture attentive to quality and safety." The culture helped teach people how to share and react to data "without taking opportunities for improvement personally but instead promoting a sense of engaging the entire care team," he added. Hospital leaders and the system's board also are apprised of performance metrics and supportive of these efforts.

Exempla Lutheran's infection control office keeps weekly data and produces a patient safety report that discusses HAIs, hand hygiene compliance rate, medication errors, and other measures. The report is

distributed to all staff, managers, directors and board members. Each unit has unit-based councils, and they can post the report. “We want every single person in the organization to read the report every month,” explained Miller.

At Johns Hopkins Hospital, performance scores also are posted by unit and available hospital-wide. Units can see where they rank in comparison to other hospital units. But “individual accountability is probably the most powerful thing that happened here,” said Angela Feurer, assistant nurse manager, NCCU. When the unit identified a young resident who was a chronic offender, the chair of the department of neurosurgery took the issue seriously and after several reports, reprimanded the resident. “To get that kind of involvement and support was big,” added Winner.

Simms at Virtua emphasized the importance of finding champions throughout the hospital to promote hand hygiene. “We are starting to hardwire processes. Leaders cannot watch staff 24/7. We are trying to get some champions that are infiltrated.” They aim to get buy-in from all levels of the organization, so even the housekeepers can say, “Hey, doc, you didn’t wash your hands.” “We’re trying to get everyone buying in,” said Kate Gillespie.

Ineffective or insufficient education

On the NCCU at Johns Hopkins Hospital, the project team had the hands of health care personnel cultured so staff would understand the organisms that could linger on one’s hands and to get buy-in. St. Joseph Mercy Health System used a CDC poster that showed how long bacteria can survive on surfaces that staff members touch every day. “That was a powerful message,” said Russell Olmsted, director of infection prevention and control services. “The survival data was earth-shattering for staff. The environment can look clean but have significant concentrations of bacteria.”

At Exempla Lutheran, non-compliant employees get an extra dose of hand hygiene education. They spend time with the infection control staff, have their hands cultured and must do a poster presentation on the topic back at their unit. Miller remembered one employee who had a bad attitude and was rude to IC staff. After spending just one half-hour with the IC staff, he completely changed his attitude and understanding. He had the misconception that gloves offered protection and later completed a great poster presentation in his unit. “He did not have bad intentions,” emphasized Miller. “He had bad workflow processes and was disorganized in his care.” The IC staff helped him better organize and improve his care routine.

Educating staff must be ongoing at hospitals to accommodate new staff, medical residents and others. Winner of Johns Hopkins, pointed out, “We are an academic medical center, and our staff turns over every July. We have the challenge of an influx of new staff. So the education is ongoing.” According to Parks at Memorial Hermann, the hospital has done a much better job to drive the culture so hand hygiene becomes a habit. Hiring new employees and adding physicians means there is room for more education.

When finding solutions with other services that worked on unit floors, such as dietary, radiology and phlebotomy, the team at WFUBMC mapped out processes and worked on a solution with them. “We recognized that these were groups that were not in the business of infection control on a regular basis, so we helped them understand the logistics of the process and worked with them to come up with a solution,” said Martin. He added, “Ancillary services may not be knowledgeable [about infection control], but they don’t seem to resist …they are open to change.”

At SJMHS, a survey of attitudes and beliefs of personnel showed staff believed alcohol-based hand rub (ABHR) was drying and irritating their hands and skin. It was an issue in the dry and cold winter months

in Michigan. “It’s an urban legend and backwards thinking,” said MacDonell. But “it was one of our critical factors to address,” he added. The hospital’s infection prevention and control services (IPCS) helped educate staff that ABHR improves skin condition—because it contains moisturizers and emollients—and soap and water are more damaging. IPCS also sought staff feedback on different hand cleansing products and collaborated with the system’s product value analysis committee to implement changes in products as needed.

Hands full

Health care personnel may enter patient rooms with their hands full of medications or linens, making it difficult for them to wash their hands. At several hospitals, shelves were added inside or outside patient rooms or used more regularly to hold items while personnel washed their hands entering and exiting the room. Froedtert Hospital has decentralized nurse servers, so medications are available inside or outside patient rooms.

The NCCU at Johns Hopkins handles many new admissions each day, which creates a flurry of activity and a stream of people and supplies to the patient’s bedside. Feurer of the NCCU said they identified the core supplies needed and worked with the unit coordinator and support associates to put a bundle of supplies in place for admissions. They asked nurses to minimize the number of people at the patient’s bedside to two or three and had someone outside the room to help with other supplies, such as pain medication. A runner is assigned to hand over supplies as needed. The units also found that health care personnel entered a room and did not touch the patient but also did not perform hand hygiene, which was against the hospital’s policy. “We created a visual barrier,” said Feurer. “We did have yellow caution tape and educated staff that once you cross the threshold, hand hygiene needs to happen whether you touch the patient or not.”

Wearing gloves interferes with process

Another revelation for the team at Virtua was noticing that non-clinical staff members were going room to room with their gloves on. “They weren’t changing their gloves,” said Simms, who described this habit as “universal.” The team was “educating staff and working diligently to inform them that just because they have gloves on, they are not protecting themselves,” added Simms.

Physicians and nurses found it difficult to put on gloves when their hands were wet after sanitizing them. Beth Lanham from Froedtert suggested to “wash hands, gown and then put on gloves.” This helped solve that problem, although some staff needed to be reminded that wearing gloves did not negate the need to wash hands, she added.

Perception that hand hygiene is not needed if wearing gloves

Food and nutritional services staff at Memorial Hermann The Woodlands had been told it was OK to wear gloves when delivering food trays as long as they did not get visibly soiled. The staff would put on gloves and pass out 36 trays on one floor and then wash their hands after delivering all trays on the floor. They had the perception that gloves were safer, which is not necessarily true. Kingdon and her team worked with food and nutrition staff to “watch the process and determine a more efficient way to incorporate the hand hygiene process,” she said. Using Lean Six Sigma, the team minimized the number of times personnel had to clean their hands. The unit set-up features six rooms together in a pod. Personnel now park their carts in one place, clean hands, get a tray, deliver the tray and clean hands upon exit. Then they pick up the next tray, deliver it and clean their hands again on exit. By following this process, the exit cleaning also serves as the entry cleaning, as only the clean tray has been touched. These staff members no longer wear gloves. At some hospitals, dietary personnel have their own bottle of sanitizer on their carts.

Health care workers forget

Visual reminders—including posters on walls in units, on elevators and by dispensers, and stickers on dispensers—were used to some extent by all the hospitals. Signage needs to be switched now and then to keep the images and message fresh. "We had to change signage frequently," said Susan Kulik, nurse manager, Nelson 8, Johns Hopkins Hospital. "People get used to looking at signage." She added, "A huge factor is making staff more aware. Using visual reminders is one of the most effective methods of raising compliance."

Johns Hopkins Hospital also used red lines at the thresholds to all patient rooms to serve as a reminder to "wash or don't cross," said Kulik. At Memorial Hermann The Woodlands, the door thresholds in the ICUs have red tape that goes up the side of the door with an arrow pointing to where the hand sanitizer is located. That area is marked "patient zone" to remind health care personnel and all visitors that they are crossing this threshold and should clean their hands. "We know hand hygiene has become a habit when a serious situation develops in the ICU and we see health care providers pause in the doorway to get hand sanitizer," said Parks. "It is the last point at which a health care worker can get it right and prevent infection," observed Rob Morehead, RN, infection control practitioner. "If we wash hands, we can still get it right," he added.

A couple of hospitals involved patients and visitors in monitoring hand hygiene and reminding health care providers to wash their hands. According to nurse manager Rivera, "When Pam [unit manager] and I do our rounding, we ask the patient, 'Did you notice your nurse sanitizing before coming in here?' One hundred percent of patients say, 'Yes, nurses and therapists are washing their hands all the time.' " Rivera added, "We would always encourage the patient to ask the provider [to wash hands]". Blaha added that nurses and therapists can serve as role models. "Family members mimic staff," she said. Cedars-Sinai also has placed kiosks across the hospital, so visitors know how important hand hygiene is, said Mark Noah, MD, medical director, graduate and continuing medical education at Cedars-Sinai.

At the Johns Hopkins NCCU, patients' families were also invited to participate in the effort. "We provided hand hygiene score cards to families so they could score our compliance," said Feurer. The patient representative in charge of the unit's visitors' lounge would give families the score card and basic information and ask if they would be willing to score. They targeted families who had been on the unit for more than 24 hours and did not have a family member in crisis. About half of the families did help, said Feurer. She stressed that the data collected from families was not used as part of their measurement data but primarily to make health care personnel aware that families are watching. If a family member mentions the name of a team member that was compliant, Feurer, the unit's assistant nurse manager, highlights it on the staff bulletin board to recognize and thank that person.

Distractions

Visual cues and reminders also can help health care personnel who become distracted. Along with their name badge, employees at Memorial Hermann wear a badge with a hand that says "Clean In and Clean Out." Individuals are taught to flash the badge to coworkers as a reminder. "We also try to give positive feedback to staff with leaders giving out cards that say, 'You Got Caught Cleaning Your Hands,'" said Kingdon. "If someone did not wash their hands, the leaders provide this feedback as well and ask the individual why. This provides just-in-time coaching and potentially identifies an issue that needs to be resolved," she added.

WFUBMC found its top root cause for failure to wash hands was distractions, which included staff having hands full, handling several requests at one time and being busy. "Distractions are a matter of changing your mind set," said Martin, physician group member on the project.

Cavelli of Virtua added, “One of the hardest things is to have staff self-recognize their behavior. Every staff member says, “I do wash my hands. I do use soap.” They are doing half of the process. “Self-regulation is half of the struggle,” she said. Kim Ricker, the ICU nursing director, suggested that instead of telling staff they are not washing their hands, ask them why they did not. They may reply that they were doing something else, and it gives them an opportunity to reflect better than if someone points out their mistake or omission.

Targeted Solutions Tool (TST)
The TST describes a six-step process:

Step 1: Getting Started. This first step includes determining who will be on the team and understanding stakeholders involved in the process. For example, in the ICU the hospital’s dietary staff does not see patients, so their buy-in would be low. But on the medical/surgical unit, they deliver trays to every patient.

Step 2: Training observers entails training hand hygiene data collectors, or observers, and just-in-time coaches. It involves giving them the tool to begin collecting data and documenting contributing factors and compliance. The tool has a structured education program and a test at the end.

Step 3: Measuring compliance comprises collecting data and entering in data tool, a Web-based application that is part of the TST.

Step 4: Determining factors includes getting charts, which includes compliance charts, analysis charts and means chart.

Step 5: Implementing solutions by analyzing data from charts to identify the top three contributing factors for failure to wash hands. For each contributing factor, the TST provides a set of implementation guidelines.

Step 6: Sustaining the gains means rethinking the data collection plan to continue to monitor the process. Keeping compliance at a high rate requires “continuous reinforcement,” emphasizes Melody Dickerson of the Joint Commission.

Controlling for Continual Improvement
Continued process improvement includes identifying dips in compliance and working to constantly increase the compliance rate or keep it high. For example, Exempla Lutheran found that non-compliant people typically were new staff members or visiting health care personnel, such as nurses from agency groups. In response, the hospital added information on hand hygiene to employee orientation. Agency groups that provide nurses have incorporated hand hygiene in their training. Those nurses must view a CD-ROM with hospital policies and procedures before they become an agency worker. “When someone walks in our door, they have to sign a statement that says they have read and understand our hand hygiene policy,” said Miller.

All the participating hospitals are working to sustain improvement as they roll out the hand hygiene project to other units. Froedtert Hospital’s Lanham observed: “I still have the belief that hand hygiene compliance, or lack of, is not about individual people who don’t care. All health care providers want to take the best possible care of patients. Lack of compliance is about processes that don’t currently support the busy health care provider. We continue to identify obstacles and barriers. How do we make it easier for you?”

After the initial project with eight hospitals, the Center pulled in 27 additional pilot organizations to participate and look for new contributing factors. To date, no additional contributing factors have been identified beyond the current 15 factors. Pilot programs were conducted in a variety of hospitals, large and small, city and rural, teaching and nonteaching, located throughout the United States. The Center is preparing to pilot hand hygiene programs at skilled nursing facilities.

About the Joint Commission Center for Transforming Healthcare

The Joint Commission Center for Transforming Healthcare aims to solve health care's most critical safety and quality problems. The Center's participants—the nation's leading hospitals and health systems—use a proven, systematic approach to analyze specific breakdowns in patient care and discover their underlying causes to develop targeted solutions that solve these complex problems. In keeping with its objective to transform health care into a high-reliability industry, the Joint Commission will share these proven effective solutions with the more than 18,000 health care organizations it accredits. For more information, visit www.centerfortransforminghealthcare.org.

About the Health Research & Educational Trust

Founded in 1944, the Health Research and Educational Trust (HRET) is the not-for-profit research and education affiliate of the American Hospital Association (AHA). HRET's mission is to transform health care through research and education. HRET's applied research seeks to create new knowledge, tools, and assistance in improving the delivery of health care by providers in the communities they serve. For more information, visit www.hret.org.

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Hospitals in Pursuit of Excellence (HPOE) is the American Hospital Association's strategic platform to accelerate performance improvement and support health reform implementation in the nation's hospitals and health systems. HPOE provides education on best practices through multiple channels, develops evidence-based tools and guides, offers leadership development through fellowships and networks, and engages hospitals in national improvement projects. HPOE brings providers together to improve performance in several areas, including care coordination/readmissions, health care-associated infections, patient safety, and the development of new payment and care delivery models that promote quality and efficiency. Visit www.hpoe.org.

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Health Care Leaders Action Guide: Hospital Strategies for Reducing Preventable Mortality

March 2011

American Hospital Association

HRET
HEALTH RESEARCH & EDUCATIONAL TRUST
In Partnership with AHA

HEALTH CARE LEADER ACTION GUIDE: HOSPITAL STRATEGIES FOR REDUCING PREVENTABLE MORTALITY

Suggested Citation
Health Care Leader Action Guide: Hospital Strategies for Reducing Preventable Mortality. Health Research & Educational Trust, Chicago, IL. February 2011. Accessed at www.hpoe.org.

Health Care Leader Action Guide: Hospital Strategies for Reducing Preventable Mortality

Introduction

As part of its 2011-13 strategic plan, the American Hospital Association (AHA) has established "strategic performance commitments" that identify specific targets for hospital efforts to improve patient care: reduce central line-associated bloodstream infections (CLABSIs), eliminate preventable readmissions, and eliminate preventable mortality. AHA members can review more details about these commitments at http://www.aha.org/aha/about/Members-Only/strategic-plan.html?group=hospital. Through its *Hospitals in Pursuit of Excellence* initiative, the AHA will provide advocacy, resources and research to America's hospitals to help them improve quality and patient safety and achieve these commitments. The *Health Care Leader Action Guide: Hospital Strategies for Reducing Preventable Mortality* provides a broad overview of key steps that hospital and health system leaders should take in developing a strategy for reducing preventable mortality. Additional resources, covering all three commitments, can be found at www.hpoe.org.

Why Is Focusing On Preventable Mortality Important?

Hospital leaders work hard every day to provide high quality care to the patients that they treat. They do this with the goal of providing care that is free of injury and harm. Nonetheless, much has been written about the numbers of patients that die unnecessarily in our nation's hospitals. The publication of the 1999 landmark Institute of Medicine report, *To Err is Human: Building a Safer Health System*, brought attention to this problem with the estimation that between 48,000 and 98,000 deaths from medical errors occur each year in U.S. hospitals (IOM, 1999). Since then, much attention has been focused on ways to improve quality and patient safety. While most hospital deaths are not due to failures in care delivery, many deaths are preventable and this presents an important opportunity for hospital leaders to address. By collectively pursuing improvement strategies in a visible and measurable way, hospitals will be joining forces to advance a health care system that delivers the right care, to the right patient, in the right place. Hospital mortality is also an issue that easily resonates with the public.

Demonstrable improvement in this area will go a long way towards maintaining and strengthening public confidence in our nation's hospitals. It is the right thing to do.

So Where Should Hospital and Health System Leaders Begin?

There are eight steps that hospitals and health system leaders should consider when thinking about ways to reduce preventable mortality. These steps are outlined below.

- **Start by looking at your data**. Understand how your hospital compares to the national average mortality rate for each condition. Remember that there is a lag time between the provision of care and reporting on Hospital Compare, so it will not be possible to do real-time or near real-time monitoring of the condition-specific risk-adjusted 30-day mortality rate. Explore other proxy measures to monitor mortality on a more timely basis. Some hospitals monitor raw mortality and others work with a performance measurement data vendor to obtain mortality data that may be applicable for monitoring mortality for these conditions. Be aware that Hospital Compare includes mortality rates for Medicare patients only and other proxy measures of mortality may include all patients.

- **Set a specific, visible, and measurable goal with timelines for reducing mortality.** Make this a strategic priority for your organization and be persistent about communicating the goal and your progress organization-wide.

- **Decide where to focus your hospital's improvement efforts.** Begin with the obvious. For example, how does your hospital perform on care process measures, particularly the Joint Commission Accountability Measures for patients treated for heart attack, heart failure, and pneumonia? Are there opportunities for improvement?

- **Consider cross-cutting concerns.** Several fruitful areas of focus described in the literature to prevent unnecessary deaths involve such cross-cutting issues as healthcare-associated infections, delays in responding to patients with deteriorating conditions, poor communication, surgical complications, and medication and medical errors. The literature is filled with examples of interventions aimed at these problems. How is your hospital addressing these concerns?

- **Align your quality improvement activities and create a visual map.** Many hospitals are already engaged in improvement work around the cross-cutting issues described above. Creating a visual map will help to give them a sense of priority and awareness of how many of the activities they are working on fit into the organization's strategic goals.

- **Establish an organized process for reviewing mortality.** Many hospitals are implementing a structured process for monthly mortality case review. Unlike the mortality reviews of the past, these new efforts involve structured review forms, interdisciplinary committees, and identification of systemic opportunities for improvement. Nursing departments are also reviewing mortality as a way to identify system issues in care and improve nursing practice.

- **Integrate these improvement efforts into your hospital's quality improvement program and develop an action plan for implementing these strategies.** Establish improvement teams where you need them, populate these teams with caregivers affected by the improvement process, and make sure there is visible executive leadership support.

- **Be accountable.** Put this on the agenda of your board and senior leadership meetings, and actively review progress.

Source: Original, IHI 100K Lives Campaign Materials, and HRET's *A Guide to Achieving High Performance in Multi-Hospital Health Systems.*

Best Practices, Case Studies, Literature, and Resources

There are a number of resources available to help hospitals and health systems reduce preventable mortality. These resources are provided in the attached table and include the following:

- General Resources with examples of best practices and toolkits;
- Case Studies illustrating how hospitals and health systems are working to improve compliance with care processes and reduce preventable mortality;
- Use of checklists, bundled protocols, teams and communication tools;
- Examples of structured processes for mortality review; and
- Literature and articles on reducing preventable mortality.

To view the resources on mortality reduction click here.

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Signature Leadership Series

Health Care Leader Action Guide: Understanding and Managing Variation

February 2011

American Hospital Association

HRET
HEALTH RESEARCH & EDUCATIONAL TRUST
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Acknowledgments

The following organizations and individuals provided significant support in the development of this guide:

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Suggested Citation
Health Care Leader Action Guide: Understanding and Managing Variation. Health Research & Educational Trust, Chicago, IL. February 2011. Accessed at www.hret.org/variation.

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Executive Summary

Health Care Leader Action Guide: Understanding and Managing Variation builds upon the report of the American Hospital Association's Task Force on Variation in Health Care Spending (January 2011). The purpose of this guide is to provide hospitals with a resource to help reduce inappropriate variation within their own organizations and in conjunction with care partners. The guide includes practical steps to understanding and managing variation and a list of best practices and case studies as examples and resources for hospital leaders to use for implementing key interventions.

Variation arises from many interrelated factors, some within and some beyond the control of the health care system. Not all variation is undesirable or inappropriate. Distinguishing among the types of variation to determine what is acceptable and what is not is critical to arriving at a reasonable set of recommendations for action. Hospitals and health systems can take these action steps alone or in collaboration with others to reduce inappropriate variation within their organizations.

There are six steps to understanding and managing variation:

1. Determine your strategic focus to reducing variation
2. Set measurable goals
3. Acquire and analyze data
4. Understand your data
5. Identify areas of focus
6. Implement improvements

Research has shown that some of the greatest potential areas of focus include:

- Intensity of hospital services
- End-of-life care
- Outpatient/ambulatory services
- Obstetrics
- Imaging use
- Emergency services

To address these focus areas, there are a variety of improvements to implement, including:

1. Providing feedback of performance data at the provider level
2. Standardizing processes of care by using checklists and other clinical and operational protocols
3. Implementing evidence-based guidelines and pathways
4. Utilizing evidence-based appropriateness criteria
5. Using quality improvement interventions, such as Lean, Toyota Production System, Six Sigma, Plan-Do-Study-Act
6. Initiating culture change toward safety, improvement, transparency, and excellence

By approaching the management and reduction of variation through a systematic improvement process in focused areas, inappropriate variation can be reduced to improve overall outcomes.

I Introduction

The American Hospital Association (AHA) issued a "bold call to action on the piece of variation that legitimately belongs to hospital organizations, while recognizing that other stakeholders must do the same" in the report of the Task Force on Variation in Health Care Spending (January 2011). The report further states, "Hospitals, in conjunction with physicians, other clinicians, and other care partners, must be aggressive and start to reduce the variation that is within their control; collaborate with other parts of the health care system, insurers, and employers to address inappropriate variation across the care continuum; and provide leadership in bringing together other stakeholders to deal with broader societal issues that affect health behavior and health status."

There will always be variation. The question is, So what…what does it mean? Should the organization be concerned about the level of and trends around variation? How do you know? A hospital and health system leader's goal need not be to *eliminate* variation, but rather to *understand and manage* it so undesirable variation can be reduced. In guiding the organization toward consistent patterns of utilization in line with clinical best practices, leaders can help ensure that care is delivered in a manner that promotes the best outcomes at the lowest cost.

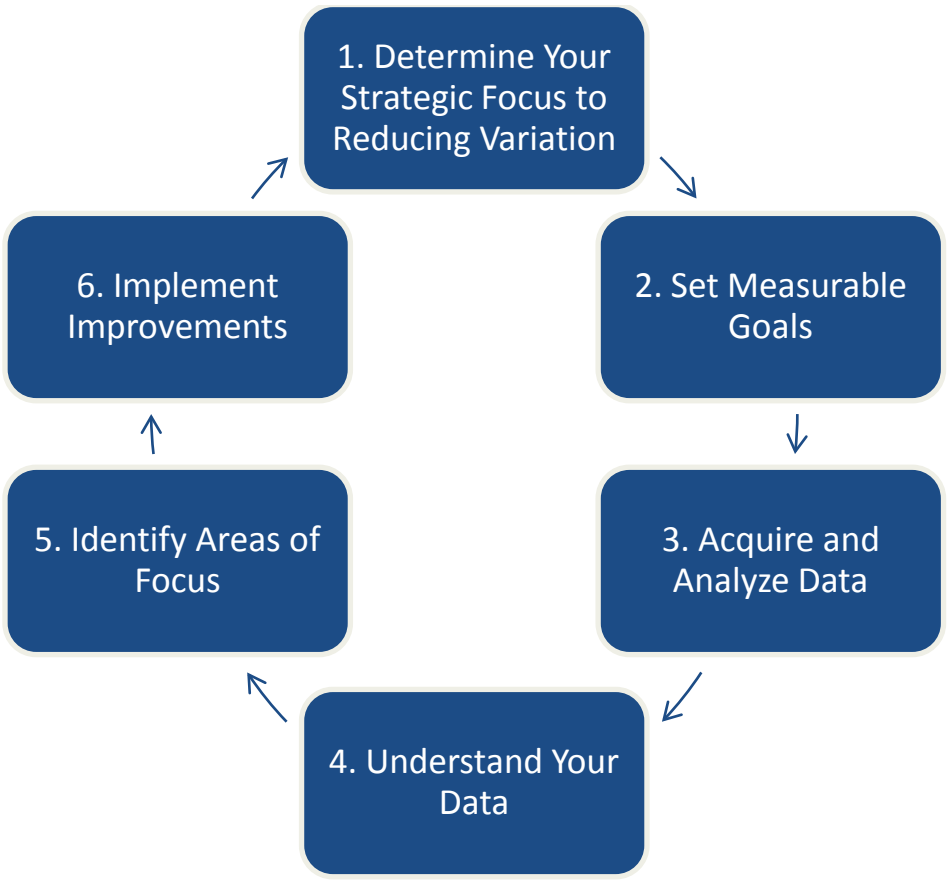
The critical starting point for managing variation in utilization is a thorough understanding of internal data. ("Utilization" refers to the usage of available services within the hospital setting, e.g., treatments, procedures, or diagnostic tests.) Well-executed analysis of internal data on a historical, location/unit, or physician-by-physician basis can help identify many opportunities within the walls of one's own organization, and it also provides a base from which to make external comparisons. Once an analysis has been completed to identify undesirable variation in utilization, managers can turn their focus to understanding what is driving it and then begin to implement solutions.

This guide is designed to inform health care leaders how to use hospital and benchmarking data to analyze care, services, safety, and appropriateness of treatment, and to identify areas where they may need to make meaningful operational decisions to provide better clinical or financial outcomes for their patients.

In addition, this guide provides senior leaders of hospitals and health systems with tools and resources to help them compare their organization's data with other peer hospitals on different measures and explore improvement opportunities. Armed with an understanding of their data and how their hospital compares with similar health systems, health care leaders can target specific areas with the best opportunities for improvement.

2 Steps to Understanding and Managing Variation

Using fundamental improvement steps, the following is a six-step approach to understanding and managing variation in your organization. Although identified linearly, these steps may be done in parallel. For example, an organization may use external data to set goals and it may also seek to acquire and analyze other data to further confirm or identify new goals.



1. Determine Your Strategic Focus to Reducing Variation

The context in which your organization embarks on understanding and managing variation is critical. Strategic considerations at your organization will direct you to the areas for greatest leverage. Potential strategic considerations include:

- Reducing operational costs
- Standardizing use of medical supplies
- Strengthening shared decision-making and patient involvement
- Improving patient safety
- Improving patient satisfaction
- Reducing spending for the population
- Preparing to accept financial risk

A recent study surveying quality improvement representatives from acute care hospitals in four states found that 90 percent of respondents were concerned about unwarranted, or inappropriate, variation,

and 75 percent of those concerned had a strategy for reduction in place[1]. There are several reasons, both financial and mission-based, that hospitals and health systems should be concerned with reducing unnecessary utilization of health care services:

- **Reducing costs and improving efficiency of providing care:** Under the current fee-for-service model, financial incentives can serve to emphasize the volume of care delivered. New models such as value-based purchasing and bundled payment arrangements, however, are designed to reward providers who demonstrate improved value (defined as improvement in both quality and efficiency). In other words, they will be rewarded for demonstrating they delivered the right care at the right time and the right place. Reducing the amount of unnecessary care in turn reduces costs of providing those services for the organization (e.g., supply and labor costs).[2,3]
- **Improving safety and quality:** Reductions in inappropriate utilization have been shown to have no adverse impacts on quality. In fact, a recently updated study on health system performance in several states indicated that quality of care in hospitals has increased while variation in care delivery across states has narrowed.[4]
- **Increasing patient satisfaction:** Patient decision aids—that is, evidence-based tools used to facilitate shared decision-making between patients and providers—lead to increased patient satisfaction and more efficient use of clinicians' time. These aids have a potential role in reducing unwarranted variations in the use of preference-sensitive health care options.[5,6] The Comprehensive Health Enhancement Support System (CHESS), developed at the University of Wisconsin-Madison, is one such example. CHESS is a computer aid that provides patients with chronic illnesses a range of self-management resources they can access at home. In an AHRQ-funded study that evaluated the impact of using CHESS for patients with HIV infection, results showed these patients had fewer hospitalizations and a higher quality of life than patients who did not have access to the same decision aids. In addition, patients participating in the CHESS program spent less time with their physicians during office visits because they were better informed.[7]
- **Preparing for health care system transformation:** Improving integration across the care continuum is an effective way to reduce unwarranted variation and attain the desired outcomes of reducing costs—for the health care organization, the community, and the industry as a whole—and improving outcomes. Changes to payment incentives, where value over volume is rewarded, will help facilitate integration efforts.[8] In addition, new delivery models such as accountable care organizations, bundled payment arrangements, and medical home models will require that providers accept more risk for delivering health care services. Standardizing care processes that eliminate unwarranted variation can help prepare an organization to accept this type of risk.

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[8] Fisher et al., 2009.

2. Set Measurable Goals

Once you establish your organization's strategic direction, identifying measurable goals is critical for tracking performance and evaluating if progress is being made. Below is an example of a template, populated with sample data, that can facilitate goal-setting by providing a framework for your own data, measures, and goals. When using this type of table, consider supplementing the table with additional charts and graphs to illustrate performance.

Area of Focus	Your Performance (Examples)	Performance Across Your Organization Across Time (*by unit, by hospital, by service line, by physician*)	Comparative Performance (*compared to your average, your top performance, national average, state average, top national performance*)	Your Goal (*how much by when*)
% of diabetics with HbA1c tests in the last 12 months	88.0%	Physician group 1 = 86.0% Physician group 2 = 89.0 % Physician group 3 = 89.0%	93% - State average 93.7%- National 90th percentile 89.0% - National average	National 90th percentile by year-end
Hospice days in the last 6 months of life	8.3 days	Hospital A = 8.1 days Hospital B = 10.2 days	State = 7.9 days National = 12.5 days 10th percentile = 18.1 days	National average within 2 years
% of low back pain patients receiving an MRI without a trial of medical therapy first	35.0%	Physician 1 = 30.0% Physician 2 = 40.0% Physician 3 = 35.0 %	30.1% State average 32.7% National average	25.0% by year-end
Etc.	Etc.	Etc.	Etc.	Etc.

3. Acquire and Analyze Data

Ideally, to reduce unwarranted utilization across the care continuum, data would be collected from each relevant site of care per disease episode. In reality, most organizations do not have access to this level of detail within their own reporting systems. Being able to adequately delve into population-level data requires forming relationships with commercial payers or health plans to access claims data. It is instead best to focus on the following aspects of data collection:

a) Collect data from internal systems that provide reliable and consistent information; in addition, be sure that physician and other clinical leaders have confidence in the data systems selected.
b) Focus on a few critical metrics—those most relevant to the operational or clinical process that you wish to improve—to avoid "analysis paralysis" that often occurs from gathering too many irrelevant data points.
c) Use multiple sources for data collection, including service line or unit reports, discharge records, and/or reports that track compliance to established care paths. Ideally, the organization's electronic medical record system would provide much of this information.

Partnering with your local employers or payers may provide additional avenues for collecting and using all payer data. Having data beyond Medicare will necessitate partnerships with payers and purchasers and provide additional areas for analysis. State agencies may also have data available across payers that may be used for general analysis, though the data may not be organization-specific.

The potential advantages of partnering with others for data collection and improvement can be seen in a randomized prospective study that applied a rule-based sentinel alert system to a managed care plan's administrative claims data for a commercial population, to prevent errors in care and improve compliance with clinical guidelines. Decision rules were incorporated into a computerized system that was able to detect variation from practice guidelines and send alerts to clinicians. Members were randomly assigned to an intervention group where physicians would receive clinical recommendations via electronic alerts and to a control group where physicians did not receive alerts. Patients who triggered recommendations had 19 percent fewer hospital admissions compared to the control group. Charges and paid claims were also lower for this group. Although this study was focused on a commercial population, study authors suggest that the potential to decrease morbidity and costs would be greater if applied to a Medicare and Medicaid population since the disease entities that generated the most frequent recommendations were for conditions that typically affect the elderly, such as cardiovascular, neurological, and respiratory conditions.[9]

Many approaches can be employed to analyze data for managing variation, including the following simple but powerful analyses below:

- How has utilization varied over time?
- How does utilization vary across different locations in the system and/or units within the hospital?
- How does utilization vary by physician within the hospital or system?

For each of these analyses, the variation should be explained using summary statistics (e.g., counts and frequency distributions, averages, standard deviations) and displayed using an appropriate format (e.g., tables, charts, bullets). Summary statistics should be viewed in context of reference points, such as the range or limits that leaders agree is acceptable.

4. Understand Your Data

Looking Within

Examining your organization's own data across time and across organizational units is essential in managing variation within your organization. By looking within your organization, you can compare yourself to the best performance internally and to track trends over time. Focusing on internal data allows hospital leaders to make comparisons on an "apples-to-apples" basis and generate greater acceptance and buy-in, as stakeholders are less likely to claim that "our institution is different" from itself.

[9] Javitt et al. Using a claims data-based, sentinel system to improve compliance with clinical guidelines: Results of a randomized prospective study. *American Journal of Managed Care*, February 2005; 11:93-10. http://www.activehealth.net/AJMC_Study.pdf

Looking Externally

While internal data is an invaluable resource for understanding and managing variation, external data is highly useful as a point of reference for performance and a basis for setting goals. Leaders in health care organizations have an opportunity to articulate their vision by setting objectives, which may include:

- *A commitment to evidence-based medicine*: Consistently achieving minimal variation from a set of metrics that reflect established guidelines.
- *Top quartile across the board*: Consistently placing in the top quartile of a given set of comparator institutions for a broad set of metrics.
- *Demonstrating excellence in a certain area*: Consistently placing in the top 10 percent of a given set of comparator institutions for a narrow set of metrics.

Many resources are available for external benchmarking, including the Dartmouth Atlas of Health Care or commercially available databases and tools maintained by health care alliances such as VHA, Premier, or University HealthSystem Consortium (UHC). Since the Dartmouth Atlas is publicly available, an overview and instructions for accessing this source are provided in Appendix B.

Additionally, when making comparisons to external sources, it may be tempting to simplify internal data (e.g., an average for the entire institution). However, this practice may send undesirable signals to the organization or lead individuals to overlook opportunities to improve. For example, a dashboard metric that shows that, on average, an institution has performed better than an external metric does not emphasize the importance of managing variation internally to identify trouble areas and leverage best practices. This example also highlights the importance of choosing external metrics that appropriately reflect the organization's goals (e.g., seeking to be in the top quartile of a select group of peers versus being above the average of all hospitals in the United States).

Often when comparisons are made to external data, and even to data from other institutions within the same system, stakeholders may seek to dismiss observations and implications on the basis of differences in patient populations. When making comparisons, attention must be paid to ensuring data sets are comparable. Using severity-adjusted data or multiple metrics (e.g., comparing kidney surgery rates for high-risk patients and for low-risk patients separately), as appropriate, can promote buy-in. When systems and tools provide severity-adjusted data, hospital administrators must ensure they understand exactly how the adjustment is made.

5. Identify Areas of Focus

If not appropriately focused, an effort to manage variation is at risk of generating many tables and charts without driving any decisions. Therefore, it is important to carefully choose a specific area to assess. In determining which area to examine first, a hospital leader might consider:

- Highest volume services
- Areas with the greatest financial impact, in terms of revenue or cost
- Areas most likely to result in avoidable injury to a patient
- Areas identified as high priorities to the organization and its leadership

Research has demonstrated that some of the greatest areas of utilization variation are:

- Hospital readmissions
- Appropriateness of admissions and diagnostic and treatment procedures
- Emergency room utilization

- Intensive care unit utilization
- Home health utilization
- Obstetrics utilization
- Imaging tests
- Surgical procedures
- End-of-life care

Minimizing unwanted variability is critical in today's cost- and quality-conscious environment. However, health care delivery professionals must take a balanced approach that responds to unique clinical needs and ensures that appropriate variability occurs in the context of evidence-based medicine. The challenging tasks for hospital administrators in this regard are to identify priority areas for managing variation in utilization, to determine what variation is acceptable and what is not, and to develop an action plan to make any changes needed.

The following table identifies areas of major opportunity, types of utilization data that would enable the organization to identify and define problems, and illustrative objectives for that area.

Areas of Major Opportunity	Utilization Data for Problem Diagnosis	Illustrative Objectives to Drive Improvement
Intensity of Hospital Services Matching the type and amount of care provided to the severity or urgency of the patient's condition	• ICU usage • Length of stay data • Emergency department usage • Admissions data	• Reduce usage of ICU in favor of step-down or med/surg • Manage length of stay • Improve coordination of care • Expand chronic disease management programs to reduce admissions
End-of-Life Care Treatment decisions and care provided for terminal patients	• ICU usage • ED usage by age and mortality • Med/surg usage within last six months of life • Discharges to hospice	• Reduce use of ICU at end of life (EOL) in favor of other care settings (e.g., hospice) • Increase enrollment in hospice, earlier and more consistently • Ensure availability of patient instructions for EOL treatment (e.g., DNR) • Develop support network with family and community organizations
Outpatient/Ambulatory Services Skilled nursing or rehab facility care, chronic disease management programs, and/or discharge process and planning	• Use of skilled nursing programs • Discharges to rehab facilities or nursing homes • Tracking of post-discharge outcomes • Readmissions rate	• Develop and deploy skilled nursing programs • Improve referral process to rehab facilities/nursing homes • Improve discharge planning, discharge process, and outcomes tracking

Areas of Major Opportunity	Utilization Data for Problem Diagnosis	Illustrative Objectives to Drive Improvement
Obstetrics Pregnancy management and delivery options, critical care, complications	• Frequency of prenatal visits, examinations, and procedures • Delivery data by patient risk factor • Frequency of inductions • Frequency of C-sections	• Improve prenatal care compliance • Reduce unnecessary C-sections • Use pregnancy risk scoring consistently • Reduce frequency of premature births
Imaging Optimal use of imaging options	• Use of imaging, frequency by episode of care and by patient • Imaging orders • Use of imaging types (CT vs. MRI)	• Reduce unnecessary imaging • Standardize practice patterns • Reduce duplicative imaging • Reduce biosafety risk for patients
Emergency Department (ED) Optimal use of emergency services for only the most urgent cases	• ED visits by patient acuity • Usage of ED for chronic disease flare-ups (e.g., asthma, diabetes) • ED visits for psychiatric diagnoses • Level of occupancy or other evidence of overcrowding	• Reduce treatment of non-urgent cases • Reduce unnecessary hospital admissions • Expand chronic disease management programs to reduce ED visits and access to primary care • Reduce overcrowding to improve quality of care and patient safety

6. Implement Improvements

There are a number of specific interventions that can be implemented. These include:

- Engaging clinicians with feedback of data
- Standardizing operational processes using quality improvement interventions, e.g., Lean, Toyota Production System, Six Sigma, Plan-Do-Study-Act
- Implementing evidence-based clinical guidelines
- Emphasizing appropriateness criteria
- Creating a culture change

Examples of these improvement efforts include:

Engaging clinicians with feedback of data

Engage clinical stakeholders, especially physicians, early in the process. Convene physician peers to review the data and use this forum to begin asking questions to identify some of the reasons for the observed variation. Supplement the review process with literature to determine if consensus can be reached about evidence-based clinical guidelines to reduce variation. Develop and implement evidence-based guidelines (see next page) and establish a data monitoring system to review performance against appropriateness criteria. Provide feedback to physicians and incorporate the feedback into ongoing professional practice evaluations.

It will be important to consider the role of peer review in thinking about how to engage clinicians with feedback of data. Peer review programs have traditionally been focused on identifying problems in physician performance based on individual case review, with little attention paid until recently to system factors in quality of care. In a survey of peer review programs in United States hospitals, study authors found that recognition of excellence, standardization of process and governance, and integration of peer review programs with performance improvement were just a few of the factors positively perceived by physicians as impacting quality. These findings suggest that peer review programs that incorporate these components are likely to engage physicians in the process. [10]

In addition, the new model of ongoing and focused professional practice evaluation, introduced by the Joint Commission several years ago, has the potential to add to traditional peer review programs by providing a constructive framework for ongoing and objective feedback to physicians about their performance. Hospitals and health systems are now required to collect a broad range of data on practitioner performance for credentialing purposes—including comparative data—and to apply evidence-based practices and quality improvement techniques. When problems in performance are identified, focused professional practice evaluations are conducted. As more information becomes available about evidence-based practices for providing the right care, to the right patient, and in the right place, this information should be incorporated into evolving professional practice evaluations and peer review programs. Implementing current quality improvement approaches such as these may be another way to engage clinicians in reducing variation.

One example of how a hospital revised its morbidity and mortality rounds to focus on system improvement using quality improvement techniques is Monroe Carell Jr. Children's Hospital at Vanderbilt University. The hospital expanded participation in rounds to include all clinical staff and senior administrators and implemented a system for developing and monitoring action plans. This new system for morbidity and mortality rounds has resulted in greater participation and involvement from clinical staff and improvements in care[11]

Standardizing operational processes using quality improvement interventions

Use quality improvement interventions to identify inefficiencies in operations and to implement standardized processes to reduce costs and inefficiencies, while improving productivity. Lean management, Six Sigma, the Institute for Healthcare Improvement's Plan-Do-Study-Act methodology, and Toyota Production System principles have been applied in various health care organizations across the country to improve productivity, efficiency, and even patient satisfaction in specific care units, such as the ICU, emergency department, and diagnostic imaging. Quality improvement tools, such as checklists, can help standardize care processes.

The MHA Keystone Center initiative in Michigan is one example that shows how using checklists and patient goal sheets to standardize infection prevention practices and improve care team communications can have a dramatic impact on reducing infections of patients in intensive care units. Implementation of these interventions resulted in Michigan ICUs reducing bloodstream infection rates by 66 percent and saving nearly 1,800 lives. Standardizing infection prevention practices in this way not only saved lives but also realized significant cost savings.[12]

[10] Edwards MT, Benjamin EM. The process of peer review in U.S. hospitals. *Journal of Clinical Outcomes Management*, 2009; Vol.16, No. 10; www.turner-white.com.

[11] Deis JN, Smith KM, Warren MD, et al. *Transforming the morbidity and mortality conference into an instrument for system-wide improvement. Advances in patient safety: New directions and alternative approaches.* Rockville, MD: Agency for Healthcare Research and Quality, 2008. http://www.innovations.ahrq.gov/content.aspx?id=2219.

[12] Pronovost P, Needham D, Berenholtz S, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. *New England Journal of Medicine,* 2006. 355(26):2725-2732.

Implementing evidence-based clinical guidelines

A recent report by the Congressional Budget Office indicated that less than half of all medical care in the United States is supported by good evidence. Using evidence-based guidelines could provide doctors with better information on which treatments work best for which patients, and whether the benefits are commensurate with the costs. In turn, needless treatment could be avoided, resulting in cost reductions and improved quality of care. [13] Where publicly available information on evidence-based clinical guidelines is obtainable, organizations should implement these standardized processes to reduce unnecessary variation within their major areas of opportunity for improvement.

An example of how the use of evidence-based guidelines may improve care is the American Heart Association's Get with the Guidelines—Coronary Artery Disease program. This program provides participating hospitals with evidence-based guidelines, learning sessions, opportunities to share best practices, and online data collection and feedback. In a study published in the American Heart Association's journal *Circulation*, researchers studied acute myocardial infarction patients at 443 hospitals participating in the Get with the Guidelines program and found that evidence-based care for these patients improved over time. They also found that racial and ethnic disparities in care for the population under study were eliminated.[14]

Emphasizing appropriateness criteria

Appropriate criteria are an important component of evidence-based guidelines, and together the two can be used on a prospective basis to improve care. Organizations should investigate how their electronic medical record system may be used to implement or facilitate the use of clinical protocols. Standardization of care paths based on appropriateness criteria can lead to the reduction of unwarranted utilization of services. In addition, several professional associations, such as the American College of Cardiology and the American College of Radiology, have established appropriateness criteria for certain procedures that have been shown to improve quality and efficiency of care.[15][16]

Using evidence-based guidelines to standardize processes for reducing variation in diagnostic imaging is illustrated in a study conducted at Virginia Mason Medical Center in Seattle. Virginia Mason identified utilization of certain imaging tests that were costly and had significant variation as an opportunity for improvement. The three imaging tests that were part of this study included lumbar MRI for lower back pain, brain MRI for headache, and sinus CT scan for sinusitis. Provider stakeholders reviewed the relevant literature on evidence-based guidelines, developed clinical decision rules for these specific tests, and discussed them extensively with clinicians before incorporating them into practice. The study found that using evidence-based decision supports helped reduce unnecessary physician orders for these imaging tests.[17]

Creating a culture change—a culture dedicated to improving performance and reducing unwarranted variation

Ultimately, organizations must make continuous performance improvement an ongoing part of everyday processes. Top-performing states, followed as part of a Commonwealth Fund study, have set benchmarks and provided examples of leadership and collaboration necessary for improvement. These

[13] *Research on the Comparative Effectiveness of Medical Treatments: Issues and Options for an Expanded Federal Role.* Congressional Budget Office, December 2007.

[14] Cohen MG, Fonarow GC, Peterson ED, Moscucci M, Dai D, Hernandez A., Bonow RO, and Smith SC. Findings from the Get with the Guidelines coronary artery disease program: Racial and ethnic differences in the treatment of acute myocardial infarction. *Circulation,* 2010; 121:2294-2301. Originally published online May 17, 2010; *Circulation,* doi:10.1161/Circulationaha.109.922286.

[15] *ACR Appropriateness Criteria.* American College of Radiology. www.acr.org.

[16] Kauffman G. Appropriateness criteria helpful for meeting new quality standards. *Cardiology*, November 2007. www.qualityfirst.acc.org.

[17] Blackmore C, Mecklenburg RS, Kaplan GS. Effectiveness of clinical decision support in controlling inappropriate imaging. *Journal of the American College of Radiology*. 2011; 8(1): 19-25 doi:10.1016/j.jacr.2010.07.009.

and other states that have made gains have established quality improvement partnerships with other health system stakeholders to promote standard approaches to quality measurement, public reporting and transparency, consumer and provider engagement, and payment reform to encourage value-based purchasing.[18]

Patients can also be important partners in helping reduce unwarranted variation. For example, Horizon Blue Cross Blue Shield of New Jersey was able to reduce unnecessary emergency department visits by talking to patients and finding out why they were using the ED. They convened a multidisciplinary team to review records of Medicare Advantage members who accounted for the greatest volume of their ED visits. They then contacted members by phone to identify the reasons they were going to the ED and helped them access the care they needed. By talking with patients and working with community resources, they were able to reduce unnecessary visits by 35.9 percent for this patient population.[19]

End-of-life care is another opportunity for engaging patients and families in the care delivery process. Hospital palliative care consultation teams work with patients and families to identify treatment goals and help coordinate care to meet those goals. Studies show that patients receiving these services have better control of their symptoms and experience less pain, and their families report greater satisfaction. Palliative care consult teams are also associated with hospital cost savings. [20]

An improvement initiative to manage variation is like other complex projects that organizations pursue. There are many critical factors in planning, managing, and executing complex projects.

The following questions outline some of the important aspects to consider in a change effort.

- *Communication*
    - Have improvement initiatives been given sufficient visibility within the organization?
    - Are communications frequent, relevant, and compelling?
    - Is the right amount and type of data being shared with the right parties?
- *Consensus*
    - Is there adequate buy-in among senior leaders?
    - Is there adequate buy-in among mid-level managers and clinical staff?
    - Have efforts been made to develop buy-in at the point-of-care?
    - Has utilization management and reduction of unnecessary treatment become part of everyone's job, or are those efforts isolated to a few managers?
- *Leadership*
    - Is there sufficient leadership to drive improvement?
    - Do internal decision-making processes support change and innovation?
    - Once decisions are made on behalf of the organization, will all levels of management and staff work to support improvement?
- *Accountability*
    - Have improvement initiatives been tied to performance metrics?
    - Will senior leaders of key areas be evaluated on their ability to drive improvement?

[18] *Aiming Higher: Results from a State Scorecard on Health System Performance*. The Commonwealth Fund, 2009.
[19] *The Medicare Advantage Emergency Room Initiative*. http://www.ahipresearch.com/pdfs/innovations.2010.pdf.
[20] Morrison RS, et al. Cost savings associated with U.S. hospital palliative care consultation programs. *Archives of Internal Medicine,* 2009; 168 (16): 1783-1790. http://www.capc.org/costsaving_aim092008.pdf.

- *Timelines*
    - Is the organization's leadership in agreement on the timeline for improvement? Have milestones been identified?
    - Does the organization recognize several levels of targets, i.e., short-term goals/targets, medium-term, and long-term? This is particularly important for areas where elimination of variation is needed.
- *Micro-centers for Change*
    - Are there relatively self-contained locations or service areas that can serve as models or demonstration sites?
    - Does a selected micro-center for improvement have enough commonality that the lessons learned can be translated to the rest of the organization?
- *Utilization Improvement Officers*
    - Are there a sufficient number of utilization experts throughout the organization who can act as resources?
    - Have training programs been developed to maintain the focus and drive for improvement?
- *Overarching Guidelines*
    - Has the organization adopted the appropriate CMS, AHRQ, or other guidelines related to utilization?
    - Is the organization looking three to five years ahead to maintain a leading position in the industry?[21]

[21] Numerof & Associates, Inc. "Managing Complex Projects." http://www.nai-consulting.com/MCP.aspx. "Meaningful Process Redesign Your Customers Would Actually Care About." http://www.nai-consulting.com/download.aspx?a=32&f=6

3 Best Practices, Case Studies, and Resources

There are a number of resources available about managing variation that can provide examples of best practices and improvement case studies. The table below identifies general website resources that have comparative data.

General Resources	
www.statehealthfacts.org	Hosted by the Henry J. Kaiser Family Foundation, this site provides demographic, utilization, and other data organized by state with many useful map features.
www.commonwealthfund.org www.whynotthebest.org	Hosted by The Commonwealth Fund, this site provides state health care scorecards, survey data, and research studies to promote a high-performing health care system.
www.ahrq.gov	AHRQ's website includes many useful research studies and reports, such as *Selecting Quality and Resource Use Measures: A Decision Guide for Community Quality Collaboratives*, as well as health IT resources and health data standards through its United States Health Information Knowledgebase at http://ushik.ahrq.gov.
www.hcupnet.ahrq.gov	HCUPnet is a free, online query system based on data from the Healthcare Cost and Utilization Project (HCUP). It provides access to health statistics and information on hospital inpatient and emergency department utilization (28 million visits). This site includes the Nationwide Inpatient Sample (NIS) dataset with tools to extract comparison data.
www.qualityindicators.ahrq.gov	The AHRQ Quality Indicators (QIs) are measures that use readily available hospital inpatient data.
www.statesnapshots.ahrq.gov	The AHRQ State Snapshots provide annual health care performance measures and public health data by state.
www.hospitalcompare.hhs.gov	Hospital Compare provided by HHS includes information targeted toward consumers to help them find and compare hospitals based on health care needs.
www.cahps.ahrq.gov	The Consumer Assessment of Healthcare Providers and Systems (CAHPS) is a compilation of survey data from patients about their treatment experience, including communications and environmental conditions. This site also provides extensive resources on improvement.
www.dartmouthatlas.org	The Dartmouth Health Atlas provides health care utilization data for Medicare-covered decedents.
www.vha.com	The corporate site gives participating organizations access to tools and data to improve utilization and reduce cost.
www.premierinc.com	The Premier Healthcare Alliance corporate site allows members to access clinical and financial data, including claims data, on 130 million patient discharges.
www.uhc.edu	The University HealthSystem Consortium site provides access to member institutions about products and services for data analysis and performance improvement.

The following table has more detailed examples and resources categorized by major areas of opportunity. These areas are not mutually exclusive and, for simplicity, examples are only listed in one area, although they may be applicable to multiple areas. The table's areas of focus include:

- Use of Checklists, Protocols, and Pathways
- Care Coordination
- Home Health: Chronic Care Utilization
- Med/Surg Utilization: Hospital Care Intensity
- Obstetrics: C-section Utilization
- Imaging
- Surgical Procedures
- End of Life: Hospice Care Utilization
- End of Life: ICU Utilization
- End of Life: Cancer
- Emergency Room Utilization
- Emergency Room: Reducing Wait Time
- Emergency Room: Stroke
- Clinical Decision-Making

Program Name / Study	Summary of Findings	Link
Use of Checklists, Protocols, and Pathways		
Study: Heart Failure Order Sets	Impact of a standardized heart failure order set on mortality, readmission, quality, and costs of care. Study of standardized order sets.	*International Journal for Quality in Health Care* 2010; pp. 1–8, David J. Ballard et. al.
Surgical Checklist Initiative	In January 2009, a coalition of major health care stakeholders in Washington came together to create the SCOAP Surgical Checklist Initiative. The Surgical Care and Outcomes Assessment Program (SCOAP) is a unique, clinician-led, voluntary collaborative that links hospitals and surgeons with clinicians from across the state to increase the use of best practices in surgical care. SCOAP's goal is to provide the kind of surveillance of procedures and response to negative outcomes that exists in the world of aviation.	http://www.scoap.org/checklist/ http://www.scoap.org/downloads/SCOAP-Surgical-Checklist_v3_4.pdf
Surgical Check List	Implementation of a surgical checklist is associated with lower death rates and fewer complications in patients 16 years or older who are undergoing non-cardiac surgery in a diverse group of hospitals. The rate (within the hospitals included in the study) of death was 1.5% before the checklist was introduced and declined to 0.8% afterward (P=0.003). Inpatient complications occurred in 11.0% of patients at baseline and in 7.0% after introduction of the checklist (P<0.001).	http://cme.medscape.com/viewarticle/586780 http://www.who.int/patientsafety/safesurgery/faq_introduction/en/index.html
WHO: Safe Surgery Saves Lives	The goal of the Safe Surgery Saves Lives Challenge is to improve the safety of surgical care around the world by ensuring adherence to proven standards of care in all countries. The WHO Surgical Safety Checklist has improved compliance with standards and decreased complications from surgery in eight pilot hospitals where it was evaluated.	http://www.who.int/patientsafety/safesurgery/en/

Program Name / Study	Summary of Findings	Link
Following Protocols Can Reduce Medication Errors for Heart, Stroke Patients	"Stroke is a huge area where there continues to be a lot of errors with blood thinners and with agents used to dissolve a blood clot causing stroke," writes Andrew D. Michaels, MD, lead author. The statement recommends that hospitals and medical personnel: (1) Obtain patients' accurate weight at admission. (2) Use the Cockroft-Gault formula to calculate creatinine clearance (a measure of kidney function) at admission and as it changes. The formula uses a patient's blood creatinine measurement plus his/her gender, age, and weight to measure the kidneys' capacity to clear drugs. It is the only formula recommended for use in determining drug dosages, but it is not commonly calculated at admission, Michaels said. (3) Adjust medication dosages and heighten surveillance for adverse medication events in older patients. (4) Standardize order forms and protocols for anticoagulation drugs.	http://icu-management.org/node/1569
A Citywide Prehospital Protocol Increases Access to Stroke Thrombolysis in Toronto	To improve rapid access to stroke thrombolysis in Toronto, Canada, a citywide pre-hospital acute stroke activation protocol was implemented. This comprised a paramedic screening tool, ambulance destination decision rule, and formal memorandum of understanding of system stakeholders. Findings observed included a four-fold increase in patients who were eligible for and treated with tissue plasminogen activator (TPA).	http://stroke.ahajournals.org/cgi/content/short/40/12/3841
Acute Stroke Practice Standard for the Emergency Department	OHSU Hospitals and Clinics have adopted this practice standard in order to delineate a consistent, evidence-based approach to treating the patient who presents with signs and symptoms consistent with acute stroke. Although this standard assists in guiding care, responsibility to determine appropriate care for each individual remains with the providers themselves.	http://img.medscape.com/pi/emed/ckb/neurology/1134815-1159751-1162677-1604804.pdf
Sedation Order Form May Reduce ICU Stays	Sedation order forms can reduce the number of days patients spend on mechanical ventilation and shorten their stays in the intensive care unit (ICU), Nebraska researchers have found. When the order form was used, the results were impressive. Patients who were monitored according to the document were assessed for sedation more frequently than those for whom the forms were not used (every 2.1 hours vs. 3.1). The time between sedation vacations was reduced from every 41 hours to every 30.1 hours ($P<0.05$ for both findings). Patients who received a daily sedation vacation spent less time in the ICU than did those patients who were not given a break from the drugs (6.6 vs. 8.3 days; $P<0.05$). Similarly, they experienced shorter duration of mechanical ventilation (3.5 vs. 5.8 days; $P<0.05$).	http://www.pharmacypracticenews.com/index.asp?section_id=50&show=dept&issue_id=404&article_id=10702
A plea for intense glucose management to control hyperglycemia in the ICU. IV insulin infusion protocols reduce hyperglycemia and other hospital morbidities.	Numerous studies have shown that intense glucose control using IV insulin with blood glucose targets of 80 mg/dL to 110 mg/dL improve hospital survival compared with conventional targets with subcutaneous insulin and physician-directed dosing. Van den Berghe et al. found that intensive insulin therapy reduced mortality in the surgical ICU from 8% to 4.6% among patients on ventilation. Additionally, hospital morbidities decrease significantly (e.g., sepsis by 46%, acute renal failure requiring dialysis by 41%, transfusions by 50%, and polyneuropathy by 44%).	http://www.cardiologytoday.com/view.aspx?rID=38185

Program Name / Study	Summary of Findings	Link
Reducing MRSA Health Care-Associated Infections	In 2002, the VA Pittsburgh Healthcare System (VAPHS) began collaboration with the Pittsburgh Regional Healthcare Initiative and the CDC to adopt the principles of the Toyota Production System (TPS) to reduce transmission of MRSA and MRSA health care-associated infections (HAIs). The approach was piloted on a surgical ward at VAPHS. The key strategies implemented included: (1) surveillance cultures for MRSA on all admissions and discharges; (2) prompt isolation (in contact precautions) of patients found to be colonized or infected with MRSA; and (3) an aggressive hand hygiene training program. Using TPS, MRSA infections on the surgical ward decreased 60 percent over four years. The strategy was expanded to the Surgical Intensive Care Unit (ICU), where a 75 percent reduction in MRSA HAIs was realized over three years. In 2005, the program was expanded to include all acute care units at VAPHS and reductions of similar magnitude were noted on all acute care units.	http://www.hsrd.research.va.gov/publications/forum/may10/may10-3.cfm
Improvement Map: Mentor Hospital Registry, Institute for Healthcare Improvement	The IHI's Improvement Map Mentor Hospital Registry allows health leaders to use tables to quickly find a mentor hospital for the implementation of IHI bundles and/or checklists with demographics similar to their own. Areas include: Surgical Checklists, Ventilator Bundle, AMI Core Processes, Catheter-Associated UTI, Central Line Bundles, Falls Prevention, Hand Hygiene, Heart Failure Core Processes, High-Alert Medication Safety, Infection Prevention: MRSA, Infection Prevention: SSI, Medication Reconciliation (ADE), Pressure Ulcer Prevention, Rapid Response Systems, Surgical Complications, and Venous Thromboembolus (VTE).	http://www.ihi.org/IHI/Programs/Campaign/mentor_registry_cli.htm
Regional and state initiatives	Six states' projects and initiatives with links to download best practices for CLASBI and VAP. There are links for national initiatives with interventions listed, for hospital successes, and for resources.	http://premierinc.com/quality-safety/tools-services/safety/topics/bundling/national.jsp http://premierinc.com/quality-safety/tools-services/safety/topics/bundling/success.jsp
Reducing HAIs: Effective Change Strategies	On September 27, 2010, Anthony Harris made this presentation at the 2010 Annual Conference with talking points on: important healthcare-associated infection (HAIs), science of how to decrease HAIs, epidemiological issues of HAI research, barriers to implementation and maintenance, and illustrative examples.	http://www.ahrq.gov/about/annualconf10/george_harris/harris.HTML
First State-Specific Healthcare-Associated Infections Summary Data Report, CDC's National Healthcare Safety Network (NHSN), January-June 2009	This website links to the HAIs report by state, but also has several links to HAI interventions and guidelines to help hospital leaders lower HAIs in their hospitals.	http://www.cdc.gov/hai/statesummary.html and http://www.cdc.gov/HAI/prevent/prevention.html

Program Name / Study	Summary of Findings	Link
CMS Discharge Planning Checklist, Home Health Quality Improvement National Campaign, Hospital to Home (H2H) National Quality Initiative	Website contains links to resources useful for home health transitions, discharge planning, and other links/resources/tools for providers on formal multidimensional programs to improve care transitions.	http://www.cfmc.org/caretransitions/provider_resources.htm and http://www.medicare.gov/publications/pubs/pdf/11376.pdf
Care Coordination		
Project BOOST	The year-long mentoring program providing expert coaching is in place at 60 sites. Project BOOST mentor sites are in various stages of planning implementation and data reporting. Aggregate findings for sites with an intervention in place for one year will be available in early 2011. Early data from six sites, which implemented Project BOOST, reveals a reduction in their 30-day readmission rates from 14.2% before BOOST to 11.2% after implementation; also, a 21% reduction in 30-day all-cause readmission rates.	http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/Boost_vanity_landing.cfm
Care Transitions Program, Louisiana	The project aims to provide Medicare beneficiaries with a health coach upon hospital admission to connect with patients and let them know what to expect during their hospital visit and after. The project has succeeded in reducing the rate of unnecessary hospitalizations from almost 19 percent to approximately 4 percent in the pilot group of patients receiving transitions coaching.	http://louisianaqio.eqhs.org/PDF/Media/Care%20Transitions%20Showing%20Success.pdf
PATH (Post Acute Transitions in Healthcare) Alabama; Tuscaloosa, Bibb, Greene, Hale, Fayette, Lamar and Pickens counties	Specific aims of PATH Alabama are: (1) to establish a multidisciplinary, multi-provider work group that will lead to effective partnerships between the community at large, providers, academic institutions, and patients; (2) to promote capacity building in the targeted communities through increased knowledge and empowerment of community constituents; and (3) to engage community providers in the development, application, and dissemination of data-driven strategies for reducing hospital readmissions.	http://www.aqaf.com/index.php?option=com_content&task=view&id=448&Itemid=824
Alliance of Community Health Plans Care Coordination Program	Two examples from the source: (1) At Security Health Plan in Marshfield, Wisconsin, nurse managers work with patients prescribed the anti-clotting drug Warfarin and their families to prevent falls, ensure proper nutrition, and answer questions about the proper use, safe dosage, and dangerous interactions with other medications. Security reduced the normal 7%-10% risk of hospitalizations or death in patients taking Warfarin to less than 2%. (2) Priority Health Plan of Grand Rapids, Michigan, tracks patients with cardiovascular conditions as they are discharged from a hospital to make sure that their medications are correct, that they have a follow-up appointment with a physician, and that they receive the other services needed to help them adhere to a treatment plan. Just 2 out of 105 Medicare patients included in Priority's pilot project had an unplanned readmission within 30 days of being discharged.	http://www.achp.org/files.php?force&file=front/JohnsHopkinsStudy-FinalReport.pdf

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Lean Healthcare / The Pittsburgh Way, UPMC St. Margaret Hospital in Pittsburgh	This hospital's goal in using Lean principles was to reduce readmissions for chronic obstructive pulmonary disease (COPD) by an aggressive 40% in one year. An intervention based on Lean principles helped find areas contributing to these readmissions, organized and established new protocols to prevent problem areas and strengthen efficiency, and established systems to sustain and maintain these changes. For example, the intervention team found that different doses of the same drug (.63 mg and 1.25 mg of Xopenex, a drug commonly used with COPD patients) were in identical containers side by side in the same drawer. To address this problem, the team moved the different doses to different drawers with highly distinctive labels to call special attention to the dosages. After finding other such areas for change and implementing new systems of efficiency and safety, within one year, UPMC St. Margaret reduced readmission rates for COPD patients by 48% and produced an estimated savings to the hospital of over $85,000.	http://www.naidagrunden.com/ http://www.cahealthadvocates.org/news/basics/2010/creative.html
Georgia Care Transitions Program, Piedmont Hospital, Atlanta	The Care Transitions Initiative aims to educate the patient and caregiver on how to take medications correctly, identify potential problems after discharge, and find community-based services. Pilots are under way in Gwinnett, Rockdale, and Newton counties. Atlanta's Piedmont Hospital cut readmissions to 10.6% among Medicare patients.	http://www.gmcf.org/transitions/index.shtml
Project RED, Boston Medical Center	Project Re-Engineered Discharge uses an 11-point checklist for hospital staff to follow during discharge, and is coordinated by a nurse trained as a discharge advocate and a pharmacist, both employed by the hospital. The list includes educating patients about their diagnoses, confirming medications, creating a personal health record, making follow-up appointments with primary care providers, and giving patients a written discharge plan. A recent randomized study showed a 30% decrease in readmission when all steps were followed.	https://www.bu.edu/fammed/projectred/
Home Health – Chronic Care Utilization		
Aetna Transitional Care Model Program	Aetna's Medicare Advantage members participating in the Transitional Care Model program receive home visits from advanced-practice nurses within seven days of hospital discharge. Nurses ensure that patients have all of the items and services needed to follow their physicians' care plans and that their home environments are safe. Among patients receiving services through the Transitional Care Model pilot from 2006-2007, significant improvements were achieved in functional status, depression symptom status, self-reported health, and quality of life. The pilot program achieved a cost savings of $175,000, or $439 per member per month. Aetna is now implementing the program for larger populations of Medicare Advantage members across the country.	http://www.commonwealthfund.org/Content/Newsletters/Quality-Matters/2010/August-September-2010/Case-Study.aspx

Program Name / Study	Summary of Findings	Link
The Alliance for Home Health Quality and Innovation (AHHQI)	According to the 2008 Data Book issued by the Medicare Payment Advisory Commission (MedPAC), an analysis of Medicare home health utilization between 2002 and 2006 revealed the following: (1) The number of Medicare recipients using home health services increased from 2.5 million to 2.9 million, or 4% a year. (2) The percent of all Medicare beneficiaries using home health rose from 7.1% to 8.1%, a 3.5% annual increase. (3) Total episodes of care went from approximately 4 million to more than 5 million, a 6.3% annual change. (4) Episodes per user rose from 1.62 to 1.76, while visits per user increased from 31 to 34. (5) Average payment per episode went from $2,317 to $2,569, an average 2.6% annual increase. This document explains the roles and responsibilities of the home health team.	www.ahhqi.org/download/File/AHHQI_HomeCareDataBookv4.pdf
Physician Awareness and Understanding of Home Health Services in Massachusetts	Contains information on physician awareness and understanding of home health services in Massachusetts. For example, 97% of physicians said home health care helps manage their patients care from home and 41% report cost savings.	www.massmed.org/HomeSurvey09
Guided Care	A Guided Care nurse, based in a primary care office, works with patients and their families to improve their quality of life and make more efficient use of health services. The nurse assesses patient needs, monitors conditions, educates and empowers the patient, and works with community agencies to ensure that the patient's health care goals are met.	www.guidedcare.org
King County Care Partners Chronic Care Management Project	Of those in the chronic care management group (839 clients), 18% (153 clients) received at least one month of chronic care management in the nine-month post period. The impact of offering chronic care management services in the program's initial nine months of operation is estimated to have resulted in an average $36 per member per month increase in Health and Recovery Services Administration medical expenditures, less than a 3% change from baseline. The change is not statistically significant given the variability of costs within both groups.	http://www.aasa.dshs.wa.gov/professional/hcs/CCM/
Home-Based Chronic Care: An Expanded Integrative Model for Home Health Professionals	This article posits that the role of chronic care coordination assistance and disease management fits within the purview of home health care and should be central to home health chronic care delivery.	http://www.nursingcenter.com/library/JournalArticle.asp?Article_ID=786675
The Sutter Care Coordination Program	The Sutter Care Coordination Program combines chronic care and disease management to address the medical and psychosocial needs of individuals with multiple chronic conditions. The program reduced patient visits to specialists by 12.7%, emergency department visits by 25.9%, and hospitalizations by 18.3%. Because the program's sponsor, Sutter Health Sacramento-Sierra, serves many patients on a capitation basis, much of the savings achieved through avoided medical costs are shared by its physician organizations and hospitals. The program was the first of its kind to receive Disease-Specific Certification from The Joint Commission.	http://www.innovations.ahrq.gov/content.aspx?id=1696

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The Long Term Home Health Care Program (LTHHCP) in Niagara County	The LTHHCP is available in every county in New York, and its patients are extraordinarily diverse. Though most LTHHCP patients are elderly, people of all ages, infants through senior adults may participate. LTHHCP patients include people with severe physical disabilities, such as advanced multiple sclerosis and severe cerebral palsy, people with multiple chronic diseases, such as diabetes, people with progressive conditions such as heart, kidney, and respiratory failure, and physically frail elders.	http://www.niagaracounty.com/health/Nu_LTHHCP.asp
Med/Surg Utilization – Hospital Care Intensity		
Rethinking the Use of Intensive Care Beds in California Hospitals	Hospital reliance on the ICU is growing: the supply of noncritical care beds shrunk 31% whereas the supply of critical care beds increased 26%. Research shows hospitals lose money on Medicare ICU cases. Reducing variation in utilization would produce significant ICU savings (i.e., substituting medical/surgical floor days for 130,000 ICU patients would yield $159 million in operating costs savings for hospitals in California annually) Quality-driven initiatives produce ICU utilization savings.	http://www.chcf.org/publications/2007/03/rethinking-the-use-of-intensive-care-beds-in-california-hospitals
Evaluation of Appropriateness of Intensive Care Unit Admissions: The GIVITI's StART Approach	StART is an approach to identify possible mismatches between the level of care actually delivered, assumed to correspond to what is clinically required, and the level of care deliverable by the unit.	http://ccforum.com/content/14/S1/P449
Patient Tracker	The Patient Tracker software is an interdisciplinary communication tool that has been widely used and has proved effective in coordinating inpatient flow. The use of the software facilitated a decrease in cancellations of surgical procedures and in delays of admissions through the ED. This is an example of the use of HIT to solve an important bed management efficiency challenge faced by academic hospitals.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2655791/
Patient Placement Coordinators, Jackson Memorial Hospital (JMH)	In an attempt to improve patient care and to maximize bed utilization, the hospital's ED developed two new initiatives. The first of these to evolve was a new position called Patient Placement Coordinator (PPC). The PPC evolved from a group of select senior nurses with strong administrative and clinical backgrounds. Their sole job was to improve ED throughput, improve bed utilization throughout the entire hospital, and to ensure that patients were assigned to in-house settings that would provide the appropriate level of care.	http://www.psqh.com/novdec05/bed-utilization.html
ED Problems Are Result of Bed Shortages, Doctors Contend	Overview of some programs that have been implemented in Canadian hospitals. An example is Montreal's Regional Health Board, which has had some success in dealing with overcrowding. Over the last two years, the board has increased home care services and improved access to medical clinics and outpatient services to free beds within hospitals. The board has also developed a management guide to improve coordination between emergency physicians and those coordinating admissions. Some hospitals have hired medical coordinators who are on-site or on-call 24/7.	http://www.cmaj.ca/cgi/content/full/170/11/1653

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Critical Access Hospital: An Overview of the Bed Management Program	Provides an approach to bed management within a critical access hospital. Real time information on bed use, streamlined placement, and earlier discharges are just a few examples of its approach.	http://www.healthynh.com/nhha/nh_hospitals/ruralhealth/cah%20downloads/Monadnock%20Bed%20Management.ppt
Reducing Inpatient Length of Stay	These findings show that hospitals that successfully lower their lengths of stay adopt a process with many of the following features: (1) Identifying clinical and financial opportunities associated with current experience based on a comparison to best-practice benchmarks. (2) Obtaining the commitment of senior management to support, encourage and reward change. (3) Engaging physicians and hospital staff and identifying champions for change. (4) Establishing baseline performance. (5) Setting objective and measurable performance targets. (6) Creating quality processes built on evidence-based, best-practice clinical processes adapted to local conditions. (7) Measuring and reporting results on a timely basis. (8) Linking target achievement to financial rewards in a legally sound manner.	http://publications.milliman.com/research/health-rr/pdfs/Reducing-InPatient-Length-Stay-CC.pdf
Learn ICU	Site with multiple guidelines on admissions and discharges for the ICU.	http://www.learnicu.org/Quick_Links/Pages/default.aspx
Obstetrics – C-Section utilization		
The Mount Sinai Cesarean Section Reduction Program	A six-year follow-up evaluation of their original cesarean section reduction program is presented. While establishing obstetric practice guidelines was accomplished, two prerequisites remain critical: lowering cesarean utilization was to be accomplished without harm to mother or fetus, and a target rate was prospectively determined. The results after six years indicate that total cesarean rates of 10%-12% can consistently be achieved without adverse outcome. Additionally, operative vaginal procedures were employed less than 3% of cases. Separate analysis of 580 breech deliveries failed to show an effect of route of delivery on mortality. This effort indicates that long-term reductions and cesarean utilization are possible with a comprehensive departmental program designed to accomplish achieving a target rate of 11%.	http://www.ncbi.nlm.nih.gov/pubmed/8272900
Northern New England Perinatal Quality Improvement Network - VBAC	Since 2000, the VBAC rate in New Hampshire fell from 36.74% to 20.12%, 8.00% due to lack of availability. In 2002, 372 extra cesarean deliveries, 179 due to lack of option, at a total cost of $1.4 million were performed in New Hampshire. Although 14 of 33 hospitals no longer offer VBAC, 31 of 33 participated in the conference, and 97.2% of individuals polled wished to offer VBAC.	http://www.nnepqin.org/site/page/vbac
Assessing Regional Variation in Cesarean Section (C-Section) and Vaginal Delivery After C-Section (VBAC) in a Major Metropolitan Area Utilizing a Statewide Database and Risk Stratification Tool	The significant variation among physicians for C-section and VBAC rates suggests that decision-making by physicians providing obstetrical care is a major contributor to overall rates. Low VBAC rates combined with high numbers of low risk repeat C-sections provide the best opportunity to modify practice patterns.	http://gateway.nlm.nih.gov/MeetingAbstracts/ma?f=102272673.html

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Bariatric Operations Reduce Odds of Gestational Diabetes, Cesarean Section	Obese women who have bariatric surgical procedures before pregnancy were three times less likely to develop gestational diabetes (GDM) than women who have bariatric operations after delivery, according to new research findings published in the August 2010 issue of the *Journal of the American College of Surgeons*. The retrospective study also found that delivery after bariatric procedures was associated with reduced odds of cesarean section—an outcome associated with GDM.	http://www.eurekalert.org/pub_releases/2010-09/wsw-bor090710.php
Ob-Gyns Issue Less Restrictive VBAC Guidelines	The cesarean delivery rate in the U.S. increased dramatically over the past four decades, from 5% in 1970 to over 31% in 2007. "The current cesarean rate is undeniably high and absolutely concerns us as ob-gyns," said Richard N. Waldman, MD, president of ACOG. "These VBAC guidelines emphasize the need for thorough counseling of benefits and risks, shared patient-doctor decision-making, and the importance of patient autonomy. Moving forward, we need to work collaboratively with our patients and our colleagues, hospitals, and insurers to swing the pendulum back to fewer cesareans and a more reasonable VBAC rate." Approximately 60-80% of appropriate candidates who attempt VBAC will be successful.	http://www.acog.org/from_home/publications/press_releases/nr07-21-10-1.cfm
AHRQ Analysis of Delivery Trends	"Vaginal Birth After Cesarean: New Insights." This structured abstract, published in March 2010, provides an analysis of research studies on vaginal birth after cesarean (VBAC), trial of labor (TOL) and elective repeat cesarean delivery (ERCD).	http://www.ahrq.gov/research/maternhlth/
Imaging		
American College of Radiology	This website provides Industry research and resources.	ww.acr.org
Interventions for Improving the Appropriate Use of Imaging in People with Musculoskeletal Conditions	For improving the use of imaging in osteoporosis, most interventions aimed at health professionals demonstrated benefit, and patient-mediated, reminder, and organizational interventions appeared to have most potential for benefit. For low back pain studies, the most common intervention evaluated was distribution of educational materials and this showed varying effects. Other interventions in low back pain studies showed variable effects. For other musculoskeletal conditions, educational materials, educational meetings, and audit and feedback were not shown to be effective for changing imaging ordering behavior. Across all conditions, increasing the number of intervention components did not result in producing a larger effect of interventions.	http://www2.cochrane.org/reviews/en/ab006094.html
ACR Appropriateness Criteria for Low Back Pain.	Evaluation criteria for the appropriateness of initial radiologic examinations for patients with low back pain with or without radiculopathy.	http://www.guideline.gov/content.aspx?id=13671
No Benefit to Routine Imaging for Low Back Pain Without "Red Flags"	Researchers conclude that clinicians should refrain from routine use of imaging in these patients, although they acknowledge that patient expectations will also have to be managed to accomplish this.	http://www.medscape.com/viewarticle/587940

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Radiologists See Opportunity in Overuse of Back Imaging	Radiologists need to help clinicians better understand which back pain symptoms require diagnostic imaging and which symptoms are likely to improve with or without imaging.	http://www.rsna.org/Publications/rsnanews/May-2009/Radiologists_feature.cfm
Minnesota Community Measurement, Low Back Pain Measure Impact and Recommendation Document	Low back pain was ranked as one of the top six clinical conditions with potential performance variation selected by clinicians in the technical advisory group for high-tech diagnostic imaging. Lumbar imaging for low back pain without indications of serious underlying conditions does not improve clinical outcomes. Therefore, clinicians should refrain from routine, immediate lumbar imaging in patients with acute or subacute low back pain and without features suggesting a serious underlying condition.	http://www.health.state.mn.us/healthreform/measurement/2010_LowBackPain.pdf
National Priorities Partnership	The National Priorities Partnership selected nine areas of overuse and misuse, one of which is unwarranted diagnostic procedures, specifically targeting lumbar spine MRI prior to conservative therapy without red flags. Imaging of the back and the use of back surgery was also identified as early targets for waste reduction by New England Healthcare Institute.	http://www.nationalprioritiespartnership.org/PriorityDetails.aspx?id=598
Community Checkup, Puget Sound Health Alliance	Researchers found "a clear relationship between MRI availability and MRI use for low back pain patients." The areas with the largest growth in MRI availability also had the fastest-growing Medicare bills for imaging. The Community Checkup, the name of the Alliance's public report, scores practices on how often imaging is deployed for new low back pain patients—the fewer the scans, the higher the score.	http://rwjfblogs.typepad.com/healthreform/2010/01/htk-1.html#more http://www.wacommunitycheckup.org/
Institute for Clinical Systems Improvement (ICSI)	ICSI developed protocols based on national guidelines for use.	http://www.icsi.org/health_care_redesign_/diagnostic_imaging_35952/
Surgical Procedures		
NEJM: Variation in Hospital Mortality Associated with Inpatient Surgery	In addition to efforts aimed at avoiding complications in the first place, reducing mortality associated with inpatient surgery will require greater attention to timely recognition and management of complications once they occur.	http://www.nejm.org/doi/full/10.1056/NEJMsa0903048#t=articleTop
Intensive Care Unit Nurse Staffing and the Risk for Complications after Abdominal Aortic Surgery	The authors report findings based on categorizing intensive care units (ICUs) into those with less versus greater nurse-to-patient ratios. Results demonstrated an increased risk for complications, including specific respiratory-related ones, in ICUs with smaller care ratios. The authors suggest that nurse staffing affects the quality of postoperative care and that continued efforts should explore optimal care ratios as one method of reducing ICU complication rates.	http://www.acponline.org/clinical_information/journals_publications/ecp/sepoct01/pronovost.htm
Understanding and Reducing Variation in Surgical Mortality	Strategies focusing on selective referral, process compliance, or outcomes measurement reflect different philosophies on how best to improve surgical quality and have distinct advantages and disadvantages. As described elsewhere, the optimal strategy may depend on both the clinical context (e.g., which procedure) and political realities. It may also depend on which outcomes measure is to be improved.	http://www.annualreviews.org/doi/abs/10.1146/annurev.med.60.062107.101214

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5 Million Lives Campaign	The 5 Million Lives campaign sponsored by Institute for Healthcare Improvement sought to reduce 5 million instances of medical harm from December 2006 through December 2008. One of their goals was reducing surgical complications. The site provides toolkits for interventions and progress made by the campaign.	http://www.ihi.org/IHI/Programs/Campaign/
Department of Veterans' Affairs Inpatient Evaluation Center (IPEC)	Following four intense years of building a system that measures and reports risk adjusted mortality in 138 hospitals nationally, these researchers have identified lessons regarding structure of a national measurement system outside of the VA that might be valid. First, a risk adjustment model that predicts death at 30 days in addition to a model predicting death at hospital discharge will be important to avoid gaming. Next, having resources and expertise to support recalibration of the weights of the model at appropriate time frame is needed. Also, using a large dataset will be needed as part of the infrastructure of the program.	www.ahrq.gov/qual/mortality/VAMort.pdf
Surgical Continuum of Care (SCoC) model	SCoC model is patient-centered, outcomes-driven, value-based approach for hospital-wide surgical patient safety. The principles of this value paradigm are adaptable to other hospitals as demonstrated in our longitudinal study in 3 hospital systems, and the initial experience of CoC suggests that this model will have benefit beyond surgical hospital cohort.	http://www.ncbi.nlm.nih.gov/pubmed/20739849
End of Life: Hospice Care Utilization		
AHA's Circle of Life Award	Useful case studies of institutions that were recognized for their performance.	www.aha.org/aha/news-center/awards/circle-of-life/awardees.html
Report of the Center for Improving the Value of Health Care (CIVHC) Palliative Care Task Force	The CIVHC Palliative Care Task Force represents a spectrum of palliative care providers and experts in Colorado. The preponderance of palliative care in Colorado is delivered by 53 hospice programs (total of 72 sites) to over 15,000 patients and their families annually. A number of hospitals and one health care system offer palliative care programs, and other hospitals and nursing homes partner with hospices to provide palliative care services in their institutions.	http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251615969179&ssbinary=true
Palliative Care and Home Hospice Program: Northwestern Memorial Hospital	Northwestern Memorial Hospital (NMH) established its hospice and palliative care program step by step over 17 years. The program has three components: a consultation service, an acute inpatient unit, and a home hospice program. During 1997, the consultation service had an average of 57 new patients per month ranging in age from 45 to 80 years. During 1996, the 12-bed acute care inpatient unit had an average midnight census of 9.8 patients. That average dropped to 6.9 in 1997, due to new treatments for AIDS, and rose to 9.0 in the third quarter of 1998. The inpatient unit cares for more than one third of all dying patients in NMH, a 779-bed private nonprofit hospital. Patients need not have hospice insurance benefits to be admitted to the acute care unit. The home hospice program serves patients living within the city of Chicago.	http://www.milbank.org/pppc/0011pppc.html#northwestern

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Dr. Alexander Nesbitt: Pulled to Palliative Care	The inpatient palliative care service at the Gatehouse Hospice Unit launched in January 2005 and grew rapidly, while the hospice census was also rising to its current level of about 100 patients. Dr. Nesbitt went to the system's administrators and persuaded them to open seven-bed Gatehouse Inpatient Hospice in July 2006 in a medical office building two miles from the acute hospital, with him as its medical director.	http://archive.constantcontact.com/fs087/1102316637620/archive/1102920975121.html
Agency for Healthcare Research and Quality (AHRQ) End of Life Care and Outcomes Report	To evaluate progress in the field of end-of-life care and clarify research priorities, the National Institute of Nursing Research (NINR) with the Agency for Healthcare Research and Quality (AHRQ), commissioned this evidence report as the basis for a State-of-the-Science Conference in December 2004. The need for such an assessment is clear. More than 75 percent of Americans now live past age 65, and 83 percent of Americans now die while covered by Medicare.	http://www.ahrq.gov/downloads/pub/evidence/pdf/eolcare/eolcare.pdf
Use of hospitals, physician visits, and hospice care during last six months of life among cohorts loyal to highly respected hospitals in the United States	This study evaluated the use of health care resources during the last six months of life among patients of U.S. hospitals with strong reputations for high-quality care in managing chronic illness.	http://www.bmj.com/content/328/7440/607.full.pdf
Researchers Define Best Practices for End-of-Life Care in Nursing Homes with Hospice Services	Researchers at Brown Medical School identified, recorded, and disseminated collaborative solutions (best practices) for end-of-life care in nursing homes with hospice services. They created a project website with information about the project, resources and guidelines, and bibliographies. Researchers identified these key collaborative solutions: Systematic processes facilitate communication among all levels of nursing home and hospice staff. Hospice chief executive officers are well versed in nursing home regulatory and care environments, are skilled leaders, and convey a consistent vision for hospice nursing home care. Nursing homes share their care expectations with their hospice partners and provide feedback to hospices.	http://www.rwjf.org/reports/grr/049891.htm
Workgroup Report on Hospice Care, Palliative Care and End-of-Life Counseling	The workgroup was asked to examine the following questions: (1) What are the types of care available in the state for individuals at the end of life for palliative and hospice care? (2) What is the degree to which these options are utilized within a home setting, long-term care setting, hospital setting, and hospice setting? (3) What is the average length of time spent in various types of palliative and hospice care settings? (4) What are the types and degrees of barriers that exist regarding awareness of and access to hospice and palliative programs? (5) What are recommendations to improve awareness and access to hospice and palliative care programs?	http://www.oag.state.md.us/Healthpol/Hospice_and_Palliative_Care_Workgroup_Report.pdf

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Caring at All Stages of Life and Health	The National Hospice and Palliative Care Organization (NHPCO), which represents hospices, palliative care providers, and end-of-life care professionals, has articulated a vision for improved end-of-life care: "A world where individuals and families facing serious illness, death, and grief will experience the best that humankind can offer." NIH experts recognized that new models of care may include aggressive technology but will also take into account the patient and the family's priorities regarding quality of life as well as the patient's spiritual needs. In these care models, honest conversations and planning with a patient and the family begin soon after a serious illness is diagnosed.	http://www.ahip.org/content/default.aspx?bc=31|130|136|18744|18748
American Hospice Foundation	Nonprofit organization that supports programs to serve the needs of terminally ill and grieving individuals of all ages	www.americanhospice.org
Hospice Foundation of America	Nonprofit organization that "provides leadership in the development and application of hospice and its philosophy of care."	www.hospicefoundation.org
National Hospice and Palliative Care Organization	Largest nonprofit membership organization representing hospice and palliative care programs and professionals in the U.S.	www.nhpco.org
Informed Medical Decisions	Nonprofit organization with a goal to lead changes to ensure that health care decisions are made with the active participation of fully informed patients. Numerous cases and research studies provided.	www.informedmedicaldecisions.org
The Palliative Care Program	The KP TriCentral Palliative Care (TCPC) program started as a pilot study in 1997 and began receiving annual funding in 1998. The TCPC program is an interdisciplinary, home-based program for patients at the end of life.	http://www.thepermanentejournal.org/files/PDF/Spring2003.pdf
End of Life: ICU Utilization		
Changes in Critical Care and the Variable-Acuity Unit	The "acuity adaptable" room is a concept that has been gaining ground as a strategy to relieve pressure on critical care areas.	http://medicalconnectivity.com/2005/08/25/changes-in-critical-care-and-the-variable-acuity-unit/
Impact of a Proactive Approach to Improve End-of-Life Care in a Medical ICU	This study assessed the impact of a proactive case-finding approach to end-of-life care for critically ill patients experiencing global cerebral ischemia (GCI) after cardiopulmonary resuscitation and multiple organ system failure (MOSF), in comparison to historical control subjects.	http://www.medscape.com/viewarticle/447781
A National Survey of End-of-Life Care for Critically Ill Patients	To determine the frequency of withdrawal of life support, these researchers contacted every American postgraduate training program with significant clinical exposure to critical care medicine, asking them prospectively to classify patients who died into one of five mutually exclusive categories. Data was received from 131 ICUs at 110 institutions in 38 states.	http://ajrccm.atsjournals.org/cgi/reprint/158/4/1163

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Can Health Care Costs Be Reduced by Limiting Intensive Care at the End of Life?	As concern has risen over the high cost of health care, especially in the last year of life, J. F. Fries and coworkers, among others, have suggested that such costs might be reduced by decreasing the need and demand for medical services, particularly among terminally ill patients, elderly and otherwise, whose deaths are seemingly imminent. Furthermore, because the terminally ill often are hospitalized and may be candidates for the intensive care unit (ICU), and because the ICU is particularly resource-intensive, reducing use of the ICU among such patients appears to present unique opportunities for cost reduction . A further rationale for limiting ICU care was provided by the Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatment (SUPPORT). This landmark study followed a large cohort of critically ill patients with a predicted six-month survival probability of only 52%. The SUPPORT investigators found that despite an intervention designed to improve end-of-life care, many patients who died did so not only at great expense but also after spending at least 10 days in the ICU comatose, receiving mechanical ventilation, with do-not-resuscitate (DNR) orders written 2 days before death, and in pain.	http://ajrccm.atsjournals.org/cgi/reprint/165/6/750
Withdrawing Life Support and Resolution of Conflict with Families	Summary points: Many deaths in intensive care occur after withdrawing or withholding life support. Clinicians and families generally make the decision as most patients are too ill to participate, but who takes the lead role varies greatly. Conflict about withholding or withdrawing life support is common between clinicians and families, and negotiation of these conflicts requires good communication skills. Good communication by intensive care physicians may shorten the dying process. Withdrawal of life support is a clinical procedure that requires good medical skills, cultural sensitivity, attention to ethical principles, and close collaboration with patients' families.	http://www.bmj.com/content/325/7376/1342.full.pdf
Rethinking the Use of Intensive Care Beds In California Hospitals	Now is the appropriate time to review the utilization of intensive care units in California as many of the state's hospitals have yet to begin construction to meet new seismic standards.	http://www.chcf.org/~/media/Files/PDF/R/PDF%20RethinkingUseOfICUCareBedsInCA.pdf
Reducing Costs and Improving Outcomes in Adult Intensive Care	The organizations in the Breakthrough Series have proven that it is possible to close the gap between what we know and what we practice, thus achieving substantial reductions in cost and improvements in quality within a matter of months. This guide is intended to help others work on closing that gap in their own institutions.	http://www.ihi.org/nr/rdonlyres/3594c6cc-3d3f-4d6d-aca8-fab39cad9a16/0/ihi_btsguide_aic.pdf
The Case of Hospital Palliative Care	Palliative care is not dependent on prognosis and can be delivered at the same time as curative treatment. The ultimate goal: to improve quality of life for patients and families facing serious illness.	http://www.capc.org/support-from-capc/capc_publications/making-the-case.pdf
Improving Outcomes While Reducing Utilization: An ICU Case Study	This case study describes St. Vincent's Charity Hospital's ambitious goal to reduce the utilization and cost of critical care, while improving quality.	http://www.himss.org/content/files/jhim/10-1/10-1-8.pdf

Program Name / Study	Summary of Findings	Link
Improving Resource Utilization in the Intensive Care Units: A Challenge for Saudi Hospitals	In the face of increasing demand of intensive care services in the kingdom of Saudi Arabia, as well as the high cost of delivering such services, systematic steps must be undertaken to ensure optional utilization and fair allocation of resources. Strategies start prior to intensive care units (ICU) admission by the proper selection of patients who are likely to benefit from ICU. Less resource-demanding alternatives, such as intermediate care units, should be used for low-risk patients. Do-not-resuscitate status in patients with no meaningful chance of recovery will prevent futile admissions to ICUs. Measures known to improve the efficiency of care in the ICU must be implemented, including hiring full-time qualified intensivists, switching open units to closed ones, and introducing certain evidence-base driven management protocols. On discharge, the intermediate care units again play a role as less expensive alternative transitional areas for patients who are not stable enough to go to the general ward. Measures to reduce readmissions to the ICU must also be implemented. Improving ICU resource utilization requires teamwork by not only the intensivists but also the administrators and other health care providers.	http://www.smj.org.sa/PDFFiles/Feb03/!IMPROVI.PDF
Cost Savings Associated with U.S. Hospital Palliative Care Consultation Programs	This study examined the impact of palliative care consultation teams on hospital costs and found that palliative care consultation teams were associated with a reduction of direct hospital costs of nearly $1,700 per admission for live discharges and nearly $5,000 per admission for patients who died.	http://www.capc.org/costsaving_aim092008.pdf
End of Life: Cancer		
Quality of End-of-Life Cancer Care for Medicare Beneficiaries, Regional and Hospital-Specific Analyses	This Dartmouth Atlas report examines how elderly patients with poor prognosis cancer are cared for across regions and hospitals and finds remarkable variation depending on where the patients live and receive care.	http://www.dartmouthatlas.org/downloads/reports/Cancer_report_11_16_10.pdf
Report: End-of-Life Cancer Care Varies Widely for Medicare Patients	Whether Medicare patients with advanced cancer will die while receiving hospice care or in the hospital varies markedly depending on where they live and receive care, according to the Dartmouth Atlas Project's first-ever report on cancer care at the end of life. The researchers found no consistent pattern of care or evidence that treatment patterns follow patient preferences, even among the nation's leading academic medical centers.	http://www.dhmc.org/webpage.cfm?site_id=2&org_id=796&morg_id=0&gsec_id=58181&sec_id=0&item_id=58181
Achieving Best Practice Cancer Care	The government of Victoria, Australia, is committed to developing and implementing multidisciplinary care for all cancer patients from diagnosis through palliative care. The aim is to ensure a multidisciplinary team approach to prospective treatment and care planning that is aligned with best-practice and evidenced-based care.	http://www.health.vic.gov.au/cancer/docs/mdcare/multidisciplinarypolicy0702.pdf

Program Name / Study	Summary of Findings	Link
Home Care for Cancer Patients	A doctor, nurse, or social worker can provide information about a patient's specific needs, the availability of home care services, and a list of local home care agencies. Services provided by home care agencies may include access to medical equipment; visits from registered nurses, physical therapists, and social workers; help with running errands, meal preparation, and personal hygiene; and delivery of medication. Medicare may offer reimbursement for some home care services. Medicaid covers part-time nursing care, home care aide services, and medical supplies and equipment. Veterans who are disabled as a result of military service can receive home care services from the U.S. Department of Veterans Affairs (VA).	http://www.cancer.gov/cancertopics/factsheet/Support/home-care
Palliative Care for Lung Cancer Patients	The majority of patients who acquire lung cancer will have troublesome symptoms at some time during the course of their disease. Some of the symptoms are common to many types of cancers, while others are more often encountered with lung cancer than other primary sites. The most common symptoms are pain, dyspnea, and cough. This document addresses the management of these symptoms, and it also addresses the palliation of specific problems that are commonly seen in lung cancer: metastases to the brain, spinal cord, and bones; hemoptysis; tracheoesophageal fistula; and obstruction of the superior vena cava.	http://chestjournal.chestpubs.org/content/123/1_suppl/284S.full.pdf+html
Palliative Care, End of Life, and Pain Relief	Two key national studies have evaluated these issues. The first, a National Cancer Policy Board (NCPB) study, responded to the 1997 Institute of Medicine (IOM) report, *Approaching Death: Improving Care at the End of Life*, which discussed a range of end-of-life issues. This report received national attention and is now regarded as a milestone in palliative care. Opportunely, the NCPB report I*mproving Palliative Care for Cancer: Summary and Recommendations* was issued by the IOM the week after the NIA/NCI cancer centers workshop. Two cancer center workshop participants, Dr. Kathleen M. Foley, the speaker for Working Group 6, and Dr. Charles S. Cleveland, a participant in Working Group 6, contributed to the NCPB report, which is an excellent resource for all initiatives generated from the priorities of Working Group 6.	http://www.nia.nih.gov/ResearchInformation/ConferencesAndMeetings/WorkshopReport/WorkingGroupReports/WorkingGroup6.htm
Early Palliative Care for Patients with Metastatic Non–Small-Cell Lung Cancer	Patients with metastatic non–small-cell lung cancer have a substantial symptom burden and may receive aggressive care at the end of life. We examined the effect of introducing palliative care early after diagnosis on patient-reported outcomes and end-of-life care among ambulatory patients with newly diagnosed disease.	http://www.nejm.org/doi/full/10.1056/NEJMoa1000678
Dana-Farber Cancer Institute Department of Psychosocial Oncology and Palliative Care	In 2008, Dana-Farber created the new Department of Psychosocial Oncology and Palliative Care. This was done in recognition of the growth and evolution of these fields and their centrality to cancer care.	http://www.dana-farber.org/res/departments/center-for-psycho-oncology-and-palliative-care-research/
Integrating Palliative Care in Oncology	A comprehensive approach to treating patients with cancer includes cancer treatment, supportive interventions, and palliative care.	http://www.moffitt.org/CCJRoot/v8n1/pdf/32.pdf

Program Name / Study	Summary of Findings	Link
Emergency Room Utilization		
Frequent Users of the Emergency Department: A Program to Improve Care and Reduce Visits	The authors describe a case management program for frequent users of the emergency department. The study had a single-subject design, with evaluation for each patient of the number of visits to the emergency department for a 12-month period before referral to the program and a similar period after implementation of an individualized care plan. Referrals were made on the basis of two or more of the following criteria: chronic medical condition, complex medical condition, drug-seeking behavior, violent behavior, and abusive behavior. A multidisciplinary team developed the individualized care plans. Twenty-four patients agreed to participate. For the 12-month period before their referral, these patients accounted for a total of 616 (median 26.5) visits to the emergency department; for a similar period after implementation of the care plans, they accounted for 175 (median 6.5) visits. The difficult-case management program appeared to be effective in reducing the total number of visits to the emergency department during the study period and in improving the care for these patients.	http://www.cmaj.ca/cgi/reprint/162/7/1017
Reducing Emergency Room Use by Low-Income Patients May Improve Their Health	Researchers at the Robert F. Wagner Graduate School of Public Service of New York University explored the differences in health outcomes experienced by low-income patients who received primary care services in various health care settings in New York City. Patients who do not receive appropriate primary care frequently use emergency rooms for nonemergencies or they are hospitalized for existing conditions that can be managed with routine care. As part of their study, the investigators: (1) Examined about 200 million Medicaid claims records filed over a six-year period; (2) Examined records from the New York City public hospital and health care system; (3) Surveyed 300 primary care providers affiliated with hospitals and other institutions; (4) Explored why some patients choose to use emergency rooms for their primary care needs while others seek care in outpatient settings.	http://www.rwjf.org/reports/grr/026673.htm
Increasing Paramedics' Skills Can Reduce Emergency Room Visits of Children with Special Needs	From 1997 to 2000, the University of Arizona College of Medicine developed and tested a model program to train paramedics to treat children with special health care needs at the scene instead of transporting them to an emergency facility. At the time the grant was made, such a training program did not exist. The model program focused on needs including severe asthma, seizure disorders, and cerebral palsy; children with those conditions may be dependent on oxygen supplementation, infusion pumps, or other technology. Investigators at the university's Arizona Emergency Medicine Research Center (AEMRC) developed the program, which paramedics could complete in a self-instruction course while on duty. It included: (1) A self-study manual and companion video. (2) Eleven integrated practice case scenarios. (3) A skills evaluation workshop. (4) A handbook of clinical activities with a supplemental CD.	http://www.rwjf.org/reports/grr/030671s.htm

Program Name / Study	Summary of Findings	Link
Providence St. Peter Brings Frequent Flyers Down to Earth	The Emergency Department Consistent Care Program in Olympia, Washington, began in 2003 with Providence St. Peter Hospital and a local organization called the CHOICE Regional Health Network. CHOICE, a nonprofit regional coalition of health care providers, manages it along with the hospital, with help from participating local medical groups and clinics. Over the past seven years, four other area hospitals have joined.	http://www.chausa.org/Providence_St._Peter_brings_frequent_flyers_down_to_earth.aspx
The Medicare Advantage Emergency Room Initiative	This initiative, by Horizon Blue Cross Blue Shield of New Jersey, convened monthly meetings of a multidisciplinary team to review records of Medicare Advantage members who account for the greatest portion of ER visits. Members were contacted by phone to identify issues leading to frequent emergency room use in nonemergency situations and help them access the care they need. In 2009, ER use declined by 35.9% among Medicare Advantage members who had eight or more emergency room visits during the previous year.	http://www.ahipresearch.com/pdfs/innovations2010.pdf
The Emergency Room Outreach Initiative	Objectives of this program by EmblemHealth, New York, were: (1) Create a multidisciplinary care team to analyze reasons behind frequent emergency room use among some members. (2) Contact members who use emergency rooms frequently for nonemergency diagnoses to address factors preventing them from obtaining ongoing care. (3) Help members access medical care, case management, disease management, and other services as needed. Within six months of the program's launch, emergency room use among participating members was 8% lower than among a control group.	http://www.ahipresearch.com/pdfs/innovations2010.pdf
Three Strategies to Reduce Avoidable ER Use	Patient education, promotion of urgent care or walk-in centers, and medical home assignments are the top three programs companies use to prevent inappropriate use of the ER, according to a new survey conducted by the Healthcare Intelligence Network. Avoidable and preventable use of the hospital ERs is not only an inefficient use of health care resources, but also a waste of payors' and consumers' health care dollars. The majority of preventable ER visits were for conditions that could have been treated more efficiently in another health care setting, according to 34.1% of respondents. About 29.3% said high utilizers were the top contributors to avoidable ER use.	http://www.hin.com/sw/Hindustry_MC91310_reduce_avoidable_ER_use_medical_home_education_urgent_care_coordination_consumer.html
Frequent Users of Emergency Departments: The Myths, the Data, and the Policy Implications	In this study, researchers reviewed the literature on frequent ED users to gain a better understanding of their characteristics. They found that frequent users made up 4.5% to 8% of patients coming to the ED, but account for 21% to 28% of all ED visits. Study authors conclude "frequent ED users are a heterogeneous group along many dimensions and defy popular assumptions. The subgroups have not yet been sufficiently defined to allow clearly directed policy design, and many frequent users present with true medical needs, which may explain why existing attempts to address the phenomena have had mixed success at best."	http://www.annemergmed.com/article/S0196-0644(10)00105-8/abstract

Program Name / Study	Summary of Findings	Link
Emergency Room: Reducing Wait Time		
Improvement Report: Eliminate Overcrowding in the Emergency Department	This report describes improvement of the percent of patients placed from the emergency department (ED) to an inpatient bed within one hour of decision to admit by 44%.	http://www.ihi.org/IHI/Topics/Flow/PatientFlow/ImprovementStories/ImprovementReportEliminateOvercrowdingintheEmergencyDepartment.htm
Reducing Emergency Department Overcrowding: Five Patient Buffer Concepts in Comparison	Emergency Department (ED) overcrowding is a common medical care issue in the United States and other developed nations. One major cause of ED crowding are holding patients waiting in the Emergency Room (ER) for inpatient unit admission where they block critical ED resources. With input data from a hospital in Massachusetts, researchers tested five patient buffer concepts aimed at relieving pressure of the ER. The buffers are also assumed to improve patient and staff satisfaction through their design tailored to needs in patient flow. To ensure patient safety, researchers performed tests with discrete event simulation in which triage-to-bed time was reduced up to 22% and diversion hour was decreased up to 24%. All buffers managed to run with significantly fewer resources than the ER. These findings have a potential impact on hospital process flow due to clear results which offer substantial improvement of hospital organization.	http://www.informs-sim.org/wsc08papers/185.pdf
Team Triage Improves Emergency Department Efficiency	This study was designed to evaluate whether three hours of combined doctor and nurse triage would lead to earlier medical assessment and treatment and whether this benefit would carry on for the rest of the day when normal triage had resumed.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1726448/pdf/v021p00542.pdf
Emergency Department Triage Revisited	Triage is a process that is critical to the effective management of modern emergency departments. Triage systems aim not only to ensure clinical justice for the patient, but also to provide an effective tool for departmental organization, monitoring, and evaluation. In addition, international variance in triage systems limits the capacity for benchmarking. While education, guidelines, and algorithms have been shown to reduce triage variation, there remains significant inconsistency in triage assessment arising from the diversity of factors determining the urgency of any individual patient. These authors call for developing and testing an International Triage Scale (ITS), which is supported by an international collaborative approach toward a triage research agenda. This agenda would seek to further develop application and moderating tools and to utilize the scales for international benchmarking and research programs.	http://emj.bmj.com/content/27/2/86.full.pdf
Reducing Emergency Department Crowding Through the Full Capacity Protocol	Staff implemented the Full Capacity Protocol, which redistributes admitted patients boarding in the ED to acute-care hallway beds on inpatient units when the ED is unable to evaluate and treat new emergency patients in a timely manner because of a lack of space and resources.	http://www.rwjf.org/pr/product.jsp?id=28816

Program Name / Study	Summary of Findings	Link
Addressing Emergency Department Wait Times and Enhancing Access to Community Mental Health and Addictions Services and Supports	This report includes suggestions that are believed to improve emergency department care for people with mental health and addiction problems, reduce demand on emergency departments, and strengthen the capacity of the community sector to address mental health and addiction problems before they become acute. Most of the suggestions are supported by a body of empirical evidence, in Canada and abroad; all are supported by the experience of consumers and service providers working to improve care for people with mental health and addiction problems.	http://www.camh.net/Public_policy/Public_policy_papers/Addressing%20ER%20and%20System%20Navigation%20for%20MHA%20july%202008.pdf
How Charleston Area Medical Center Reduced Wait Time in the Emergency Room	Charleston Area Medical Center (CAMC) is West Virginia's largest medical center and a level 1 trauma facility. For the past five years, visits to CAMC's General Hospital ER have grown by 5% to 6% annually. This increasing volume, along with a desire to improve patient care and satisfaction, prompted CAMC to hold a rapid-improvement event designed to streamline the ER.	http://www.bmgi.com/sites/bmgi.com/files/Charleston%20Medical%20Center.pdf
Emergency Room: Stroke		
Deaths Higher for Strokes Treated at Night, on Weekends	Two new studies suggest that stroke mortality is higher in patients who are admitted to the hospital during nights and on weekends.	http://www.medscape.com/viewarticle/570477
Recommendations for Improving the Quality of Care Through Stroke Centers and Systems: An Examination of Stroke Center Identification Options	A series of options with respect to stroke center identification were presented at the October 2001 meeting of ASA's *Advisory Working Group on Stroke Center Identification*. These options are not mutually exclusive. Some options could be pursued on parallel tracks while others might provide one or more incremental steps in the evolution to a more mature identification program.	http://stroke.ahajournals.org/cgi/content/full/33/1/e1
Stroke Team Telemedicine	Through the use of telemedicine, stroke teams can extend expert stroke care into rural remote communities lacking sufficient neurological expertise. The Stroke Team Remote Evaluation Using a Digital Observation Camera (STRokE DOC) trial and its follow-up, the STRokE DOC Arizona TIME (The Initial Mayo Clinic Experience) trial, showed the effectiveness of a single-hub, multispoke rural hospital telestroke research network.	http://emedicine.medscape.com/article/1162677-overview

Program Name / Study	Summary of Findings	Link
Critical Pathways Can Improve Results with Carotid Endarterectomy	Approximately 10 years ago, the Section of Vascular Surgery at Pennsylvania Hospital reported results of critical pathways developed for all major vascular operations, including carotid endarterectomy (CEA). After implementing these pathways, a specific five-step protocol was developed to further improve results and decrease costs for elective CEA. With the advent of carotid artery balloon angioplasty and stenting (CABAS), CEA has come under increasing attack by endovascular interventionalists. We believe our regimen remains the gold-standard against which CABAS should be compared. Our five-step CEA protocol includes: (1) duplex ultrasonography performed in an accredited vascular laboratory as the sole diagnostic carotid preoperative study, (2) admission the day of surgery, (3) cervical block anesthesia to eliminate intraoperative electroencephalographic monitoring and other costly intraoperative monitoring tests, (4) transfer from the recovery room after a short observation period to the vascular ward, and (5) discharge the first postoperative morning. Since this five-step protocol was implemented several years ago, we have found it to be safe and cost-effective, and it now represents the standard against which CABAS should be compared.	http://www.ncbi.nlm.nih.gov/pubmed/15449249
A Regional Intervention to Improve the Hospital Mortality Associated With Coronary Artery Bypass Graft Surgery	A multi-institutional, regional model for the continuous improvement of surgical care is feasible and effective. This model may have applications in other settings.	http://jama.ama-assn.org/content/275/11/841.abstract?ijkey=3608a142382ef153e2c638a08f8f641cecaef877&keytype2=tf_ipsecsha
Get With The Guidelines: Stroke	U.S. hospitals participating in *Get With The Guidelines: Stroke* had a 10% relative drop in ischemic stroke deaths and a 29% relative drop in length of stay beyond 4 days in 2009, compared with 2003.	http://americanheart.org/presenter.jhtml?identifier=3002728
Use of Intravenous tPA for the Management of Acute Stroke in the Emergency Department: Policy Resource and Education Paper (PREP)	The purpose of this PREP is to assist the emergency physician in distilling the literature that has been published regarding intravenous tPA in acute stroke management in order to facilitate establishing the setting in which fibrinolytics can be safely used in patient care.	http://www.acep.org/content.aspx?id=29936
Statin Pretreatment Reduces Mortality in Cardiac-Surgery Patients without CAD	The use of preoperative statin therapy among patients undergoing CABG surgery has been shown to improve operative outcomes in other studies, including a large 30 000-patient meta-analysis published in the June 2008 issue of the *European Heart Journal*. In that study, previously reported by *heartwire*, preoperative statins reduced the risk of 30-day mortality from any cause by 40%, as well as significantly reduced the risk of stroke and atrial fibrillation.	http://www.theheart.org/article/932955.do
In-Hospital Medical Complications and Long-Term Mortality After Ischemic Stroke	The study shows that stroke patient mortality is influenced by in-hospital medical complications significantly up to the chronic stage. This finding suggests that the appropriate prevention and management of in-hospital complications could improve short-term and long-term prognoses after stroke.	http://stroke.ahajournals.org/cgi/content/full/36/11/2441

Program Name / Study	Summary of Findings	Link
Georgia Coverdell Stroke Registry	This program addresses quality improvement in multiple areas of stroke care, from rapid screening, diagnosis, and intervention for patients experiencing an acute stroke, to secondary prevention measures such as blood pressure control, smoking cessation, and treatment of elevated cholesterol to reduce the incidence of recurrent stroke after hospital discharge. For participating hospitals, training in Advanced Stroke Life Support through the University of Miami's ASLS Emergency Medical Skills Training Course is provided to hospital staff. This training teaches emergency assessment and management of acute stroke to all levels of health care providers, from EMS personnel to hospital and emergency department nurses and physicians.	http://health.state.ga.us/epi/cdiee/strokeregistry.asp
A Blueprint for Successful Stroke Intervention	Sacred Heart Hospital was the first hospital in the Pensacola (Florida) area to earn Primary Stroke Center Certification from the Joint Commission on Accreditation of Healthcare Organizations. The Joint Commission's certification and its award of the Gold Seal of Approval to Sacred Heart's Regional Stroke Center means the center complies with the highest national standards for safety and quality of stroke care.	http://www.sacred-heart.org/strokecenter/
Clinical Decision-Making		
CHESS (Comprehensive Health Enhancement Support System)	CHESS is a computer aid to help patients with self-management of chronic diseases such as HIV infection, breast cancer, and heart disease. The system was developed at the University of Wisconsin-Madison. In an AHRQ-funded study that evaluated the effect of using CHESS on patients with HIV infection, results showed that they had fewer hospitalizations and a higher quality of life than patients who did not have access to the CHESS computer decision-aids. Hospitalization costs for patients using the CHESS program was $728 per month lower. The CHESS tools include answers to frequently asked questions, a reference library, descriptions of health services and consumer tips, and tools to assess and reduce risk, decision supports to help patients make informed decisions, an action guide to help patients carry out decisions, online discussion groups, ability to ask questions of experts and receive confidential replies, and stories from other patients	http://www.ahrq.gov/data/informatics/informatria.htm - chronicdisease
The Missing Piece: Embracing Shared Decision-Making to Reform Health Care	In this editorial published in the journal *Spine*, Dr. James N. Weinstein discusses the role of patient preferences as the missing piece in health care delivery. He summarizes the experience with shared decision-making tools when patients are deciding on surgical or nonsurgical treatment options. The specific studies cited involved decisions about prostate surgery and decisions about cardiac surgery. In the studies he cites, use of decision-making tools were positively received by patients, appeared to help them make decisions that were consistent with their values and preferences, and resulted in patient decisions that leaned toward nonsurgical options. He concludes that "the patient's desire and ability to make decisions when well informed" is the missing link in health care.	http://tdi.dartmouth.edu/documents/publications/Missing Piece.pdf

Program Name / Study	Summary of Findings	Link
Effectiveness of Clinical Decision Support in Controlling Inappropriate Imaging	In a study conducted at Virginia Mason Medical Center in Seattle and published in the *Journal of the American College of Radiology*, clinicians reviewed the relevant literature on evidence-based guidelines and developed clinical decision rules for areas where they had identified opportunities for improvement. The targeted use of clinical decision support was found to reduce imaging test orders for three imaging tests: orders for lumber MRI for back pain, orders for brain MRI for headaches, and orders for sinus CT for Sinusitis.	http://www.jacr.org/article/S1546-1440(10)00389-3/fulltext
A Randomized Trial of a Telephone Care - Management Strategy	This randomized study evaluated the effect of a telephone-based care-management strategy on medical costs and resource utilization. Health coaches contacted patients with certain medical conditions known to have high medical costs and, using shared decision-making tools, educated them about self-care and behavioral change. After one year of the program, the average monthly medical and pharmacy costs per person in the enhanced-support group were 3.6% ($7.96) lower than those in the usual-support group ($213.82 vs. $221.78, P=0.05). The majority of the savings were due to a 10.1% reduction in annual hospital admissions (P<0.001). The cost of this intervention was less than $2.00 per person per month.	http://www.nejm.org/doi/pdf/10.1056/NEJMsa0902321
Using a Claims Data-based, Sentinel System to Improve Compliance with Clinical Guidelines: Results of a Randomized Prospective Study	This randomized prospective study evaluated the impact of applying a rule-based sentinel alert system to a managed care plan's administrative claims data for a commercial population to prevent errors in care and improve compliance with clinical guidelines. More than 1,000 decision rules were incorporated into a computerized system that was able to detect variation from practice guidelines and send alerts to clinicians. Members were randomly assigned to an intervention group where physicians would receive clinical recommendations via electronic alert and to a control group where physicians did not receive alerts. Patients who triggered recommendations had 19% fewer hospital admissions compared to the control group. Charges and paid claims were also lower for this group. While this study focused on a commercial population, study authors suggest that the potential to decrease morbidity and costs would be greater if applied to a Medicare and Medicaid population since the disease entities that generated the most frequent recommendations were for conditions that typically effect the elderly, such as cardiovascular, neurological, and respiratory conditions.	http://www.activehealth.net/AJMC_Study.pdf

Appendix A: Dartmouth Atlas of Health Care Utilization Indicators

The Dartmouth Atlas of Health Care (www.dartmouthatlas.org) is an interactive website that provides data on care utilization for hospitals. Utilization data includes Medicare claims; demographic data includes gender, race, and select socio-economic indicators. All data has been organized into geographic hospital services areas (HSAs) and hospital referral regions (HRRs) according to a specific methodology.

Claims data is grouped into sections related to care of chronic illness in the last two years of life: Medicare reimbursements, hospital and physician capacity, quality care, hospital use, end-of-life care, and physician care service areas. Data is presented in tables, graphs, and customizable maps. National averages and percentile breakdowns (10th, 50th, and 90th percentiles) are also available. A list of the utilization measures that can be found using this resource appears on the following page.

While this source is extensive and widely used, it has some limitations: (a) data is available for the period 1996–2005 only; (b) some metrics are provided in aggregate (e.g., 2001–2005) rather than by year (e.g., 2001, 2002...); (c) the dataset includes Medicare-enrolled decedents only, so comparisons to other populations may not be appropriate; and (d) data have been allocated according to a specific methodology and are not likely to match internal utilization figures for a given facility. Researchers have identified other strengths and weaknesses of the data.[22]

Nearly all utilization indicators in the Dartmouth Atlas are available by gender and race, and for the years 1996–2005. Certain indicators are available for the summary period 2001–2005 only. Details can also be obtained by state, hospital service area, or hospital referral region.

Please note that the following list only includes a sample of *utilization* indicators. A complete list of all indicators, including those not shown here (e.g., demographics or Medicare reimbursements) is available at http://www.dartmouthatlas.org/data/topic/all.aspx.

[22] Bach PB, Skinner J, Staiger D, Fisher ES. The debate over regional variation in health care spending. *New England Journal of Medicine,* 2010; 362:7. Accessed November 23, 2010 from www.nejm.org.

Cancer Care
- Percent of deaths in hospital
- Percent hospitalized, last month of life
- Hospital days, last month of life
- Percent admitted to ICU, last month of life
- ICU days, last month of life
- Chemotherapy, last 2 weeks of life
- Life-sustaining procedures, last month of life
- Percent enrolled in hospice
- Hospice days, last month of life
- Percent seeing 10 or more MDs, last 6 months

Home Health Agency Utilization
- HHA visits

Hospice Utilization
- Hospice days, last 6 months
- Percent enrolled in hospice, last 6 months

Hospital Care Intensity
- HCI index, last 2 years

Hospital Utilization
- Inpatient days

Physician Utilization
- Number of MDs seen, last 6 months
- Percent seeing 10 or more MDs, last 6 months
- Physician visits

SNF Utilization
- SNF days per decedent

Terminal Care
- Inpatient days, terminal admission
- Percent of deaths with ICU admission
- Percent of deaths in hospital

Hospital Use, by type of admission
- Hospital Discharges
- Inpatient Days

Medical Discharges
- Discharges for ACS Conditions
- Non-ACS Medical Discharges
- Medical Discharges

Surgical Procedures
- All Surgical Discharges
- Hospitalization for Hip Fracture
- Inpatient AAA Repair
- Inpatient Valve Replacement
- Inpatient Back Surgery
- Inpatient Carotid Endarterectomy
- Inpatient Cholecystectomy
- Inpatient Coronary Angiography
- Inpatient CABG
- Inpatient Hip Replacement
- Inpatient Knee Replacement
- Inpatient Lower Extremity Bypass
- Inpatient Mastectomy, by race only
- Inpatient PCI
- Inpatient Colectomy
- Inpatient TURP for BPH, by race only

End-of-Life Care, by level of care intensity
- Hospital Admissions, last 6 months
- Inpatient Days, Terminal Hospitalization
- Inpatient Days, last 6 months
- Inpatient Spending, Terminal Hospitalization
- ICU Admissions During Terminal Hospitalization
- Percent of Deaths Occurring in Hospital
- Percent Hospitalized, last 6 months

Appendix B: Step-by-Step Process for Using Dartmouth Atlas Data

The Dartmouth Atlas of Health Care website has data to compare your organization to other hospitals and health systems and provides one way to compare utilization.

First go to the Dartmouth Atlas website: http://www.dartmouthatlas.org/

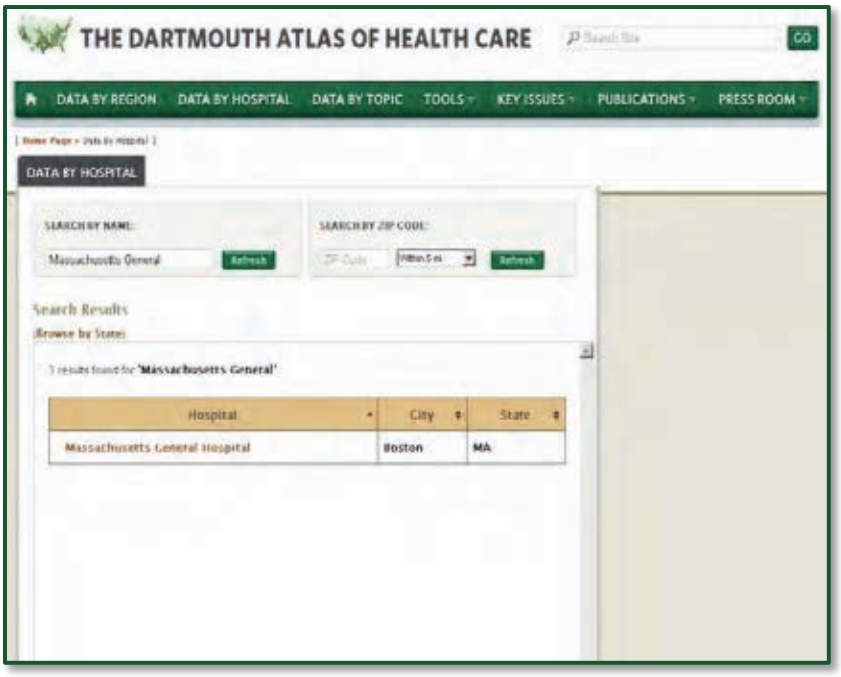
You will notice under the heading a tab called "*Data by Hospital*."

Clicking on this tab will go to the section of the Atlas that will allow leadership to choose by state, hospitals, topics, and indicators. This pulls the most information about demographics and national comparisons into one place. There are two types of searches under this tab: one is to search for a specific hospital under the grey tab labeled "*Data by Hospital*" under the main tab bar and the other is to search for a specific topic on the gray tab on the right labeled "*Start a New Report*." Below we explain both approaches.

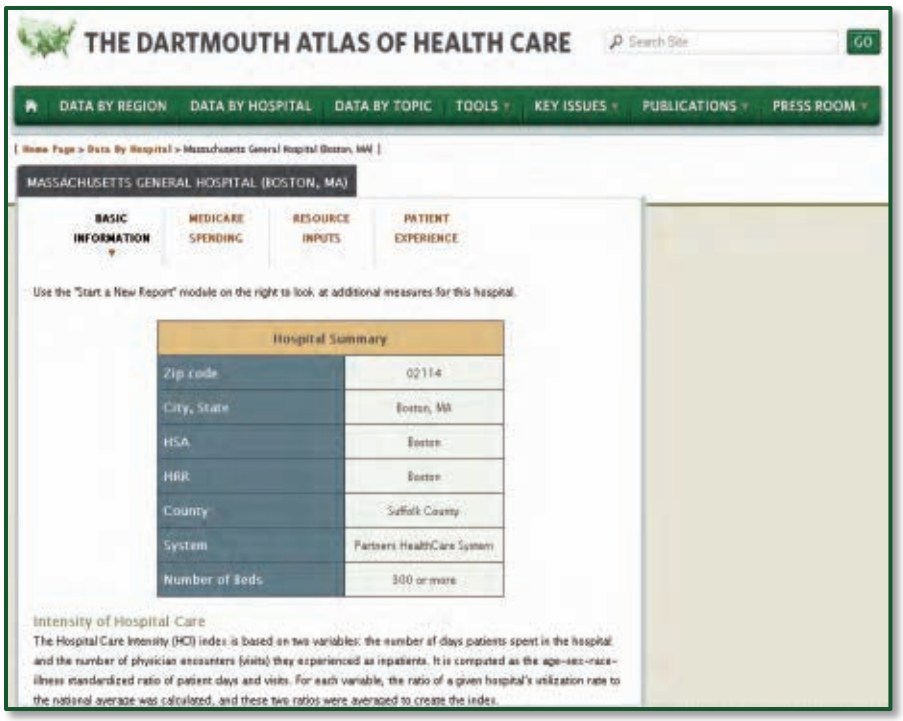
DATA BY HOSPITAL

Click on "*Data by Hospital*" tab on the top of the page. If you know the name of the hospital you wish to search, type it into the "*Search by Name*" textbox and click "*Refresh*."

The hospital name should appear in the "*Search Results*" box. Click on the name of the hospital you wish to explore.



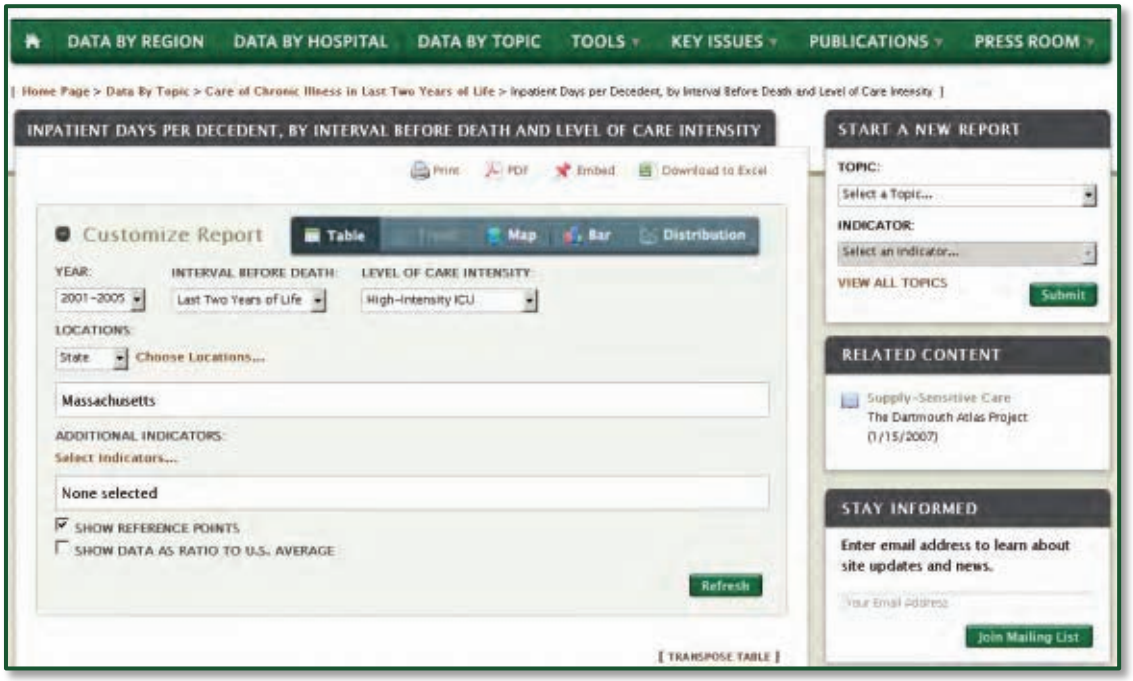
This will provide a comprehensive profile of the hospital's performance. To access the data for the hospital you searched for, navigate through the red tabs labeled: Basic Information, Medicare Spending, Resource Inputs, and Patient Experience.



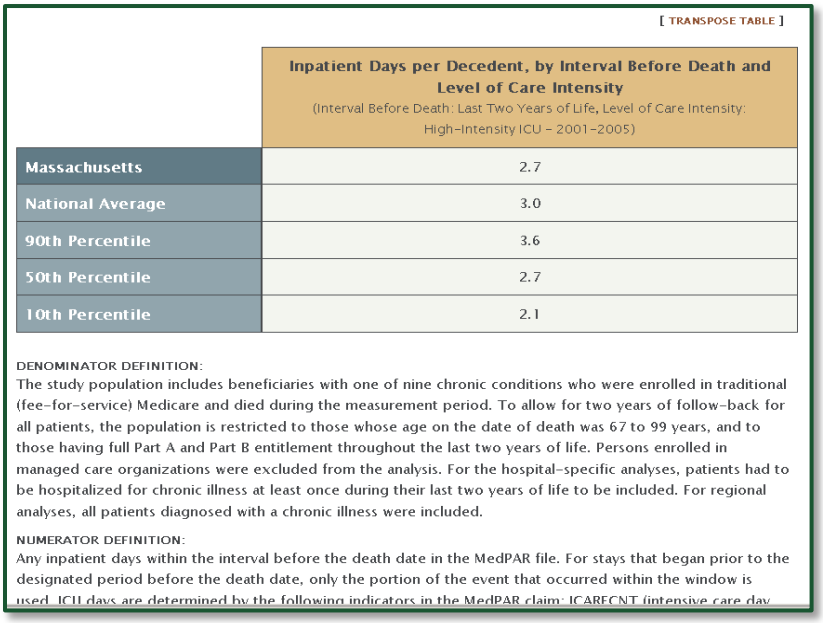
START A NEW REPORT

Another way to gather data on hospitals is by topic. To search specific topics, such as Hospital Utilization, click the drop-down menu on the right side of the webpage under "*Start a New Report*" and select an option under "*Topic*." After this selection, pick an indicator you would like to see under "*Indicator*" drop-down box such as "*Inpatient Days*." Click "*Submit*."

At the "*Customize Report*" page, you can narrow your search with the given categories provided. For example, to look at "*Inpatient Days per Decedent*" during the last two years of a patient's life in an ICU, you would specify that data in the appropriate drop-down boxes. If you would like to view the report as a PDF file, there is an option to do so next to the "*Print*" icon.



After clicking "*Refresh*," scroll down the screen to view the data.



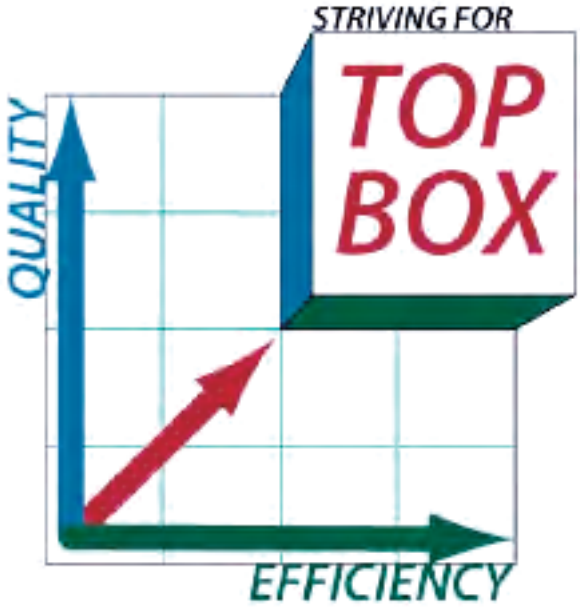
[TRANSPOSE TABLE]

	Inpatient Days per Decedent, by Interval Before Death and Level of Care Intensity (Interval Before Death: Last Two Years of Life, Level of Care Intensity: High-Intensity ICU - 2001-2005)
Massachusetts	2.7
National Average	3.0
90th Percentile	3.6
50th Percentile	2.7
10th Percentile	2.1

DENOMINATOR DEFINITION:
The study population includes beneficiaries with one of nine chronic conditions who were enrolled in traditional (fee-for-service) Medicare and died during the measurement period. To allow for two years of follow-back for all patients, the population is restricted to those whose age on the date of death was 67 to 99 years, and to those having full Part A and Part B entitlement throughout the last two years of life. Persons enrolled in managed care organizations were excluded from the analysis. For the hospital-specific analyses, patients had to be hospitalized for chronic illness at least once during their last two years of life to be included. For regional analyses, all patients diagnosed with a chronic illness were included.

NUMERATOR DEFINITION:
Any inpatient days within the interval before the death date in the MedPAR file. For stays that began prior to the designated period before the death date, only the portion of the event that occurred within the window is used. ICU days are determined by the following indicators in the MedPAR claim: ICARECNT (intensive care day

Once you have the report, you can compare your data to other hospitals or health care systems, with the 90th percentile, 50th percentile, and 10th percentile as well as with the national average.



Striving for Top Box: Hospitals Increasing Quality and Efficiency

http://www.hret.org/topbox/index.shtml

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A Guide to Financing Strategies for Hospitals

With Special Consideration for Smaller Hospitals

December 2010

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A GUIDE TO FINANCING STRATEGIES FOR HOSPITALS

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Executive Summary

Given economic and industry trends related to the worldwide financial markets, the nation's economy, and U.S. health care reform, access to external capital has become more important than ever for hospitals nationwide.

Reform and market changes are accelerating hospitals' need for capital to fund physician employment and integration, information technology (IT), facility modernization and expansion, and other initiatives. Successful health care organizations will need to make substantial capital investments in each of these areas. Scale and market essentiality will be factors critical to success.

For most hospitals, operating cash flow alone will not support the higher level of required capital spending. Recent improvements in median hospital profitability and liquidity positions have been encouraging but are likely not sustainable given the downward revenue/expenditure pressures associated with bending the nation's health care cost curve. Hospitals will need to borrow capital. Competitiveness will depend on having reliable access to debt at reasonable cost, terms, and risk. Small hospitals without sufficient capital capacity and access will need to secure capital/merger partners in order to assure continuing provision of services in their communities.

The problem related to capital access is this: Given constrained national liquidity since mid-2008, most hospitals have experienced more limited capital access, fewer borrowing options, higher cost of capital, more restrictive terms, less flexibility, and higher risks related to available borrowing options. This is especially true for smaller hospitals, which have almost always experienced a more difficult time accessing capital than larger organizations.

This guide offers seven strategies that can help hospitals achieve the best possible capital access. Key "take aways," recommended action items, and implications for smaller organizations are highlighted. While the guide provides considerations related specifically to smaller organizations, such as rural hospitals, critical access hospitals, or stand-alone community hospitals, the strategies are applicable to all health care organizations, including multihospital systems, regional systems, and hospitals that are part of a larger system.

1. Understand Your Strategic Financial Position and Maintain Credit Strength

Take Aways

Over the next decade, as market changes occur and health reform regulations emerge, the quantification of impacts and risks will be more important than ever for hospitals. Every hospital should assess the expected impact of health reform and market forces on an ongoing basis and develop appropriate response strategies. Preparedness for change by organizations at all credit levels is by itself a competitive advantage.

Action Items

1. Using objective market and financial data, accurately assess the hospital's current strategic and financial position, where it needs to go, and if it has the resources to get there.
2. Through sound financial management, do everything possible to preserve the strength of the hospital's credit position.

Implications for Smaller Hospitals

The challenge for many small hospitals is whether they have the scale and financial resources needed to secure a public credit rating. If they do, the next question is whether the public rating they secure is high enough to be helpful to their capital formation effort. A public rating usually is helpful, but it is not always necessary. Many of the strategies described throughout this guide involve the use of credit intermediaries, such as banks, the FHA, or other alternatives, which do not necessarily require a public rating for access to that financing alternative.

Whether a hospital obtains a public rating or not, the basic principles behind a strong credit position apply to every organization. Understanding credit metrics and incorporating them into ongoing financial management efforts will improve any hospital's ability to approach a range of appropriate lenders from a position of relative strength.

As such, the need for objective strategic and financial planning is heightened for smaller organizations. Disciplined evaluation and study will enable the board and management to assess whether the available access to capital is strong enough to support the organization's strategic needs. Once the financial plan is established, continued rigor and discipline will be required to achieve the targeted levels of performance.

2. Identify and Evaluate the Full Range of Financing Options

Take Aways

The capital markets have returned to a more normal level of functioning in 2010, allowing access to external debt by organizations at most credit levels. Transactions continue to get done across the credit spectrum, at times requiring different structuring and provisions, but smaller and lower-grade credits should always assume that they will experience a more challenging process. Tax-exempt fixed-rate bonds are currently the product of choice, as hospitals move risks related to variable-rate debt off the table, but many alternatives are available to health care borrowers. Bank lending capacity has increased. Market volatility remains high and warrants close executive attention.

Action Items

1. Assess the full range of financing options, including nontraditional sources.
2. Recognize that fixed-rate bonds are the least risky debt structure available to hospitals, but they are often the most costly form of debt.
3. Be aware of the changing accounting treatment of leases (on balance sheet, like debt).
4. Ensure that leasing is not used as a means to finance projects to circumvent the hospital's capital decision-making process.
5. Scrub the hospital's existing portfolio of businesses; divest non-core assets.

Implications for Smaller Hospitals

Due to a lower scale of borrowing and credit strength, smaller hospitals typically do not have the complete range of financing options available to larger organizations. But there are public and private borrowing alternatives available if smaller hospitals are willing to invest the needed time to gain capital access. Access to direct bank lending has opened up for organizations of all credit strength. Small community hospitals may have to commit to an exclusive banking arrangement in order to secure funding.

Given industry, economic, and market trends, small organizations without significant credit strength should not continue to own businesses or operate programs that are not affordable or core to their missions. Divestiture of such assets will be key to survival.

3. Consider Sources of Local and State Support

Take Aways

Local and state support can significantly lower a hospital's cost of capital and contribute to capital funding.

Action Items

1. Explore sources of local and state support.
2. Pursue philanthropic support, as appropriate.

Implications for Smaller Hospitals

Smaller hospitals can benefit from pursuing all capital options, including philanthropic donations and local and state support for specific projects. Communities with small hospitals typically are highly invested in retaining their local access to health care and hospital-related jobs. Some municipalities and districts might be able to afford direct or indirect support of the hospital; given current fiscal constraints, others may not have such means.

4. Consider Partnership as a Broad Strategic Capital Option

Take Aways

The need for significant capital to fund new-era requirements will increase the potential benefits of strategic partnerships between health care organizations. Partnering options range from loose affiliations with a high degree of local control to fully integrated asset sales/mergers/acquisitions with a lower degree of local control. Hospital management teams and boards nationwide are identifying and securing partnerships appropriate to support the organization's long-term strategic and financial needs.

Action Items

1. Consider and pursue partnership options, as appropriate; early movers in consolidating markets will have a strategic advantage.
2. Ensure use of a structured process for making well-informed partnership decisions.

Implications for Smaller Hospitals

Marketplace pressures under the emerging new business model and health reform will challenge organizations to a much greater extent than in the past. Many stand-alone hospitals and small health systems, even strong ones, are recognizing that they do not have the strategic and financial resources required to achieve the capabilities associated with success in the new era. These competencies include close integration with physicians, information technology sophistication, balanced service distribution, and strong payor relationships.

Proactive hospital boards and management teams are asking challenging questions about whether their organizations can best serve their missions "as is," or if partnership with other providers would provide their communities with the best-possible services and access going forward. Many small hospitals and health systems are exploring and securing strategic partnerships with other not-for-profit and for-profit organizations. In specific markets, small hospitals may not be able to take a "wait-and-see" approach because competitors are consolidating their market. Early movers may be rewarded.

5. Evaluate and Select the Best Financing Strategy

Take Aways

To choose the right capital markets financing vehicle(s) for the hospital, many factors should be weighed, including issuance costs, all-in borrowing rate, covenants, interest rate risk, and other factors. Flexibility of selected options is critical, but so is a fundamental understanding of the underlying benefits and risks of each instrument. If a hospital's financial leaders and the board members on its finance committee don't understand and cannot explain the financing approach, the hospital should not pursue it.

Action Items

1. Evaluate each debt instrument using the 11 criteria outlined in this section.
2. Ensure that the debt vehicle selected provides as much flexibility as possible and involves the lowest overall cost and risk level, given the hospital's overall asset and liability portfolios.
3. Stick to the basics: Don't select debt products that the hospital's financial leaders and the board members on its finance committee don't understand.

Implications for Smaller Hospitals

Smaller hospitals often have less flexibility in the provisions and terms of debt vehicles, but they should weigh the relevant factors outlined in this section. Covenants related to liquidity can be particularly problematic and should be fully understood prior to a transaction.

6. Involve the Right Professionals

Take Aways

Selecting the right team of experts to identify, pursue, and secure capital options is critical. For tax-exempt bond transactions, a multidisciplinary team, which brings depth and breadth of expertise and independent viewpoints, is recommended.

Action Items

1. Use a multidisciplinary team for tax-exempt bond transactions; ensure that team members have both national and local experience.
2. Understand the role of financing team members who represent the interests of both the borrower and lenders/investors/issuers.
3. Ensure that the financing team can provide independent financial advice.

Implications for Smaller Hospitals

Small hospitals that access the municipal bond market can follow all of the guidance in this section. Hospitals without access to the tax-exempt market will also need to obtain independent, objective advice about, and assistance with, financing transactions, whether through bank, government, or other programs. Advisors with national and local experience can provide the needed assistance.

7. Stay Closely Connected

Take Aways

The hospital's management team and board, as appropriate, must remain actively engaged throughout the debt financing and/or partnership exploration and transaction processes. The leadership team ultimately is responsible for understanding the implications of capital financing decisions and for pursuing appropriate strategies.

Action Items

1. Ensure that the hospital's management team and board remain actively engaged throughout the debt financing and/or partnership exploration and transaction processes.
2. Ensure that financial and other advisors explore the full range of available capital options.

Implications for Smaller Hospitals

It is particularly important for management teams of smaller hospitals to be closely involved with financing strategies that include funding from state or local governments or from philanthropic sources. Maintaining strong relationships with these sources can help maximize the capital received and manage its structure and timing.

Concluding Comments

The stakes are high. Whether hospitals are strong or not so strong, their executives cannot afford to take a wait-and-see approach to capital access. To ensure capital options in the new health care environment, leadership teams must understand available options for accessing external capital. Doing this requires that they be committed to building an in-depth understanding of their current strategic and financial position, preserving the strength of their credit position, identifying and evaluating the broadest-possible funding sources, securing the best-fit options through involving the right experts, and staying closely connected to their capital position by monitoring existing funding and new opportunities. Winning organizations will take a proactive approach.

A GUIDE TO FINANCING STRATEGIES FOR HOSPITALS

With Special Consideration for Smaller Hospitals

Introduction

Health care is a very capital-intensive business and access to debt financing keeps hospitals in business. Few hospitals today can generate enough cash flow from their operations and reserves to fund short- and long-term strategic investments in people, programs, facilities, and technology. Most hospitals must access external debt on a periodic basis to assure the provision of continued health care services in their communities. The ability to issue and support debt is not a "nice-to-have" capability; it is essential to the viability of nearly all U.S. hospitals and health systems.

Health care organizations have been struggling to keep up with a demand for capital that has been higher than at any point in past decades. Aging facilities, increasingly competitive markets, and new equipment and technology have been creating ever-higher capital spending requirements. Debt financing in numerous forms, "relatively easy" to obtain up until recent years, has been helping organizations to fund important strategic initiatives.

At this point in history, access to external capital has become more important than ever for hospitals nationwide. Health care reform and related and unrelated market changes are accelerating hospitals' capital needs related to physician employment and integration, information technology (IT), facility modernization and expansion, and other initiatives.

Successful health care organizations will need to make substantial capital investments in each of these areas. The emerging value-based care delivery and payment system requires new and expensive organizational competencies, including care management capabilities, sophisticated IT, and highly integrated physician arrangements. For most hospitals, operating performance alone will not support the higher level of capital spending required to achieve such competencies. Competitiveness will depend on having reliable access to debt at reasonable cost, terms, and risk as a key option available to management.

The problem is this: Fundamental changes in the capital and credit markets following the 2008 credit crisis have reduced overall market liquidity and increased investor scrutiny of all potential investment opportunities. Health care bonds and loans were no exception. Given constrained national liquidity since mid-2008, most hospitals have experienced more limited capital access, fewer borrowing options, higher cost of capital, more restrictive terms, less flexibility, and higher risks related to available borrowing options. This is especially true for smaller hospitals, which almost always have experienced a more difficult time accessing capital than larger organizations. Hospitals further down the "credit curve" (more on this follows) have been similarly affected.

Presented here are seven strategies that can help these hospitals to achieve the best possible access to capital. Our focus is on all smaller organizations—whether rural hospitals, critical access hospitals, or stand-alone community hospitals—as distinct from multi-hospital systems, regional systems, or hospitals that are part of a larger system. While the strategies provided here are not unique to hospitals of a particular size, smaller hospitals cannot afford to neglect any one of these. "All cylinders must be firing simultaneously" for maximum capital access at minimum cost and acceptable risk.

Strategy 1. Understand Your Strategic Financial Position and Maintain Credit Strength

Strategic Financial Position

Given the new financial and industry realities, a hospital leadership team needs to have an accurate picture of its organization's current strategic and financial position. This includes analysis of the hospital's market and competitive positions, key market demand/volume trends, programs/service line strengths and weaknesses, facility development needs, financial and capital position, and current and likely future debt capacity given its current financial trajectory.

The strategic and economic underpinning of financial projections completed as recently as six months ago most likely have changed and must be reevaluated. Every hospital should assess the expected impact of health reform and market forces on an ongoing and regular basis. Over the next decade, as market changes occur and regulations emerge, the quantification of impacts and risks will be more important than ever for health care providers. Modeling at this time should include, at a minimum:

- Projected volume of business, including volume created through the expansion of Medicaid and the new state insurance exchanges
- Capacity to accommodate this volume, along with potential shifts in care sites and inpatient and outpatient locations/services
- The financial implications of payment rate and payor mix changes resulting from the newly insured
- The operating impacts and capital requirements associated with expanded hospital-physician organizations and relationships
- The capital and operating costs related to IT
- The capital needs for other strategic initiatives and routine operating requirements

Access to the external capital required to fund strategic plans is contingent on an organization's financial performance. Does your organization have a clear understanding of its current strategic and financial position, where it needs to go, and if it has the resources to get there?

Credit Position

A strong credit position, frequently measured by a strong bond rating (see Sidebar), helps to optimize access to capital. During difficult times, hospitals with stronger credit profiles (higher bond ratings) have had more flexible borrowing alternatives resulting in access to lower-cost restructuring opportunities. This effect has been material and has accelerated the growing credit-quality gap with strong health care credits getting stronger and weak credits getting weaker, as noted by the agencies that rate health care debt.[1]

Bond Ratings

A bond rating is a credit agency's assessment of the ability and willingness of an issuer (i.e., "borrower") of debt to make full and timely payments of principal and interest on its debt over the course of its maturity. Each of the three agencies that rate health care debt uses a slightly different rating system, as shown below (from high rating to low rating for investment-grade debt). Each agency offers noninvestment grade ratings (below BBB-/Baa3) as well. Ratings are borrower-specific, meaning that they are assigned by the credit agencies based on an evaluation of factors affecting the borrower rather than a specific debt issuance.

Fitch Ratings	AA, AA-, A+, A, A-, BBB+, BBB, BBB-
Moody's Investors Service	Aaa, Aa1, Aa2, Aa3, A1, A2, A3, Baa1, Baa2, Baa3
Standard & Poor's	AA+, AA, AA-, A+, A, A-, BBB+, BBB, BBB-

Sources: Moody's Investors Service, New York, NY; Standard & Poor's, New York, NY; Fitch Ratings, New York, NY.

The challenge for many small hospitals is whether they have the scale and financial resources needed to secure a public rating. If they do, the next question is whether the public rating they secure is high enough to be helpful to their capital formation effort. A public rating usually is helpful, but it is not always necessary. Many of the strategies described throughout this paper involve the use of credit intermediaries, such as banks, the FHA, or other alternatives, which do not necessarily require a public rating for access to that financing alternative.

Whether a hospital obtains a public rating or not, the basic principles behind a strong credit position apply to every organization. Understanding credit metrics and incorporating them into ongoing financial management efforts will improve any hospital's ability to approach a range of appropriate lenders from a position of relative strength.

Benefits of a Strong Position. Benefits enjoyed by organizations with strong credit profiles, defined as "A" category or above, include the following:

Access to both Taxable and Tax-Exempt Public Debt. Public taxable debt, not readily accessible to organizations with lower credit ratings, may be required for certain programs or services that don't qualify for tax-exempt debt. Organizations with a strong credit rating may want to access taxable debt to fund investments such as medical office buildings or joint-venture ambulatory facilities. Typically, public debt alternatives will represent the lowest cost alternative, so having the size and credit position needed to access this option can represent an important business advantage.

Improved Distribution. Maintenance of a stronger credit position also creates an expanded pool of potential lenders, which drives improved pricing and terms and typically reduces the time and effort required to raise the debt capital. Many large investor groups, funds, and insurance corporations that normally buy tax-exempt hospital bonds are precluded from buying debt with ratings below the "A" category; further, banks and other lenders typically reduce the amount of credit they will make available to weaker credits. Hence, the pool of potential investors for "BBB" bonds, for example, is much smaller than it is for higher-rated bonds.

Lower Cost of Capital. Higher-rated organizations consistently pay less for debt capital than do lower-rated organizations. The difference between the two, known as the "spread," has narrowed, then widened, and then narrowed again in recent years, but it has remained significant at almost all points in time (Figure 1). Public market health care spreads were narrow through mid-2007, when there was high market liquidity and investor confidence; conversely, in a time of limited liquidity, due to investment losses and risk sensitivity, such as what occurred in 2008 and 2009, credit spreads were much wider. Overall, however, hospitals with "AA" and "A" category credit can access lower-cost capital than hospitals with "BBB" and non-investment grade ratings.

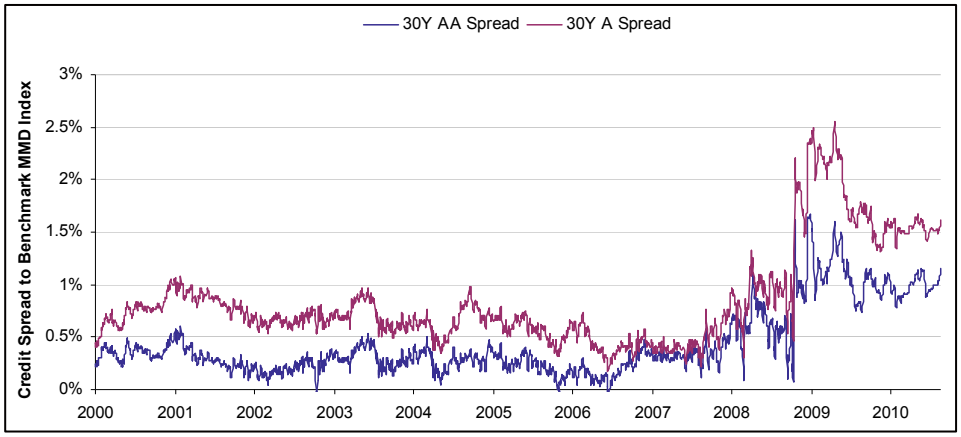

Figure 1. Health Care Credit Spreads: "AA" and "A" Credit Spreads Over MMD "AAA" Benchmark Index
Source: Kaufman, Hall & Associates, Inc.

Less Restrictive Bond Covenants. Bond documents include covenants, which are the financial compliance requirements that the borrower must meet on an annual, and sometimes quarterly, basis. For example, bond covenants frequently define the minimum number of days cash on hand or debt service coverage ratio that the borrowing organization must maintain. If the organization does not meet the covenants, the bonds governed by the covenants will be in "technical default," which has associated consequences. Covenants can limit an organization's financial flexibility, for example its ability to respond quickly to an acquisition opportunity that would reduce to below required levels, at least temporarily, liquidity indicators, such as days cash on hand. Lower-rated organizations are held to more stringent covenant standards, which limit their financial and perhaps operating flexibility.

Ability to Be Market Consolidators. A solid credit rating also can provide a major strategic and financial advantage. Market consolidators are always creditworthy organizations. In the current health care environment, strong organizations are consolidating markets by acquiring or merging with weaker competitors that are often no longer able to compete because of a lack of access to cost-effective capital. Because these organizations can offer excess capital capacity and lower capital costs, organizations with the highest credit ratings are attractive partners to those with lower ratings. Nevertheless, smaller hospitals that have strong credit positions will be less dilutive, or perhaps will even be accretive, to the credit position of larger potential partners. Whether as "consolidator" or "consolidate," bringing a strong credit profile to a partnering discussion will favorably impact the organization's ability to secure the best possible transaction for its community.

Credit Position Conclusions. Hospitals' trustees and management teams of smaller hospitals should do everything possible to preserve the strength of their organization's credit rating. In the long run, hospitals are only as strong as their own credit position. This is a "domino environment." A weak or deteriorating position can trigger more restrictive bond and bank document covenants, limit flexibility and access to different types of financing, and increase cost of capital. This results in decreased debt capacity and more difficult access to debt capital, which ultimately threatens independence. Executives must avoid knocking over the first domino.

Take Aways

Over the next decade, as market changes occur and health reform regulations are defined, the quantification of impacts and risks will be more important than ever for hospitals. Every hospital should assess the expected impact of health reform and market forces on an ongoing basis and develop appropriate response strategies. Preparedness for change by organizations at all credit levels is by itself a competitive advantage.

Action Items

1. Using objective market and financial data, accurately assess the hospital's current strategic and financial position, where it needs to go, and if it has the resources to get there.
2. Through sound financial management, do everything possible to preserve the strength of the hospital's credit position.

Implications for Smaller Hospitals

The challenge for many small hospitals is whether they have the scale and financial resources needed to secure a public credit rating. If they do, the next question is whether the public rating they secure is high enough to be helpful to their capital formation effort. A public rating usually is helpful, but it is not always necessary. Many of the strategies described throughout this guide involve the use of credit intermediaries, such as banks, the FHA, or other alternatives, which do not necessarily require a public rating for access to that financing alternative.

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As such, the need for objective strategic and financial planning is heightened for smaller organizations. Disciplined evaluation and study will enable the board and management to assess whether the available access to capital is strong enough to support the organization's strategic needs. Once the financial plan is established, continued rigor and discipline will be required to achieve the targeted levels of performance.

Strategy 2. Identify and Evaluate the Full Range of Financing Options

Hospitals should look at all traditional and nontraditional financing options available in today's public and private capital markets. This is especially true for small hospitals that often do not have as wide a range of options as larger hospitals. A description of eight options follows, including municipal bonds, direct bank loans, FHA Section 242 credit enhancement, leasing, USDA Rural Development Program, New Market Tax Credit Program, debt restructuring, and asset sales. Certain of these products—particularly public market alternatives—may not be available to smaller hospitals. Nevertheless, each option is worth understanding and tracking as executives begin contemplating capital formation strategies.

Municipal Bonds

Debt capital comes in a variety of forms, but bonds issued in the public, municipal markets are a major capital financing vehicle for not-for-profit hospitals and health systems. During the last decades, municipal bonds have funded the bulk of large hospital facility and technology improvements nationwide. In 2009, hospitals issued nearly $44 billion of tax-exempt bonds, including both new-money and refunding issuances. According to Thomson Reuters' *Municipal Market Analysis*, this sum represents nearly 11 percent of total bonds issued in the municipal market, a category that includes state and local governments, public transportation, power/utilities, airports, and universities.

Recent Market Functioning. The tax-exempt municipal market has gone through an extraordinarily challenging period in recent years. Since the Lehman Brothers bankruptcy filing in September 2008, which basically shut down the market for fixed-rate health care bonds, the market has returned to a functioning state and is again being accessed by organizations at most credit levels. However, market volatility remains high and warrants close executive attention.

For most of the period from 2009 to the present, larger and higher-grade credits have had the "best" market access. Credit spreads for this group improved over this time period, but most importantly, there has been consistently strong investor support. Deals continue to get done across the credit spectrum, at times requiring different structuring, but the level of participation by institutional and retail investors for smaller and lower-rated credits has been less consistent. Smaller and lower-grade credits should always assume that they will experience a more challenging borrowing process.

How They Work. A public bond offering is structured such that the hospital, through a "conduit issuer," sells bonds to an underwriter, typically an investment bank, that then resells the debt to any party—individuals or institutions—interested in owning the bonds. Hospital borrowers must follow certain rules to qualify their bonds as a public offering, such as securing the required legal opinions about the

use of the capital and providing adequate disclosure to potential investors regarding the credit and bond structure.

Fixed-Rate Bonds. These bonds are the most commonly issued debt by not-for-profit hospitals and systems, and they represent the least risky debt structure available for borrowers. Fixed-rate debt essentially transfers all market risks to the investors and, as a result, typically represents the most costly form of tax-exempt or taxable debt.

The interest rate paid on a fixed-rate bond does not change during its lifetime. Even though each maturity of an issued bond may have a different interest rate, the investor purchasing the bond receives a fixed rate of return for the entire period during which the bonds are outstanding. Fixed-rate bonds are also considered *committed capital,* because as long as the hospital borrower meets its principal and interest payment obligations on a timely basis and complies with covenant requirements, the rates and repayment structure remain fixed until the bond matures, except at the option of the borrower.

Fixed-rate debt generally provides investors with call protection for a number of years, which means that for a period of time (typically 10 years), the hospital borrower can not "call" or buy back the bonds from the bondholder. At the end of the "no call" period, if interest rates have declined, the hospital borrower might wish to call the bonds and replace them with lower interest-paying obligations through issuance of new *refunding bonds*.

Variable-Rate Bonds. Variable-rate or floating-rate bonds or notes have rates that are reset daily, weekly, or monthly. The interest rate paid by the borrower fluctuates with each rate reset based on an interest rate index that reflects current, but changing market conditions. Variable-rate demand bonds (VRDBs), the primary variable-rate product available to hospitals at this time, are *put bonds*, meaning they can be put, or redeemed by bondholders for their full face amount on every reset date. VRDBs are considered *uncommitted capital* due to this put feature and the fact that the credit enhancement and liquidity support required to issue these bonds does not typically extend for their full life but must be renewed numerous times during their lifetime. Put differently, VRDBs carry certain "event risks" that might create an unexpected and accelerated repayment obligation, which could severely strain cash resources.

The biggest challenge attached to VRDBs is securing the credit and liquidity support from a highly rated bank. This is needed to convince investors that they will be able to get out of their position at any time. Such support typically takes the form of a direct pay letter of credit (LOC), under which the bank stands between the hospital and investors. Smaller hospitals may have particular difficulty securing this form of bank support from the "right" large banks, which may lead them to the direct issuance option described later.

Historically, variable-rate debt has provided borrowers on average with lower "all-in" costs of capital than fixed-rate debt. The all-in borrowing rate represents the total cost of capital, including interest and fees involved with initiating and maintaining the financing. However, access to variable-rate debt through the municipal markets has generally become limited to organizations with stronger credit ratings. This is due both to the fact that purchasers of VRDBs are typically institutional investors with minimum rating requirements and to the more limited appetite of the banks providing credit enhancement and liquidity.

Direct Bank Loans

Since Federal money started flowing through the Troubled Asset Relief Program in 2009, banks have been expanding their direct loan programs to tax-exempt health care organizations. The American Recovery and Reinvestment Act (ARRA) has also contributed to this upward lending trend. ARRA

raised the eligibility limit for tax-exempt bank-qualified bonds to $30 million from $10 million, and placed the limit with borrowers rather than issuing authorities. "Bank qualified debt allows small governments and authorities (which represent health care borrowers) to directly place their debt with banks . . . which are then able to deduct a percentage of the carrying costs for purchasing these bonds. This allows small governments (and other borrowers) to pay lower borrowing costs for their debt," (Source: The American Hospital Association letter to Max Baucus and Charles Grassley, dated May 7, 2010). Whether this $30 million eligibility limit will be extended beyond its December 31, 2010 expiration date is unknown as of the publication date of this guide.

With recent signals of economic recovery and continued federal incentives, direct lending capacity has further increased. This is particularly true among those banks that historically offered letters of credit (LOCs) to support VRDB programs that have been converted by hospitals to fixed-rate debt. Some banks, in fact, may now have more appetite for direct loans than for LOC renewals. Most regional and national banks are participating, and even local banks are looking to lend in order to retain commercial banking relationships with area hospitals.

Implications for Borrowers. Unlike municipal bonds, direct bank loans do not require a public rating for the underlying credit, can be implemented with the broadest range of banks, and can frequently be completed on a faster timetable than is true for many public market alternatives. Direct loans can also offer hospitals a useful tool to gain floating-rate exposure without some of the risks attached to public market structures, most notably the ongoing put risk associated with VRDBs. *Put risk* is the risk that bonds can be "put" back to the hospital by the lender/investor, requiring that the loan be repaid. Due to put risk, VRDBs require liquidity support from a bank. The rating agencies closely monitor the amount of put risk an organization incurs due to the inherent risks associated with renewal and pricing of the liquidity and credit support.

Conversely, most direct loans do not have an ongoing put, but they frequently have a "hard put" at the end of the initial term. Even if the principal is amortized, the vast majority of it will still be due at the end of the loan's term. This "bullet" payment represents a significant risk, and borrowers should be careful to manage the potential impact of such requirements on liquidity balances. One means of partially mitigating this risk is by securing a "term out" provision; in this case, residual debt that cannot be renewed or refinanced would be converted into a term loan that is repaid over some period of time (i.e., one to five years). This improves the hospital's risk position—providing some room to secure other financing—but does not eliminate it; banks will be very careful about managing the full duration of their exposure against a particular credit (debt plus term out).

Direct loans can yield reduced costs of capital for hospitals that may not have access to other financing products that offer lower costs. However, with lower costs often come additional restrictions and legal covenants that can range from expanded coverage of existing public debt covenants to lender review and approval for every financial decision.

Structure. Direct loans can be either tax-exempt or taxable. Tax-exempt loans are issued through a conduit agency (e.g., an authority or city) and funded by the bank; taxable debt is issued directly by the bank with no need for a conduit issuer.

Loan amounts have been ranging from $10 to $50 million per bank, although there have been some as big as $100 to $150 million. Amortization periods can range up to 30 years, as is typical with publically issued municipal bonds, but typically have much shorter terms, ranging from three to ten years. Direct loans may provide hospitals with "committed" funding for a period of time; however, as noted earlier, at the end of the loan term, the loan must be renewed (and repriced), refinanced, or perhaps termed out, if renewal or

refinancing are not alternatives. This rolling term or renewal risk will likely represent the most significant issue in the structure and must be managed closely.

Direct loan covenants may be more stringent than with traditional fixed-rate municipal bond financings. Banks may request certain covenants that differ from those in the organization's Master Trust Indenture (MTI), such as higher ratios (often, specifically, the debt service coverage ratio). Terms generally can be negotiated in order to try to align the loan as closely as possible with the organization's MTI.

Rates. Taxable variable-rate loans are typically priced at a spread to one-month London Interbank Offered Rate (LIBOR), which reflects taxable interest rates. Rates and spreads to LIBOR that are offered will be highly dependent upon a hospital's credit, the hospital-bank relationship, and the term of the facility. Banks are offering lower rates and spreads to hospitals with established relationships—again, to keep the hospital's business.

If the loan is tax exempt, either the one-month LIBOR base rate is multiplied by a percentage representing the bank's "tax factor" (at this point, in the 64 to 74 percent range) plus a spread, or the loan is priced at a spread to the Securities Industry and Financial Markets Association (SIFMA) index.

For hospitals of all sizes and levels of capital access, direct loans can offer a useful tool to obtain floating-rate exposure without certain of the risks attached to public market structures. The direct loan structure creates rollover/renewal risk at maturity but does not create public market pricing exposure to the bank's credit or week-to-week put risk. The spread to the benchmark index is purely based on the hospital's credit. Importantly, there is no deviation in that spread if the bank's rating deteriorates during the loan period.

"Drawable" Option. Bank-issued loans can be set up as tax-exempt drawable loans, which can offer cost savings to hospital borrowers funding new construction projects. Normally when borrowing in the public market, hospitals raise all of the needed capital in a single offering and then put the money in a construction or project fund that is reinvested. Due to market conditions at this point in time, hospitals may be borrowing at a capital cost in excess of 5 percent, for example, but receiving only 0.5 percent interest on the reinvested funds. This "negative arbitrage" can represent a significant amount of money over a multiyear construction program.

With drawable tax-exempt loans, the conduit issuer issues the whole amount, but the bank allows the hospital borrower to draw on the loan, as needed. The fee for this flexibility might be 25 basis points on the undrawn balance, but this approach effectively limits the hospital's negative arbitrage to the bank's "unused" fee. During construction periods that extend over multiple years, it may be cheaper for a hospital to use a drawable direct bank loan than it would be to issue VRDBs. Clearly the question is how the reductions in negative arbitrage compare to the incremental fee; in some situations, the savings could be attractive.

The tax-related issues that must be addressed are considerable, but surmountable, so direct bank loans represent an important form of variable-rate debt for hospitals and health systems. Certain banks are aggressively marketing such loans in order to build their presence in the health care market. Because public disclosure is not required for bank loans, it is impossible to gauge the actual number of transactions, but the volume nationwide is likely significant. Loans are being offered to organizations across the credit spectrum, including some unrated hospitals. Increased competition among banks for the tax-exempt business is boosting the attractiveness of loan offerings.

Federal Housing Administration (FHA) Section 242 Mortgage Insurance Program

The Office of Healthcare Programs within the U.S. Department of Housing and Urban Development (HUD) administers the Section 242 program. Chartered in 1968 to provide mortgage insurance for hospitals and health systems, the program provides credit enhancement commitments (insurance against losses) for health facility replacement, remodeling, expansion—including purchase of existing facilities, modernization, and equipment. The program has grown in size and geographic reach in past years; the FHA currently has about 100 loans in 43 states in its portfolio, reflecting more than $8 billion in commitments to all types of healthcare organizations (see Sidebar).

Section 242 Program Participants

- Hospitals in 43 states and territories
- Acute care hospitals
- Critical access hospitals
- Large urban teaching hospitals
- System-affiliated hospitals
- For-profit, not-for-profit, and government-owned hospitals

Traditional Applications. The Section 242 program has historically provided lower-rated or non-rated credits with access to the capital markets at attractive interest rates by providing credit enhancement through the form of mortgage insurance. Among other requirements, applicants must have a minimum of a positive three-year average operating margin, debt service coverage greater than 1.25 times, and Certificate of Need (CON) approval, where required. The program is well suited for hospitals that have expansion/replacement projects that are large relative to their balance sheets and that have sufficient time to secure a mortgage insurance commitment from HUD. Once considered an "option of last resort," many hospitals are taking a second look at the Section 242 program.

Broader Funding Applications. Recently, HUD has expanded the program through Section 223f transactions that allow funds to be used by hospitals for refinancing of non-FHA-insured debt. This program expansion is intended to help hospitals that have experienced increased borrowing costs as a result of the demise of bond insurance, downgrades of commercial banks, and the disappearance of other financing alternatives.

Several recent transactions have involved innovative uses of the FHA program and its capital commitments. For example, one organization constructed a new hospital in a suburban growth market by creating a subsidiary to complete a $300+ million tax-exempt Section 242 financing. As a result, the parent system is not legally obligated on the new hospital project's HUD financing, but did provide support to various components of the financing structure. Therefore, in a default situation, HUD's recourse would not extend to the parent, but would be limited to the suburban facility actually carrying the mortgage insurance. While this legal protection may be effective, this "off balance sheet" approach may not extend to either accounting treatment or rating agency credit evaluation.

How the Program Works. HUD is a real estate lender, so the FHA Section 242 program offers credit enhancement in the form of mortgage insurance. Because HUD requires "first lien-holder status," mortgage of *all* real property owned by the hospital is required for Section 242 commitments. Consequently, all of the hospital's outstanding debt must generally be refinanced into the Section 242 program. Hospitals wishing to secure Section 242 financing must meet minimum financial requirements and satisfy other specific conditions.

For organizations that meet the criteria, the program offers significant leverage—up to 90 percent loan-to-value—for borrowers that need to fund large projects relative to the size of their existing balance sheet or stand alone debt capacity. "Value" includes construction costs, including equipment, capitalized

interest, and financing costs, an allowance to make the project operational (up to 2 percent of construction cost for working capital), and the appraised value of property, plant, and equipment. Mortgage terms extend up to 25 years, plus the construction period.

Standard FHA financial and reporting covenants are similar to those found in most lower-rated bond transactions. The application/approval process is extensive, often taking up to 12 months to complete, and can be more costly than a standard tax-exempt debt issuance. One unique cost related to FHA financing is the need for a financial feasibility study performed by an approved consultant.

Borrowers are able to access the tax-exempt bond market at interest rate levels equivalent to the high "A" to low "AA" rating categories. All-in cost of capital typically includes an additional one to two percent more for the fees and other expenses involved. An all-in comparative analysis typically demonstrates that the HUD structure generates appreciable savings relative to a conventional bond financing for lower-rated credits; market access improves significantly for hospitals that have weaker credit and large projects to finance.

Affordability. Hospitals should be diligent in their evaluation of whether or not they can afford the project for which they're pursuing a Section 242 mortgage, *however* available the financing. Leveraging the organization through borrowing that further undermines the organization's balance sheet will increase operating strains during the life of the bonds and total risk. Unanticipated events could compromise the organization's financial position and should be considered.

Leasing

As is true in other sectors, leasing represents a major form of capital formation for investment in equipment and real estate by not-for-profit hospitals and health systems. To date, two types of leases have been common in health care: capital and operating leases. A *capital lease* is a leasing arrangement in which the lessee seeks a long-term commitment to use the asset with or without the eventual opportunity to purchase the asset. An *operating lease* is a lease with no transfer of ownership interest or title between lessor and lessee. The lessee makes "rent payments," which are recorded as an operating expense as they occur.

Use of leases as an alternative source of capital beyond traditional bank loans and bond financings is entirely appropriate and effective in *many* cases, especially for smaller hospitals that have limited or no access to public market alternatives. This may be especially true of short-lived assets for which long-term financing may be inappropriate. However, hospital executives should be well aware of two "exploding" uses of leases and accounting changes on the near horizon that will likely significantly alter the leasing landscape.

Capital Crunch-Related Leasing. During times when organizations have to constrain or curtail their capital expenditures, leasing may look like an attractive way to move forward with projects that cannot otherwise be financed through bonds or bank loans due to limited capital and credit capacity.

Executives should ensure that leasing is not used as a means to finance projects without proper vetting through the organization's capital decision-making process, which should define and enforce capital expenditure limits. Projects circumventing the process create an "end run" problem that is present in many hospitals and health systems. The challenging financial conditions in recent years likely exacerbated this problem in many organizations. Smaller hospitals should be particularly attuned to leasing used as an end run on the capital process.

Physician Strategies. Physician acquisition or partnership strategies, which many hospitals and health systems are pursuing aggressively at this time, may also result in significantly increased organizational lease obligations. These leases are often characterized by short amortization and relatively high total costs when compared to traditional tax-exempt debt. Many leases have difficult termination and renewal provisions, especially long-term real estate leases.

Depending upon the size of the hospital or health system, physician leases can have a large income and balance sheet impact, either individually or in aggregate. For larger organizations with significant physician-related initiatives, lease commitments may exceed traditional tax-exempt debt.

Accounting Treatment of Leases. The International Accounting Standards Board (IASB) and Financial Accounting Standards Board (FASB) have jointly developed a new approach to lease accounting. The approach requires lessees to capitalize operating leases in a manner similar to the current treatment of capital leases. Expected to be effective by mid-2011, operating leases will need to be recognized *on* the balance sheet, essentially as debt, which will eliminate the "off balance sheet" benefits of operating leases.

Because this new standard will increase reported debt on the balance sheet, many hospitals may experience weakened leverage ratios. This could cause some organizations to fail certain debt covenant tests in their bond/loan agreements. These ratios include debt to cash flow, maximum annual debt service coverage, cash to debt, and debt to capitalization. The shorter life may also have, in and of itself, a material impact on the maximum annual debt service.

Perhaps more importantly, this accounting change clarifies leases for what they are: an alternative form of financing that should be compared to all other available options to discern the best financing tactic at any moment in time. Leasing is a broad-based market that can accommodate smaller projects on a fairly efficient basis; for this and other reasons, it may represent an excellent alternative for smaller hospitals. However, it is likely not the only alternative and given shifting accounting and rating considerations, it is essential that financial executives have clear control over leasing review and decision-making processes within their organization.

Rating Agency View. Since the early 2000s, the three rating agencies have disregarded the distinction between operating and capital leases, treating operating leases as a debt equivalent. In various publications over recent years, Moody's Investors Service articulated this view, indicating that although noncancelable operating leases are *off* balance sheet (at this time) for accounting purposes, such leases are *on* credit. In assessing debt capacity and credit quality, Moody's incorporates such leases as part of an organization's comprehensive debt program, "when material." To date, however, none of the not-for-profit health care rating groups have incorporated operating leases in their published medians.

"A red flag goes up when leases comprise a material amount of total debt; materiality will be different for different organizations, depending on rating category, debt capacity, and structure, as well as financial performance" note Moody's Lisa Goldstein, Senior Vice President—Team Leader, and Beth Wexler, Senior Credit Officer.[2] Moody's asks the organization's management to explain its philosophy for using operating leases instead of a more permanent debt financing, such as long-term bonds or capital leases.

Each rating agency handles leasing calculations in different ways, but because the rating agencies already treat capital and operating leases as *on* balance sheet, the new accounting standards will better align the accounting and rating agency treatment of leases.

Management Questions to Evaluate Lease Use

Lease-use philosophy

- What is management's philosophy and history related to use of capital and operating leases?
- What assets are being leased?
- Why lease versus buy? Are other funding sources being considered, such as long-term bonds or capital leases, instead of operating leases?
- Did the organization enter into the lease as a way to manage and protect against obsolescence? What is the history of managing this issue?
- If the lease were to be fully on balance sheet and incorporated with the rating debt metrics, would the organization reconsider its use?

Lease management and documentation

- What is the approval process for leases? Are lease decisions consistently made within the capital allocation process?
- Who is responsible for leases?
- How are leases documented? Is a single overall summary document maintained and reported on by type of lease (capital or operating), use (equipment or real estate), and level of commitments over time?
- Are all leases fully tracked, including those with joint ventures and affiliated entities?

Lease structure and terms

- How are the leases being structured? Are there criteria related to the asset's useful life that govern the use of leases? Who bears the residual value?
- Are the leases cancelable or noncancelable? Are they typically renewed at maturity? What happens at the end of the lease term regarding the leased assets?
- What secures the lease and what is the recourse to the leaseholder? Are the leases parity to the Master Trust Indenture debt with cross-default provisions?
- Are real estate operating leases, in turn, subleased to others (within or external to the health care system)?
- Are equipment operating leases done through a master leasing agreement? Are the terms standardized? Does the organization use its leverage to gain better overall terms?

Concluding Comments about Leases. As mentioned earlier, leased assets *must* be considered within the context of the organization's capital formation options and capital allocation process and be subject to organizational capital constraints. Clearly, leases can offer an attractive way for a hospital or health system to finance an asset and preserve cash under the right circumstances.

For organizations with access to a range of financing alternatives, lease use should be carefully scrutinized and controlled (see Sidebar for relevant evaluation questions). The off-balance-sheet treatment of leases is no longer an available benefit, but there may be other benefits that should be considered. For example, an organization entering a new but uncertain market with an outpatient presence might wish to lease a facility rather than own it. This provides an easier exit strategy if the organization decides that it no longer wishes to have a presence in that market. Most importantly, going forward the use of leasing for qualified projects should be carefully weighed against other funding alternatives in the tax-exempt, public and private markets.

USDA Rural Development Community Facilities Program[3]

The USDA Rural Development Community Facilities Program makes and guarantees loans to develop "essential community facilities," which include clinics, ambulatory care centers, hospitals, rehabilitation centers, and nursing homes, in rural areas and towns with populations of up to 20,000. These loans may be used to construct, enlarge, or improve health care facilities, including the cost to acquire land, pay professional fees, and purchase equipment required for operations.

Refinancing existing debt may be considered an eligible direct or guaranteed loan purpose if the debt being refinanced is a secondary part of the loan, is associated with the project facility, and if the applicant's creditors are unwilling to extend or modify terms in order for the new loan to be feasible.

The Community Facilities Program is similar to the FHA Section 242 financing program in that it can provide credit enhancement to specifically defined borrowers. It can guarantee loans made and serviced by lenders such as banks, savings and loans, mortgage companies that are part of bank holding companies, banks of the Farm Credit

System, or insurance companies regulated by the National Association of Insurance Commissioners. The Community Facilities Program may guarantee up to 90 percent of any loss of interest or principal on the loan. However, unlike the FHA program, the Community Facilities Program can also make direct loans to applicants who are unable to obtain commercial credit.

Rates and Terms. For the direct loan program there are three levels of interest rates available (poverty, intermediate, and market) each on a fixed basis. The poverty rate is currently set at 4.5 percent. The market rate is indexed to a rate determined by the U.S. Treasury Department. The intermediate rate is set halfway between the market and the poverty rates. Eligibility for these different interest rates is determined by the median household income (MHI) of the area being served by the borrower and the type of project being financed. The intermediate and market interest rates are adjusted quarterly.

For the guaranteed loan program, the interest rate charged is the lender's customary interest rate for similar projects. The interest rates for guaranteed loans may be fixed or variable and are determined by the lender and borrower, subject to review and approval. Loan repayment terms may not exceed the applicant authority (under State law or organizational structure), the useful life of the facility, or a maximum 40 years.

Security Requirements. Bonds or notes pledging taxes, assessments, or revenues will be accepted as security if they meet statutory requirements. Where state laws permit, a mortgage may be taken on real and personal property. Tax-exempt notes or bonds may be issued to secure direct loans but cannot be used for guaranteed loans.

Similar to the FHA Section 242 program, the standard Community Facilities Program financial and reporting covenants are consistent with most lower-rated bond transactions. The application/approval process is quite extensive but requires less time than the FHA process to complete. Nonetheless, it can be more costly than a standard tax-exempt debt issuance, including the need for an external financial feasibility study.

Applications for the Community Facilities Program are handled by USDA Rural Development field offices. For more information, access the USDA Rural Development Community Facilities Program website www.rurdev.usda.gov/HCF_CF.html.

New Market Tax Credit Program

Although appropriate for a much smaller universe of hospital borrowers, this product deserves brief mention, as a number of hospitals are using it to achieve positive financing outcomes. Signed into law as part of the Community Renewal Tax Relief Act of 2000 (Omnibus H.R. 4577), the New Markets Tax Credit program (NMTC) seeks to encourage private investment in low-income U.S. communities that historically have had poor access to capital. The program provides a 39 percent credit against federal income taxes over a seven-year period for investors (e.g., banks, insurance companies, and investment funds) that make "qualified equity investments" in "community development entities" (CDEs). The CDEs act as intermediary vehicles for the provision of loans and investments to eligible businesses under the NMTC program.

Eligibility. Entities eligible to receive NMTC financing from CDEs include corporations, partnerships, or non-profit organizations located in low-income communities. The legislation defines such communities as census tracts with a poverty rate of at least 20 percent or a median family income not exceeding 80 percent of the statewide or metropolitan area median family income. In addition, entities eligible to

receive NMTC financing must be active in low-income communities, as defined by specific criteria, such as having:

- Fifty percent or more of gross income derived from an eligible census tract; and
- Forty percent or more of services performed, and tangible property derived from, an eligible census tract.

Funding Examples. NMTC proceeds have financed a variety of projects in distressed U.S. communities for organizations such as manufacturers, alternative energy companies, charter schools, and health care providers. Hospital borrowers have accessed the NMTC program primarily to finance the purchase, construction, or renovation of projects that will provide long-term benefits to low-income communities. Examples include a children's hospital in a low-income community on the West Coast that recently received $30 million in NMTC funding for facility improvements and a Boston hospital that used $20 million of NMTC funding to restore its historic medical center.

The NMTC program has been found to be an attractive financing option because NMTC loans typically have below-market interest rates (typically one to three percent below market), lower fees, and more flexible loan terms (e.g., longer amortizations and interest-only payment periods). Health care borrowers should be aware, though, of the generally increased amount of time and effort that is required to complete a financing through the NMTC program. In addition, extension of the NMTC program through 2011 is currently subject to Congressional authorization, which is expected this fall. For more information, see www.cdfifund.gov.

Debt Restructuring

Hospitals under significant financial strain, with little liquidity and high debt burden, may want to consider restructuring their existing debt portfolio. Reducing or eliminating tax-exempt bond debt and other securities can offer liquidity from immediate cash payouts and remove securities that may limit the organization's capital position and its ability to undertake new investments.[4]

When hospitals are experiencing financial distress and are in danger of default on debt and insolvency, "investors and lenders are often prepared (and may expect) to restructure their debt, including cashing out at a discount, reducing principal and interest, stretching maturities and changing payment terms. In certain cases, these restructuring efforts may also include the compromise of some or the entire initial debt obligation," note two experts. [4]
For example, a 550-bed hospital in upstate New York used debt restructuring as one strategy to achieve a turnaround within two years of filing for bankruptcy protection with debts of $90+ million. The hospital negotiated a five-year deferral of debt from secured creditors, which was expected to save the hospital $12 million during that period.[5] Hospitals should consult with their financial advisor and legal counsel to identify whether debt restructuring can and should be pursued.

Asset Sales

Health care leaders should be asking hard questions about their existing portfolio of hospitals, businesses, services lines, and real estate to ensure that they have the right portfolio for changing competitive conditions. Divestiture of non-core assets may represent a significant capital-raising opportunity for many hospitals and health systems, and a means to focus the organization on core mission activities.

Non-Core Businesses. Businesses accumulated by hospitals and health systems during the past decades, such as long-term care facilities, home health and hospice agencies, managed care plans, joint-ventured

ambulatory surgery centers, and others may no longer be affordable or core to the organization. Businesses that are not core to the mission could be divested in order to fund core strategies.

The type of sales process selected for those non-core assets or businesses can significantly impact the monetary value of the divesture and other benefits and considerations (see Sidebar), so hospitals will want to seek the advice of a financial advisor and legal counsel.

Types of Sales Processes

	Exclusive Negotiations	*Limited Sale*	*Controlled Sale*	*Public Auction*
Buyer universe	One	2 to 4	5 to 15	Many
Comfort with strategic decision to divest	Low	Low	High	High
Maintain confidentiality	High	High	Medium	Low
Risk of not closing a transaction	High	Medium	Low	Low
Maximize monetary value	Low	Medium	High	High
Maximize non-monetary value	Low	Medium	High	High
Controlling time line	Low	Low	High	High
Controlling transaction structure and documents	Low	Low	High	High
Ensure fairness/ adequacy of value	Low	Medium	High	High
Time commitment from management	Low	High	Low	Low
Fairness of information disclosure	High	Low	High	High
Fiduciary responsibility	Medium	Medium	High	High

Source: Kaufman, Hall & Associates, Inc.

Real Estate. The starting point for consideration of real estate as a source of capital is a thorough assessment of an organization's existing real estate holdings. The assessment should include a close look at the current operational value of each building or land holding, its future strategic value, and the potential financial value, using appropriate criteria or metrics for each.

For the most part, hospitals will want to continue owning properties with high values across all three factors, as well as properties with high strategic value (even if they have lower operational and financial values). Generally, assets with high financial value, but lower operational and/or strategic value, should be considered as monetization opportunities. Real estate assets with low values across all three categories are more of a challenge and may represent a redevelopment opportunity. A more thorough "sell or hold" evaluation is recommended for real estate assets with mixed results.

Often real estate monetization related to buildings involves a sale/leaseback transaction, where the hospital commits to a long-term lease for a portion of the buildings it has sold. Proceeds from the sale of buildings are returned to the hospital's balance sheet, which improves liquidity and key credit rating ratios—most importantly, days cash on hand and cash to debt. However, the hospital will lose rental income and incur new occupancy expenses for the portion of space leased by the hospital. The question is whether the balance sheet benefit outweighs the incremental operating costs.

As mentioned earlier, executives must fully understand the implications of such transactions, including financial issues related to the implied cost of capital in the leaseback transaction as compared to the hospital's overall cost of capital. Strategic issues, such as ongoing control, are also important. Through long-term ground lease control provisions, it *is* possible to monetize certain real estate assets while still maintaining a degree of strategic control, such as restriction on competitive activities and the right to lease space.

Take Aways

The capital markets have returned to a more normal level of functioning in 2010, allowing access to external debt by organizations at all credit levels. Transactions continue to get done across the credit spectrum, at times requiring different structuring and provisions. Tax-exempt fixed-rate bonds are currently the product of choice, as hospitals move risks related to variable-rate debt off the table, but many alternatives are available to health care borrowers. Bank lending capacity has increased. Market volatility remains high and warrants close executive attention.

Action Items

1. Assess the full range of financing options, including nontraditional sources.
2. Recognize that fixed-rate bonds are the least risky debt structure available to hospitals, but they are often the most costly form of debt.
3. Be aware of the changing accounting treatment of leases (on balance sheet, like debt).
4. Ensure that leasing is not used as a means to finance projects to circumvent the hospital's capital decision-making process.
5. Scrub the hospital's existing portfolio of businesses; divest non-core assets.

Implications for Smaller Hospitals

Due to a lower scale of borrowing and credit strength, smaller hospitals typically do not have the complete range of financing options available to larger organizations. But there are public and private borrowing alternatives available if smaller hospitals are willing to invest the needed time to gain capital access. Access to direct bank lending has opened up for organizations of all credit strength. Small community hospitals may have to commit to an exclusive banking arrangement in order to secure funding.

Given industry, economic, and market trends, small organizations without significant credit strength should not continue to own businesses or operate programs that are not affordable or core to their missions. Divestiture of such assets will be key to survival.

Strategy 3. Consider Sources of Local and State Support

Due to their economic and strategic interest to rural and small communities, local hospitals may be able to secure significant support from local government authorities, businesses, and residents. For example, city officials in a town in Oklahoma pledged more than $3 million to help a regional medical center complete its new 62-bed, $61 million facility. Additionally, the State waived the state sales tax for materials in construction as part of its effort to defray the cost for existing industries that are helping health care in the State.

Other means of support to explore that can significantly lower a hospital's cost of capital might include:

- Obtaining the city or county's agreement to support the debt service on issued bonds, should the hospital default.
- Introducing a "millage pledge" as part of a ballot initiative (This involves a promise by the taxpayers themselves to support the bonds either directly or through an underlying guarantee of the debt service payments.)
- Utilization of enterprise or redevelopment zone financing.
- Assistance with FHA financing.

Philanthropy can represent an important piece of the capital pie but certainly should not be the foundation upon which significant capital projects are built. Should the hospital want to conduct a capital campaign or other fundraising initiative, working with local businesses or individuals to generate contributions will likely be a material source of philanthropy.

Take Aways

Local and state support can significantly lower a hospital's cost of capital and contribute to capital funding.

Action Items

1. Explore sources of local and state support.
2. Pursue philanthropic support, as appropriate.

Implications for Smaller Hospitals

Smaller hospitals can benefit from pursuing all capital options, including philanthropic donations and local and state support for specific projects. Communities with small hospitals typically are highly invested in retaining their local access to health care and hospital-related jobs. Some municipalities and districts might be able to afford direct or indirect support of the hospital; given current fiscal constraints, others may not have such means.

Strategy 4. Consider Partnership as a Broad Strategic Capital Option

Hospital leaders should consider *all* strategic options for obtaining the capital required to meet continued needs of their communities. Beyond traditional and nontraditional options available through the capital markets and asset divestiture, as described earlier, hospitals can and should consider partnering with other organizations (or physicians) that can bring capital to the table to fund specific strategic initiatives or the organization's ongoing operations.

The need for significant capital to fund new-era requirements will increase the need for such partnerships. Due to accelerating health care industry and economic trends, many hospitals and small health systems are exploring strategic partnerships with other organizations. Hospital merger and acquisition activity includes all types of partnerships between not-for-profit and/or for-profit players.

Through analysis of the hospital's current strategic and financial position, as described in Strategy 1, hospital executives should have a clear understanding of their hospitals' relative market strength and available capital capacity. The assessment must continuously be updated as market definitions change quickly. For example, regionalization, involving acquisition by systems of hospitals across state lines, is occurring with increasing frequency nationwide.

Partnership structures vary in level of integration and control, from loosely coupled strategic affiliations to comprehensive asset mergers (Figure 2). Criteria for consideration of partnerships at all levels include synergy of mission, organizational culture, market position, and financial and operational positions. A small hospital will likely be looking for a partner to help move its strategic agenda forward. The partner could be another hospital, a health system, or a group of physicians that can enable the hospital to offer new services or improve the breadth and quality of existing services. The partner would need to have a stronger financial position, depth and breadth of management and other resources, and ability to leverage economies of scale.

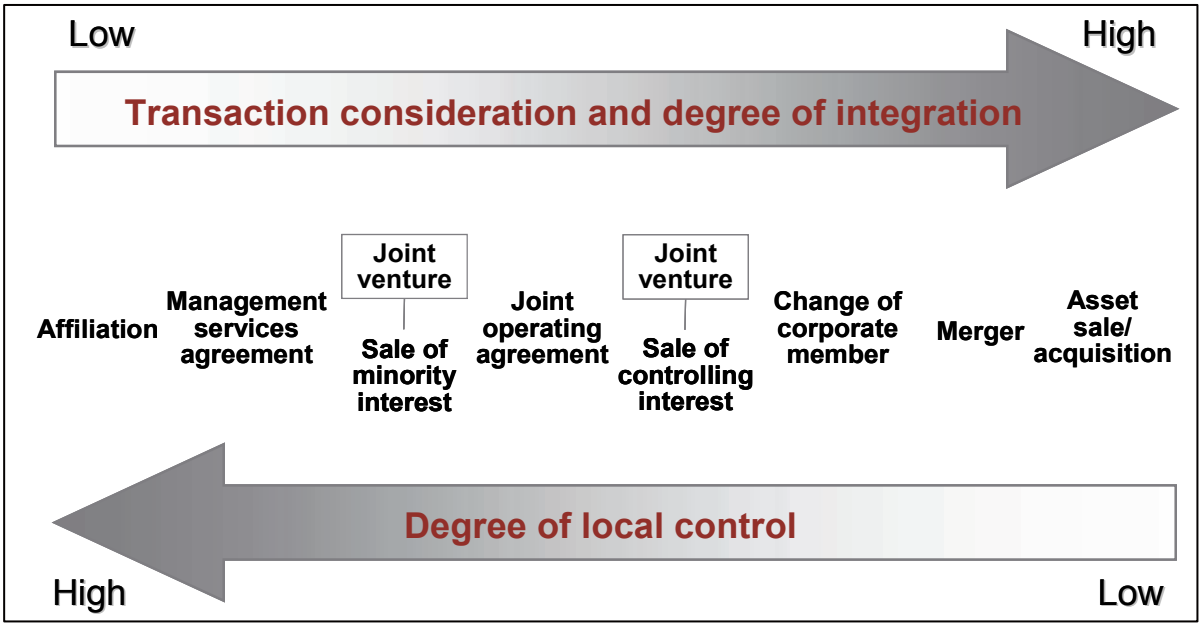

Figure 2. Range of Partnering Options
Source: Kaufman, Hall & Associates, Inc.

Partnership exploration and implementation can be exceedingly challenging on many different levels, particularly when a hospital *requires* a partner for future success. Hospitals can achieve best-fit partnerships by: clearly defining partnership objectives; identifying the broadest-possible strategic partnership options; evaluating the opportunities and risk associated with each; determining which option(s) would best enable the organization to fulfill its objectives while maintaining an acceptable level of risk; and purposefully pursuing this option. Options clearly are more numerous when an organization's core position is solid. The Sidebar outlines four options often available to small hospitals.

Take Aways

The need for significant capital to fund new-era requirements will increase the potential benefits of strategic partnerships between health care organizations. Partnering options range from loose affiliations with a high degree of local control to fully integrated asset sales/mergers/acquisitions with a lower degree of local control. Hospital management teams and boards nationwide are identifying and securing partnerships appropriate to support the organization's long-term strategic and financial needs.

Broad Strategic Options Available to Small Hospitals

1. Proceed as an independent provider; key considerations include whether the organization can meet defined future success requirements on its own.
2. Affiliate with a larger not-for-profit health system; key considerations include an evaluation of which objectives would and would not be addressed through affiliation.
3. Merge with a not-for-profit health system; key considerations include the role and function of local governance.
4. Divest assets to a for-profit health system and use the sale proceeds to establish a health care foundation; key considerations include the kinds of commitments that could be negotiated related to capital investment, retention of programs/services, quality of care, retention of staff, and more.

Action Items

1. Consider and pursue partnership options, as appropriate; early movers in consolidating markets will have a strategic advantage.
2. Ensure use of a structured process for making well-informed partnership decisions.

Implications for Smaller Hospitals

Marketplace pressures under the emerging new business model and health reform will challenge organizations to a much greater extent than in the past. Many stand-alone hospitals and small health systems, even strong ones, are recognizing that they do not have the strategic and financial resources required to achieve the capabilities associated with success in the new era. These competencies include close integration with physicians, information technology sophistication, balanced service distribution, and strong payor relationships.

Strategy 5. Evaluate and Select the Best Financing Strategy

Hospitals that can achieve their goals by obtaining capital via traditional capital market sources should ensure that they have clearly defined borrowing goals and then keep those goals in mind throughout the process. All capital decisions must support the organization's strategic plan, provide as much flexibility as possible given existing and pending laws or restrictions, involve the lowest overall cost for the risk of the asset and liability portfolios, and allow for future financing needs.

Evaluation Criteria

The following 11 factors should be weighed when considering each potential debt instrument:

All-In Borrowing Rate. The all-in borrowing rate represents the total cost of capital, including interest and ongoing fees involved with maintaining the financing. Historically, all-in rates have on average been lower with variable-rate debt than with fixed-rate debt, and also lower with traditional bond offerings than with nontraditional offerings.

Costs of Issuance. Tax-exempt bonds typically have higher costs of issuance than do taxable bonds, but in either case, organizations should carefully evaluate these costs. Tax law permits tax-exempt borrowers to finance costs of issuing bonds in an amount up to 2 percent of the principal issued. Such financing can cover any expenses incurred in preparing and implementing the plan of finance.

Use of Proceeds. The tax status of the financing option is determined both by the tax status of the entity for which the financing is being sought and the use of the proceeds. For example, if a tax-exempt hospital wants to use financing proceeds to build a medical office building in which independent physicians will practice, the transaction will likely need to be taxable so that the benefits of tax exemption are not provided to the individual physicians. Hospitals should seek guidance from legal counsel in this area.

Credit Position. The creditworthiness of an organization largely determines its access to financing vehicles. Publicly offered variable-rate bonds typically require either a letter of credit from a commercial bank or bond insurance with a line of credit.

Document Structure and Underlying Security Requirements. The weaker the credit, the more security is required. With some financing vehicles, such requirements can limit an organization's ability to issue debt in the future.

Covenants. There are two basic categories of covenants—maintenance and incurrence. *Maintenance covenants* are routine requirements that the borrower must meet on an annual and sometimes quarterly basis. Examples include the liquidity covenant (i.e., days cash on hand) and the debt service coverage ratio. *Incurrence covenants* are special requirements that must be met to undertake a particular action, such as sale or disposition of property. Organizations should always seek the least restrictive covenants possible.

Principal Amortization. The amortization schedule for the financing vehicle is critical to cash flow and maintenance covenants.

Interest-Rate Risk. When incurring fixed-rate debt, the borrower is insulated from interest rate fluctuations. Variable-rate debt, characterized by periodic resets of the interest rate, exposes the borrower to risk related to changing rates. The best course is to achieve a mix of fixed-rate and variable-rate debt that minimizes interest-rate risk.

Average Useful Life Versus Average Maturity. Tax-exempt financing rules require that projects eligible for tax exemption be specifically delineated in the documents that support the borrowing. The weighted economic maturity of the bonds cannot currently exceed 120 percent of the weighted average project asset life to be financed. Organizations should check with bond counsel to certify the tax-exempt eligibility of each project and the weighted average life of the financing.

Disclosure Requirements. Tax-exempt vehicles require organizations to provide prompt, accurate, complete, and continuing disclosure of certain financial and utilization information.

Prepayment Penalties and Unwind Provisions. Different financing vehicles have differing premiums or prepayment penalties associated with an early redemption date.

Selection Principles

By weighing each financing option against these 11 factors, organizations can narrow the field of options to the most appropriate financing alternatives. The best strategy in choosing a financing structure is to stick to the basics, looking toward more complicated vehicles only if they would provide known and measurable benefits. Complex financing vehicles may carry greater risk or terms that could limit an organization's current and future flexibility.

Take Aways

To choose the right capital markets financing vehicle(s) for the hospital, many factors should be weighed, including issuance costs, all-in borrowing rate, covenants, interest rate risk, and other factors. Flexibility of selected options is critical, but so is a fundamental understanding of the underlying benefits and risks of each instrument. If a hospital's financial leaders and the board members on its finance committee don't understand and cannot explain the financing approach, the hospital should not pursue it.

Action Items

1. Evaluate each debt instrument using the 11 criteria outlined in this section.
2. Ensure that the debt vehicle selected provides as much flexibility as possible and involves the lowest overall cost and risk level, given the hospital's overall asset and liability portfolios.
3. Stick to the basics: Don't select debt products that the hospital's financial leaders and the board members on its finance committee don't understand.

Implications for Smaller Hospitals
Smaller hospitals often have less flexibility in the provisions and terms of debt vehicles, but they should weigh the relevant factors outlined in this section. Covenants related to liquidity can be particularly problematic and should be fully understood prior to a transaction.

Strategy 6. Involve the Right Professionals

Strategy, legal, and financial experts can help hospitals identify, pursue, and secure a full range of capital options. Professionals with national experience bring both depth and breadth of expertise to the table. Objective advice is critical.

Because issuance of bonds is the most common way not-for-profit hospitals and health systems finance major strategic investments, the focus here is on the team that participates in the bond-issuance process. However, support from relevant outside professionals is important under any external financing alternative. In all instances, a multidisciplinary team is strongly recommended; roles and expertise vary and independence of viewpoints is critical to the terms achieved by the hospital and its ultimate financing success. Figure 3 shows the participants involved in a tax-exempt bond transaction.

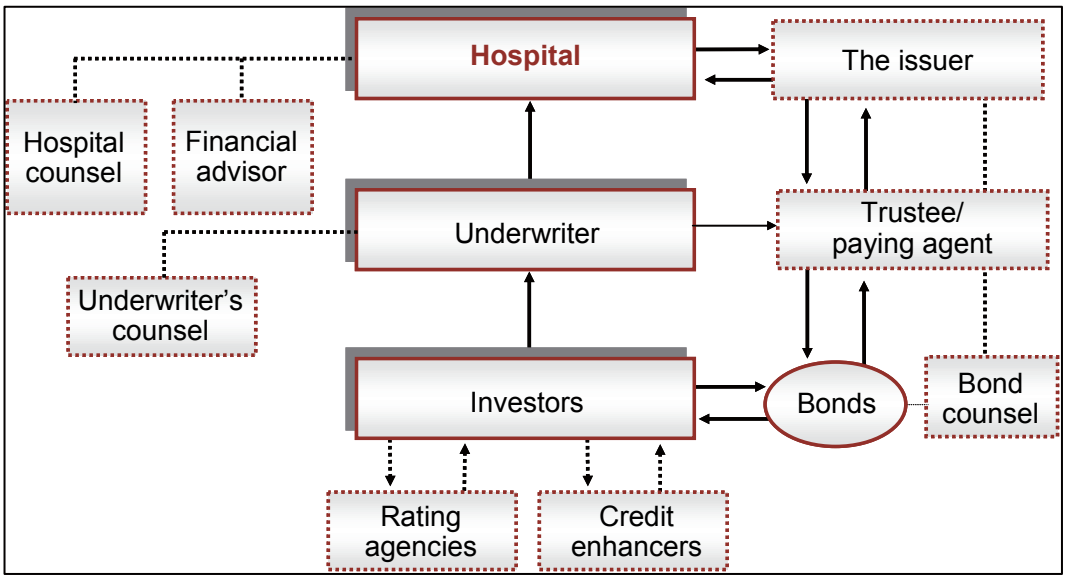

Figure 3. Participants in the Tax-Exempt Bond Financing Process
Source. Kaufman, Hall & Associates, Inc.

The Financing Team

The financing team includes individuals who represent the interest of both the borrowers and lenders/investors/issuers. A description of each follows.

The Borrower—the actual hospital or health care system "obligor" that is contractually required to repay the debt.

The Borrower's Counsel—represents the borrower's legal interest in the transaction and provides required corporate legal opinions.

The Borrower's Financial Advisor—advocates for the borrower throughout the financing transaction as an independent and objective participant. Support includes counseling the borrower about final bond

and/or swap pricing terms and conditions, and guiding the borrower through the financing process described earlier.

The Issuer—the state or local government entity or "conduit" that is authorized to issue obligations that are exempt from federal income tax.

The Issuer's Counsel—represents the issuer's legal interest and provides required legal opinions on behalf of the issuer.

Underwriter (Investment Banker)—provides overall technical analysis and recommendations related to plan of finance decisions (working closely with the financial advisor), acts as a broker in the marketing and sale of bonds to investors, and actively participates in credit and bond insurance conversations.

Underwriter's Counsel—represents the underwriter's legal interest and provides required legal opinions regarding the adequacy of disclosure and the underwriter's responsibilities.

Bond Counsel—provides the overall opinion that the bonds are tax exempt and drafts many of the basic financing transaction documents, ensuring that the bonds conform to federal and state tax code requirements, and coordinates required regulatory approvals.

Master Trustee and Bond Trustee—assumes certain fiduciary responsibilities on behalf of all master note holders under the master trust indenture. The bond trustee represents bondholders' interests within certain parameters on a specific series of debt and coordinates payments from the borrower to the bondholders.

Auditor—typically conducts certain accounting reviews and procedures, as required by the underwriter and underwriter's counsel, to ensure adequate disclosure of the borrower's financial position to the investment community.

A balanced financing team can provide both national and local support. National exposure to a bond offering may be desirable because wide distribution can translate into lower interest costs. The hospital will wish to consider its legal team carefully, installing an expert bond attorney who is knowledgeable about current best practices. A local attorney who can respond to legal situations unique to the particular hospital may also be a good idea.

Role of the Financing Team

To complete a financing, the financing team evaluates the organization's capital structure, formulates the right plan of finance, guides the organization through the ratings process, evaluates credit support options, ensures compliance with regulatory and legal due diligence requirements, drafts documents, negotiates covenants, and executes the overall financing transaction. An independent, financial advisory team can offer and apply successful strategies used by hospitals nationwide—both large and small—to accomplish these tasks.

Take Aways

Selecting the right team of experts to identify, pursue, and secure capital options is critical. For tax-exempt bond transactions, a multidisciplinary team, which brings depth and breadth of expertise and independent viewpoints, is recommended.

Action Items

1. Use a multidisciplinary team for tax-exempt bond transactions; ensure that team members have both national and local experience.
2. Understand the role of financing team members who represent the interests of both the borrower and lenders/investors/issuers.
3. Ensure that the financing team can provide independent financial advice.

Implications for Smaller Hospitals

Small hospitals that access the municipal bond market can follow all of the guidance in this section. Hospitals without access to the tax-exempt market will also need to obtain independent, objective advice about, and assistance with, financing transactions, whether through bank, government, or other programs. Advisors with national and local experience can provide the needed assistance.

Strategy 7. Stay Closely Connected

Regardless of the financing strategy selected to meet the strategic and capital needs of the hospital, the process by which that financing is implemented will require a variety of individual decisions. Financial and legal advisors with specific subject and process knowledge can provide needed expertise related to debt financing and identification and implementation of successful strategic partnership transactions. The hospital's management team and board, as appropriate, must remain actively engaged in the entire process, however; the decisions made at each step could have significant, cumulative effects on the organization's long-term strategic and financial flexibility. Advisors can help to identify such effects, but ultimately, management is responsible for understanding the implications and pursuing appropriate strategies.

For example, as a financing process moves forward, management should stay closely connected, questioning the professionals as to the full range of available alternatives related to each potential decision. No question or idea is a bad one, and management should never accept as valid a response such as "that's the way it is always done." It is particularly important for management to be closely involved with financing strategies that include funding from state or local governments or from philanthropic sources. Clearly, the maintenance of strong relationships with these sources can help maximize the capital received and manage its structure and timing.

Within the context of the organization's strategic partnership requirements, management should ensure that the advisory team fully identifies and evaluates all viable options and approaches.

Take Aways

The hospital's management team and board, as appropriate, must remain actively engaged throughout the debt financing and/or partnership exploration and transaction processes. The leadership team ultimately is responsible for understanding the implications of capital financing decisions and for pursuing appropriate strategies.

Action Items

1. Ensure that the hospital's management team and board remain actively engaged throughout the debt financing and/or partnership exploration and transaction processes.
2. Ensure that financial and other advisors explore the full range of available capital options.

Implications for Smaller Hospitals

It is particularly important for management teams of smaller hospitals to be closely involved with financing strategies that include funding from state or local governments or from philanthropic sources. Maintaining strong relationships with these sources can help maximize the capital received and manage its structure and timing.

Concluding Comments

The stakes are high. Whether hospitals are strong or not so strong, their executives cannot afford to take a wait-and-see approach to capital access. To ensure capital options in the new health care environment, leadership teams must understand available options for accessing external capital. Doing this requires that they be committed to building an in-depth understanding of their current strategic and financial position, preserving the strength of their credit position, identifying and evaluating the broadest-possible funding sources, securing the best-fit options through involving the right experts, and staying closely connected to their capital position by monitoring existing funding and new opportunities. Winning organizations will take a proactive approach.

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BIOGRAPHIES

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Mr. Sussman is the author of *The Healthcare Executive's Guide to Allocating Capital,* published by the American College of Healthcare Executives' Health Administration Press. He has authored and co-authored articles for various industry periodicals and received a Best Article Award from the Healthcare Financial Management Association (HFMA) for "Ensuring Affordability of Your Hospital's Strategies," which appeared in the May 2009 issue of *hfm* magazine.

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In addition to debt financings, interest rate swaps, and many other types of derivative transactions, Mr. Jordahl's capital markets experience includes raising equity and equity-equivalent capital as well as advising on mergers, acquisitions, divestitures, joint operating agreements, fairness opinions, specific financial advisory assignments, and financial reorganizations. Mr. Jordahl received a B.A., cum laude, from Harvard College.

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American Hospital Association

Bundled Payment

AHA RESEARCH SYNTHESIS REPORT

MAY 2010

American Hospital Association
Committee on Research

AHA Research Synthesis Reports are periodic reports that synthesize literature on key issues related to the 2010 to 2012 AHA Research Agenda. The AHA Committee on Research developed the 2010 to 2012 AHA Research Agenda, which was approved by the AHA Board in November 2009.

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Bundled Payment – AHA Research Synthesis Report
Executive Summary

Introduction

The first in a series of periodic reports, this *AHA Research Synthesis Report* examines the current evidence base on the design and impact of bundled payments and identifies knowledge gaps that still need to be answered as both the public and private sectors actively pursue this payment approach as a solution to current care delivery and quality issues.

Evidence on the Impact of Bundled Payments

The models of bundled payment that have been tested in the public and private sectors have yielded promising results. However, the models focus on specific conditions, such as those with defined timeframes, defined services, and isolated episodes, and are based in specific care settings, such as integrated delivery systems and academic medical centers.

Despite the limitations of the current knowledge base on bundled payment, current literature indicates that:

1. **Bundled payment could potentially reduce spending on an episode of care.** For example, during the five-year Heart Bypass Center Demonstration, Medicare saved $42.3 million, or roughly 10 percent of expected spending, on coronary artery bypass graft (CABG) surgery at the seven participating hospitals. Geisinger's ProvenCare was able to reduce hospital costs by 5 percent.

2. **Providers' readiness to participate in bundled payment programs varies.** Of the 734 hospitals that expressed interest in Medicare's Heart Bypass Center Demonstration, 209 submitted pre-applications. Within a year of the introduction of Blue Cross Blue Shield of Massachusetts' Alternative QUALITY Contract (BCBSMA AQC), about 20 percent of eligible providers have signed up for the payment program.

3. **Bundled payment can spur quality improvement.** This is especially true when bundled payment is paired with defined quality metrics. ProvenCare was coupled with 40 best practice steps based on the American Heart Association and the American College of Cardiology guidelines, and BCBSMA AQC has a performance incentive linked to a variety of nationally-recognized measures. ProvenCare reduced average length of stay (LOS) for CABG by 0.5 days and 30-day readmission rates by 44 percent over 18 months.

Key Issues for Consideration

Before bundled payment can be widely implemented, several key questions need to be addressed:

1. To which conditions should bundled payments be applied?
2. What providers and services should be included in the bundled payment?
3. How can provider accountability be determined?
4. What should be the timeframe of a bundled payment?
5. What capabilities are needed for an organization to administer a bundled payment?
6. How should payments be set?
7. How should the bundled payment be risk-adjusted?
8. What data are needed to support bundled payment?

Introduction

One of the top four research questions in the 2010 to 2012 AHA Research Agenda is:

What is the role of the hospital in a new community environment that provides more efficient and effective health care (e.g., what are the redesigned structures and models, the role and implementation of accountable care organizations, the structures and processes needed to implement new payment models such as bundled payments, and how do organizations transition to this new role)?

This *AHA Research Synthesis Report* provides a review of the literature on one aspect of this transition—*reviewing what is known and unknown about bundled payment.*

Bundled payment has been proposed as a means to drive improvements in health care quality and efficiency. Although there is great interest in this payment reform approach, there is currently limited data on how to design and administer bundled payments. Despite a few real-world applications of bundled payment, several questions remain. Among them is how payments for the physician and non-physician components of care will be determined under bundled payment.

The purpose of this research synthesis is to present an overview of bundled payment, including evidence of impact from public and private sector application, and the questions that must be considered as policymakers and delivery organizations move forward with this concept.

What is Bundled Payment?

Under a system of bundled payment, or episode-based payment, reimbursement for multiple providers is bundled into a single, comprehensive payment that covers all of the services involved in the patient's care. The goal of the bundled payment approach is similar to that of the Institute of Healthcare Improvement's (IHI) "Triple Aim™" objectives of improving population health, boosting the patient care experience, and reducing cost. As with the five components identified by IHI to fulfill its triple aims, bundled payment aims to control cost, integrate the care delivery system, and restructure delivery of primary care.

Bundled payment is touted as a viable option to meet payers and providers goals because of the potential improvements it presents over the Medicare fee-for-service system of reimbursement and the capitation model of payment. Medicare's current diagnosis-related group (DRG) system of reimbursing providers can be considered a form of bundled payment involving only one provider type. Likewise, the capitation model of payment adopted by several managed care organizations is also a type of bundled payment. However, both of these payment approaches are on the extreme ends of the bundled payment spectrum. Under the DRG system, the insurer assumes full financial risk of the patient acquiring the condition and any treatment costs associated with that episode; under capitation, the provider assumes most of the financial risks. The spectrum of services included in the DRG payment is very limited, compared to capitation, which is broader in scope. The appeal of recent models of bundled payment is that they ensure that financial risks of treating a patient are shared by both the payer and the provider and allow for flexibility in defining the scope of the bundled payment (e.g.,

timeframe, services included, and other considerations). Bundled payment may cover a certain clinical episode or a defined time period (Pham et al. 2010). For example, a single payment under a bundled payment system might cover:

- Hospital and physician services for acute episodes such as hip replacement or cardiac catheterization
- Physician, hospital, and support services associated with the management of a patient's congestive heart failure for one year

If the costs of care during the episode or timeframe are less than the bundled payment amount, the providers keep the difference. Conversely, if costs exceed payment, providers absorb the loss. In some proposed models of bundled payment, such as the accountable care organizations (ACOs) framework, savings are shared by all entities involved. Bundled payment has been proposed to address some of the shortcomings of the current fee-for-service payment system, such as overuse of well-reimbursed services and fragmented, uncoordinated care delivery. Proponents of bundled payment believe that it will lead to more judicious use of health services and improved care quality.

Bundled Payment and Health Reform

The idea of bundled payment has been gaining traction for many years, and the recent health reform law includes a provision pertaining to bundling. The law calls for the establishment of a national pilot program on payment bundling for the Medicare program by 2013 and a Medicaid bundling demonstration program by 2012. The pilot, which will be administered by a new Center for Medicare and Medicaid Innovation (CMI), is a voluntary, five-year pilot program that will test bundle payments. Pilots may involve hospitals, including Long Term Care Hospitals and inpatient rehabilitation facilities, physician groups, and skilled nursing facilities and home health agencies for an episode of care that begins three days prior to a hospitalization and spans up to 30 days post-discharge.

The stated purpose of the program is to improve the coordination, quality, and efficiency of services around a hospitalization in connection with one or more of eight conditions to be selected by the Secretary of Health and Human Services. The health reform law holds a lot of promise for the expansion of bundled payment by authorizing the Secretary to expand the program after the pilot phase, based on performance. Expansion of previous federal bundled payment demonstrations has been curtailed by the congressional approval process. The law also eliminates the budget-neutrality requirement for the expansion of previous demonstration programs and hints at the possibility of aligning Medicare payment programs with private sector initiatives.

Evidence on the Impact of Bundled Payment

Evidence of the impact of bundled payment is limited but promising. To date, only a handful of models have been implemented, and they offer some insight into the feasibility and impact of bundled payment (Box 1). However, all of these programs are either narrow in scope or have been implemented in highly integrated systems with a broad array of services, such as large

hospitals or academic medical centers. Therefore, their design and results are not necessarily generalizable on a wide scale and to small, medium-sized, and rural hospitals. Also, as shown in the summary chart in the Appendix, the major bundled payment programs implemented do not address key gaps in the design of bundled payment. The chart summarizes the publicly-available published data on components of the programs such as, the conditions of focus, the providers and services involved in the bundled, strategy for holding providers accountable for care provided, timeframe for the bundled payment, organizational capabilities of the entity receiving the payment, and how payments were determined and adjusted.

Box 1 – Sample Bundled Payment Programs

Medicare's Participating Heart Bypass Center Demonstration: Under this demonstration, which ran from 1991 to 1996, seven hospitals received a single payment covering hospital and physician services for coronary artery bypass graft (CABG) surgery. The participating hospitals received a single payment and determined how they would share the amount with physicians. The payment rate was also updated based on the Medicare hospital prospective payment and physician fee schedule rates.

Medicare's Cataract Surgery Alternate Payment Demonstration: From 1993 to 1996, this demonstration project used a negotiated bundled payment option for all services routinely provided within an episode of outpatient cataract surgery, including physician and facility fees, intraocular lens costs, and the costs of selected pre- and postoperative tests and visits. Payment rates were determined by competitive bidding and were 2 to 5 percent lower than the non-demonstration payment rates.

Geisinger Health System's ProvenCare: Under this program, which began in 2006, payment is bundled for all non-emergency coronary artery bypass graft (CABG) procedures including the preoperative evaluation, all hospital and professional fees, and management of any complications (including readmissions) occurring within 90 days of the procedure.

Dr. Johnson and Ingham Medical Center: In 1987, an orthopedic surgeon partnered with a local hospital to offer a fixed price for knee and shoulder arthroscopic surgery, which included all related physician and hospital charges for surgery and any subsequent service for two years after surgery.

Medicare's Acute Care Episode Demonstration: Beginning in 2009, Medicare pays the five participants a flat fee to cover hospital and physician services for cardiac care (CABG, valves, defibrillators, pacemakers, etc.) and orthopedic care (hip and knee replacement). The participating sites have the discretion to reward clinicians and other hospital staff who meet certain quality and efficiency goals.

PROMETHEUS Payment, Inc.: With grants from the Commonwealth Fund and the Robert Wood Johnson Foundation, PROMETHEUS is developing a bundled payment system to cover a full episode of care for acute myocardial infarction, hip and knee replacements, CABG, coronary revascularization, bariatric surgery, and hernias. PROMETHEUS was implemented in three sites in 2009.

Fairview Health Services: Fairview Health Services in Minnesota is currently working with Target, 3M, and other large, self-insured employers to develop flat fee "care packages" around specific chronic conditions, such as diabetes and asthma. Employers and patients can use online tools to purchase a package that best fits their needs.

Blue Cross Blue Shield of Massachusetts (BCBSMA): The Alternative QUALITY Contract (AQC): In 2009, BCBSMA introduced the AQC to provider and hospital groups in Massachusetts. As of November, 2009, 20 percent of the BCBSMA provider network had signed on to the AQC. The AQC is a global payment system tied to nationally accepted measures of quality. The payment rate is set for all services and costs associated with a patient's care, is risk-adjusted for patients' health status, sex, and age, and is updated annually for inflation. The AQC is the most comprehensive bundled payment model to date because it covers all conditions that a BCBSMA member may present with, includes all services that the member may require across the continuum of care, and rates performance based on a detailed list of process, outcome, and patient experience measures. The contract also includes a pay for performance component where providers are eligible for an additional 10 percent of total payment if they meet certain quality benchmarks.

1. Bundled payment could potentially reduce spending on an episode of care, so payers, providers, and patients may benefit.

Cost reduction and quality improvement in the bundled payment system results from several factors such as provider adherence to guidelines (ProvenCare), elimination of waste and utilization reduction (Heart Bypass Center Demonstration), and physician-hospital alignment. However, it is still unclear which of these factors has the greatest impact on cost reduction and quality improvement. During the five-year Heart Bypass Center Demonstration, Medicare saved $42.3 million, or roughly 10 percent on CABG surgery at the seven participating hospitals, compared to expected spending. Eighty-six percent of the savings came from negotiated discount rates for patient services. The hospital negotiated rates applied to four physician specialties involved in bypass admission: surgeons, anesthesiologists, cardiologists, and radiologists, in addition to the allowable Medicare payment for consulting physicians. In addition to savings to Medicare, three of the four hospitals initially included in the demonstration experienced an average cost reduction of 2 to 23 percent by changing physician care practices and hospital processes (Bertko and Effros 2010). Specifically, the cost reductions were attributed to reduction in nursing intensive care unit hours, thus resulting in fewer nursing days per patient, reduced pharmacy cost from generic drug substitutions, and efficient use of the catheter lab. All four original hospitals included in the demonstration enjoyed profits. Beneficiaries saved $7.9 million in coinsurance payments (Cromwell et al. 1997).

The fixed price for CABG under Geisinger's ProvenCare was set at the cost of a typical hospitalization plus 50 percent of the average cost of post-acute care over 90 days. An evaluation of the program found that hospital costs dropped 5 percent (Casale et al. 2007). Average length of stay (LOS) for CABG fell by 0.5 days, and the 30-day readmission rate fell 44 percent over 18 months.

Medicare's cataract surgery demonstration was also successful in reducing Medicare spending by $500,000 for approximately 7,000 procedures.

Dr. Johnson and Ingham Medical Center's two-year project covering 111 patients also resulted in a lower price per case than in the comparable fee-for-service model. Profit margins for the surgeon and the hospital increased, and the payer (an HMO) saved more than $125,000 (Johnson and Becker 1994).

Empirical work conducted by researchers at RAND lends further support to the notion that bundled payment can reduce health care spending. They constructed a model to compare the potential cost-saving impact of twelve policy options (e.g., establishing medical homes, decreasing resource use at end of life, expanding value-based purchasing), and bundled payment was shown to have the greatest potential to reduce health spending (Hussey et al. 2009). As outlined by the Medicare Payment Advisory Commission (MedPAC 2008), savings will result from efficient use of physician and hospital resources during hospitalization and reduction in post-discharge complications and costs (MedPAC 2008).

2. Providers' readiness to participate in bundled payment programs varies.

Prior to the start of the Heart Bypass Center Demonstration, the Health Care Financing Administration mailed solicitations to 734 hospitals. Of those, 209 submitted pre-applications, suggesting that many hospitals can work with their medical staffs to develop a single price for the service (Cromwell et al. 1997). However, provider interest in the cataract surgery demonstration was lower. Only 3.7 percent of eligible providers indicated a willingness to participate (Abt Associates Inc. 1997). Based on the success of ProvenCare for CABG, Geisinger has expanded the model to develop similar programs for hip replacement, cataract surgery, and percutaneous coronary intervention (Paulus et al. 2008).

3. Bundled payment can spur quality improvement.

The change in payment under ProvenCare was coupled with a pay-for-performance system that included 40 best practice steps based on American Heart Association and American College of Cardiology guidelines. Initially, 59 percent of patients received all 40 best practices. Six months after the start of the program, 100 percent of patients received all best practices (Casale et al. 2007). ProvenCare is estimated to have reduced all complications by 21 percent, sternal infections by 25 percent, and readmissions by 44 percent, and decreased hospital length of stay by half a day (Steele et al. 2008).

Hospitals participating in the Medicare Participating Heart Bypass Center Demonstration reduced mortality in CABG patients included in the demonstration (Cromwell et al. 1997). Dr. Johnson and the Ingham Medical Center's orthopedic surgery project resulted in a decline in potentially avoidable complications and reoperations (Johnson and Becker 1994).

Key Issues for Consideration

Before widespread implementation can be achieved, a number of operational and design questions must be addressed. Several questions are listed in Box 2 below and followed by additional detail for each question.

Box 2 – Key Questions

1. To which conditions should bundled payments be applied?
2. What providers and services should be included in the bundled payment?
3. How can provider accountability be determined?
4. What should be the timeframe of a bundled payment?
5. What capabilities are needed for organizations to administer a bundled payment?
6. How should payments be set?
7. How should the bundled payment be risk-adjusted?
8. What data are needed to support bundled payment?

1. To which conditions should bundled payments be applied?

Historically, Medicare's bundled payment demonstrations have been applied to conditions with a defined timeframe from diagnosis to recovery such as CABG and cataract surgery. Also, bundled payments have been proposed for conditions requiring defined types of services such as end stage renal disease. Similarly, Geisinger initially applied their bundled payment system, ProvenCare, to CABG and then extended it to other conditions such as hip replacement, cataract surgery, and obesity surgery. The Commonwealth Fund recently recommended the development of bundled payments for both acute and chronic conditions. Therefore, the trigger for bundled payment could occur before or even in the absence of hospitalization.

The focus of the previous bundled payment models may suggest that some conditions are better suited for bundled payment than others. For example, isolated acute care episodes with a clear beginning and end will better facilitate the development of a flat payment for an episode (Miller 2008). Also, conditions should have well defined clinical definitions so that it is clear which patients are eligible for bundled payment. Conditions with established clinical guidelines will help with the development of benchmarks and goals for providers. Feasibility may also be enhanced for episodes of care that have little variation in utilization and cost (Pham et al. 2010). For example, the care needed by patients with chronic heart failure is highly variable. The progression of the condition may, to a large extent, be outside the control of providers, and the service needs are often unpredictable.

Previous bundled payment models offer little insight into how bundled payments can be scaled up to include more conditions without being mired in administrative complexities. Lessons from the BCBSMA AQC could be instructive on how bundled payments can be structured for a wide variety of conditions and at the same time minimize the administrative burden for both providers and payers.

2. What providers and services should be included in the bundled payment?

Past demonstration and pilot projects have centered on bundling payments for services provided by the hospital and physicians. For example, previous projects have often focused on surgical procedures (e.g., CABG or cataract surgery) where the largest expenditure for the payer is often concentrated in the acute care hospital and includes hospital-based physician services. As bundled payment is proposed for other medical, chronic, or long-term conditions, it will necessitate that other providers be included in the bundled payment, including but not limited to: primary care physicians, home health, nursing home, long-term acute care, rehabilitation, and other providers across the full continuum of care. Within the hospital setting, there may be an opportunity to link ancillary services such as laboratory work, emergency services, and other diagnostic services to the bundled payment. The engagement of multiple service providers will present an opportunity for optimal financial management. Establishing linkages between different types of providers and providers from different organizations will be a challenge. Similarly, determining actual payments to the physician and non-physician components of care within the bundle will also be challenging as the limited models of bundled payment do not present a precedent for future application.

The information available from previous applications of bundled payment might indicate that the broader the scope of providers and services included in the bundle, the more opportunities there are for cost savings and quality improvement. For example, some of the sites in the Medicare Participating Heart Bypass Center reduced spending by generic substitution, in addition to other practice changes. The BCBSMA AQC could offer some insight on the range of providers and services along the continuum of care that should be included in a bundled payment.

3. How can provider accountability be determined?

A related consideration is how to attribute provider responsibility for care in an episode. For example, most hip fracture episodes involve four or more care settings, and it may be challenging to determine the extent to which each provider is responsible for the outcomes of an episode (Hussey et al. 2009). This is an important question because bundled payment provides incentives for providers to reduce unnecessary utilization. One potential unintended consequence is that necessary care may also be reduced.

Assignment of responsibility for quality and payment purposes is easier for some conditions than others. For example, it is easier to determine the relative involvement of hospitals and post-acute care facilities, specialists, and other physicians for a hip replacement than a heart attack because hip replacements have more predictable care assignments (Pham et al. 2010). The orthopedic surgeon and hospital could be assigned primary accountability for the patient. For other conditions, it will be difficult to assign clear responsibility to a small number of providers to keep payment and quality control issues simple and transparent.

Unfortunately, the data on bundled payment provide limited guidance on how provider accountability for care was enforced in their models. For example, the sites included in Medicare's Participating Heart Bypass Center were at liberty to allocate the bundled payment between participating providers reduced as they deemed necessary. Medicare's Acute Care Episode Demonstration allows participating sites to reward clinicians and other hospital staff

who meet certain quality benchmarks. Another possible approach for fostering provider accountability is to allocate the bundled payment based on the share of what providers' fees would have been, thereby holding each provider accountable for delivering efficient care and controlling their costs.

4. What should be the timeframe of a bundled payment?

Available literature provides several examples of different durations for bundled payments. For example, in determining the financial risk impact of bundled payment on hospitals, researchers used 60 day post-discharge as the post-acute period to define the duration of the bundle (Welch 1998). The Commonwealth Fund proposal favors bundling payment for services provided from the time of admission through 90 days post-hospitalization (The Commonwealth Fund 2007). The president's proposed budget for 2010 suggests bundling payment for hospitalization and post-acute care that occurs within 30 days after hospitalization (Office of Management and Budget [OMB] 2008).

Geisinger's ProvenCare bundled payment for hospitalization and the 90-day period following CABG surgery. However, none of the literature presents evidence in support of any defined post-acute timeframe. It is important to note that the duration of the bundle will determine the types and amount of services included in the bundle. An appropriate post-acute timeframe should also allow patients enough time to fully recover from a condition. This is an especially important consideration for bundling payments for chronic conditions that often span a patient's lifetime. In an analysis of Medicare data, one study found that many patient episodes are captured within 30 days. However, for a sizeable minority of patients, a 30-day episode would not capture their multiple visits and hospital days for their complex health condition needs (Avalere 2010).

5. What capabilities are needed for organizations to collect and administer a bundled payment?

Bundling payments for episodes of care presents the administrative challenge of identifying the appropriate entity to collect and dispense income from the bundle as well as oversee the efficient delivery of care within the episode. This entity would need to have the administrative capacity to act as a third-party administrator in some respect and determine what patients' continuing care needs may be and how much each provider should be reimbursed for care. Acute care facilities, ACOs, and other organizations have been proposed as the appropriate entities to receive bundled payments on behalf of all providers and facilities involved in an episode of care.

In order to successfully undertake the function of care coordination, the entity would have to effectively work with hospitals, physicians, and other care providers to hold them accountable for high quality and efficient care delivery. Currently, few organizations have the infrastructure and influence to undertake this function. Additionally, the entity would need information technology systems to track and manage processes, especially if it is receiving bundled payments from multiple payers and there is no uniform definition or consensus on what is included in the bundle. Regardless of the reimbursement structure for bundled payments, it will

have to ensure that all care facilities and providers involved in an episode of care have equal bargaining power in the arrangement.

In most of the models of bundled payment implemented to date, such as PROMETHEUS, Geisinger's ProvenCare, and Medicare's Participating Heart Bypass Center program, the hospital or hospital system received the bundled payment and determined how to allocate the money among physicians and other providers. Sites in the Medicare's Participating Heart Bypass Center program expressed billing and collection challenges, especially at the onset of the program while they determined internal procedures and acquired appropriate technology. An important takeaway for future expansion of bundled payment is that the participating sites in Medicare's Participating Heart Bypass Center program would have liked to have been reimbursed for the initial investment.

6. How should bundled payments be set?

Once assignment of responsibility for patient care is established and the appropriate entity for payment is identified, another challenge is setting the appropriate payment amount. If a bundled payment program includes only a small number of episode types or a small number of providers, payers could negotiate payment amounts (Pham et al. 2010), which is what Medicare has done (and continues to do) under its demonstration programs. However, there are several other ways in which payers may set bundled payment rates. For example, payment rates could be based on historical costs (e.g., average fee-for-service cost minus five percent) or standard of care guidelines (i.e., the estimated costs assuming providers delivered only recommended care).

The PROMETHEUS payment model uses evidence-based case rates that are based on resources required to provide care under well-established clinical guidelines. Geisinger's ProvenCare rates were negotiated and based on historical cost and reimbursement data. The rate for CABG assumed that readmission and complication rates would be cut in half as providers followed evidence-based care guidelines. Regardless of the method used, payers will also have to periodically revisit and update payment rates over time as more data on program outcomes become available. BCBSMA's AQC will be updated annually for inflation, and Medicare's Participating Heart Bypass Center program was updated based on the existing inpatient prospective payment and physician fee schedule rules.

7. How should the bundled payment be risk-adjusted?

Bundling payments for care received in the acute and post-acute care settings needs to factor adequate case-mix adjustment for the severity of illness of different patient populations. This will ensure that providers will not turn away the sickest patients for fear of being liable for more expensive treatments (RAND COMPARE). Also, social determinants such as language, socioeconomic status, and availability of social support should factor in risk-adjusted bundled payment, since they could influence patient health outcomes. Finally, to ensure that the bundling payment approach does not pose additional financial risk to providers and facilities, the payments would have to closely match the combined costs of acute and post-acute care (Welch 1998).

The bundled payment approach that provides a clear direction for risk-adjustment is BCBSMA's AQC. The global payments made to providers are risk adjusted for the age, sex, and health status of the patients. Other models may have alternative or additional ways to risk-adjust payment; however, that information is not readily available in the literature. Insurers commonly cite 100,000 as the appropriate patient population size to adequately diversify risks. It will be important to analyze if such thresholds should apply for risk-adjusting bundled payment.

8. What data are needed to support bundled payment?

Most current studies on bundled payment use episode groupers (software packages that search medical claims and records to identify whether patients meet the criteria of an episode, when the episode began and ended, and the services received) (Pham et al. 2010). However, in order for the groupers to be effective, data must contain accurate information on patient diagnoses and co-morbidities; dates, types, and cost of services; and patient and provider identifiers. Although many of these data are currently available, there is often limited detail because the data collection systems were designed for fee-for-service payment approaches. Electronic medical records may permit more comprehensive data collection.

Conclusion

While the concept of bundled payment is appealing, implementation is complex. It is telling that so few bundled payment programs have been established over the past 20 years. However, current political support for bundled payment coupled with the growing evidence base may lead to more experimentation with bundled payment in the near future. Further advancement of bundled payment will depend on the will of payers and providers to collaborate in a new way and to address several challenging operational issues.

Key References

Proposals

1. Senate Finance Committee (2009) *Description of Policy Options: Transforming the Health Care Delivery System: Proposals to Improve Patient Care and Reduce Health Care Costs*. Retrieved from: http://finance.senate.gov/sitepages/leg/LEG%202009/042809%20Health%20Care%20Description%20of%20Policy%20Option.pdf

Summary: This proposal advocates for a bundled payment to be made for acute services and post-acute services occurring or initiated within 30 days of discharge from a hospital. This approach would involve a three-phase implementation, separated by two years. In phase one, bundled payments would be applied to the top 20 percent of post-acute spending; in phase two, bundled payments would be applied to the next 30 percent of post-acute spending; and in phase three, bundled payments would be applied to the last 50 percent of post-acute spending. Bundled payments will total inpatient MS-DRG amount plus post-acute care costs for the same MS-DRG and will be paid to an established legal entity, including a hospital.

2. Office of Management and Budget (2009) *A New Era of Responsibility: Renewing America's Promise*. Retrieved from: http://www.whitehouse.gov/omb/assets/fy2010_new_era/a_new_era_of_responsibility2.pdf

Summary: The president's budget proposes bundled payments as an approach to reducing preventable rehospitalizations. The bundled payments will cover hospitalizations as well as post-acute care 30 days after the hospitalization. Additionally, hospitals with a high rate of readmissions within the 30-day period will be paid less.

3. Guterman, S., Davis, K., Schoen, C., and Stremikis, K. (2009) *Reforming Provider Payment: Essential Building Block for Health Reform*. (Fund Publication # 1248). Retrieved from the Commonwealth Fund: http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2009/Mar/1248_Guterman_reforming_provider_payment_essential_building_block_FINAL.pdf

Summary: This proposal suggests a global fee for hospitalization and a "specified set of services for 30 days following discharge." This approach would be phased in starting in 2010; the first stage would involve bundled payment for hospital costs associated with initial hospitalization and any readmissions that occur within 30 days of discharge and follow up care for the patient. The second stage would involve bundled payments for acute and post-acute care, and the final stage would involve a bundled payment for acute care, physician services, post-acute care, and emergency room care.

4. MedPAC (2008) A path to bundled payment around a hospitalization. In *Report to Congress: Reforming the Delivery System* (pp. 83-103). Retrieved from: http://www.medpac.gov/documents/Jun08_EntireReport.pdf

Summary: MedPAC proposes a bundled payment for services rendered by a single entity, defined as a hospital and its affiliated physicians. The payment will cover costs associated with an episode of hospitalization. The commission recommends a phased-in approach: in phase one, hospitals and physicians will be confidentially informed of their utilization patterns for hospitalization episodes. In the second phase, occurring two years after the first, the confidential information will be made publicly available. In phase three, the bundled payment system will be implemented. The commission also recommends that Medicare reduces payment to hospitals with high readmission rates.

5. Miller, H. D. (2008) From Concept to Reality: Implementing Fundamental Reforms in Health Care Payment Systems to Support Value-Driven Health Care. *Issues for Discussion and Resolution at the 2008 NRHI Healthcare Payment Reform Summit.* Retrieved from: http://www.nrhi.org/downloads/2008NRHIPaymentReformSummitFramingPaper.pdf

Summary: This framing paper prepared for the 2008 Network for Regional Healthcare Improvement (NHRI) Summit on Healthcare Payment Reform describes key issues and options for advancing payment reform in the U.S. The paper proposes episode-of-care payments as a middle ground between fee-for-service and capitation model of payment. One of the issues covered by the framing paper is the type of provider structures needed for bundled payments. According to the author, an integrated delivery system (IDS) is well-positioned to be such an entity. Outside of an IDS, a special organizational entity that includes a physician group and a hospital could also receive the bundled payment on behalf of all providers involved in an episode of care.

6. Congressional Budget Office (2008) *Budget Options Volume 1: Health Care*. Retrieved from: http://www.cbo.gov/ftpdocs/99xx/doc9925/12-18-HealthOptions.pdf

Summary: This proposal advocates for bundled payments for acute and post-acute care provided in both the hospital and non-hospital setting within 30 days of patient discharge. The bundled payment rate would be equal to the amount paid for the MS-DRG plus post-acute cost associated with that MS-DRG. According to the proposal, hospitals would have a greater involvement in the patient's post-discharge care and would probably reduce post-acute care under this payment approach. An alternative approach proposed by the CBO is bundling payment for hospital and physician services.

7. The Commonwealth Fund (2007) *Bending the Curve: Options for Achieving Savings and Improving Value in U.S. Health Spending*. Retrieved from : http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2007/Dec/Bending%20the%20Curve%20%20Options%20for%20Achieving%20Savings%20and%20Improving%20Value%20in%20U%20S%20%20Health%20Spending/Schoen_bendingthecurve_1080%20pdf.pdf

Summary: The Commonwealth Fund Commission on a High Performance Health System proposes bundling payments for hospitalizations for acute-care episodes. Under this approach, Medicare would bundle payments for all inpatient, physician, and related services provided from the time of admission within 90 days post-hospitalization. The approach would also be applied to healthy and chronically ill patients in the outpatient setting.

Evaluation of Demonstration Projects

8. Paulus, R. A., Davis, K., and Steele, G. D. (2008) Continuous Innovation in Health Care: Implications of the Geisinger Experience. *Health Affairs*, 27:1235-1245.

Summary: Geisinger created the ProvenCare model for coronary artery bypass graft (CABG). As part of the model, the organization established best practices across the episode of care and developed a risk-based price for care, which included hospital costs and subsequent readmissions. Through ProvenCare, Geisinger was able to increase the percentage of CABG patients receiving recommended care, as measured by the forty measures, to 100 percent.

9. Cromwell, J., Dayhoff, D. A., McCall, N. T., Subramanian, S., Freitas, R. C., and Hart, R. J. (1998) Medicare Participating Heart Bypass Center Demonstration: Final Report. *Health Economic Research, Inc*.

Summary: In 1988, the Health Care Financing Administration negotiated contracts with four hospitals to pay them bundled payments for heart bypass with or without catheterization. The demonstration project lasted from 1991 through 1996, including a two year extension. The evaluation found that the demonstration saved Medicare $42.3 million on bypass patients and saved beneficiaries $7.9 million in Part B coinsurance payments. Participating hospitals also saved on treating bypass patients. Some of the cost savings were a result of generic drug substitutions reported by pharmacists. The range of hospital savings was between $1.7million and $15 million. Patients discharged from participating hospitals also had on average, an 8 percent decline in mortality rates. The evaluators also noted that patients received appropriate care at participating hospitals.

Other Published Literature

10. Mechanic, R. and Altman S. (2010) Medicare's Opportunity to Encourage Innovation in Health Care Delivery. *The New England Journal of Medicine*, 362(9): 772-774.

Summary: The authors of the article evaluate the newly-mandated Center for Medicare and Medicaid Innovation (CMI) and how the entity will facilitate the implementation of key health delivery models. First, the CMI is authorized to run pilot programs rather than demonstration projects, which can be hampered from widespread dissemination by congressional approval. The CMI would also have the authority to decide on which proposals to pursue and can choose to expand pilots that are not budget neutral. The CMI would play an essential role in health care payment reform, especially in the piloting and implementation of new payment approaches.

11. Pham, H. H., Ginsburg, P. B., Lake, T. K., and Maxfield, M. M. (2010) Episode-Based Payments: Charting a Course for Health Care Payment Reform. National Institute for Health Care Reform, Policy Analysis No. 1.

Summary: The authors discuss key design issues related to implementing an episode-based payment system, including defining episodes of care, establishing payment rates, identifying

providers to receive payments, compatibility with other proposed reforms, and staging implementation.

12. Bertko, J. and Effros, R. (2010) Analysis of Bundled Payment. RAND Health COMPARE. Accessed at: http://www.randcompare.org/analysis-of-options/analysis-of-bundled-payment.

Summary: The authors measure bundled payment against nine performance dimensions: spending, waste, patient experience, coverage, operational feasibility, consumer financial risk, reliability, health, and capacity. Their information is drawn heavily from results of the Medicare Participating Heart Bypass Center Demonstration and Geisinger's ProvenCare.

13. Ahlstrom, A., Cafarella, N., Dietz, K., and Tumlinson, A. (2010) Piloting Bundled Medicare Payments for Hospital and Post-Hospital Care: A Study of Two Conditions Raises Key Policy Design Considerations. Avalere Health, LLC. Accessed at: http://www.avalerehealth.net/research/docs/20100317_Bundling_Paper.pdf

Summary: Avalere analyzed Medicare claims from 2006 and 2007 for patients with Major Joint Replacement and Chronic Obstructive Pulmonary Disease. The data analysis demonstrated that a 30-day bundle length would capture nearly all of the care provided to joint replacement and COPD patients during an initial hospitalization, first post-hospitalization encounter and any subsequent rehospitalization. However, for a more complex definition of a bundle (defined as all hospital and post-hospital care until there is a break in care) only 79 percent of episodes and 41.5 percent of patient days are completed by the 30th day.

14. Blue Cross Blue Shield of Massachusetts (2010) Blue Cross Blue Shield of Massachusetts: The Alternative QUALITY Contract. Retrieved from: http://www.qualityaffordability.com/pdf/alternative-quality-contract.pdf

Summary: This article describes the voluntary global payment system introduced by Blue Cross Blue Shield of Massachusetts for its provider network. The Alternative Quality Contract (AQC) is a bundled payment that has been risk-adjusted for patients' age, sex, and health status and is updated annually for inflation. The system is also tied to performance incentives, which allows providers to receive additional 10 percent reimbursement for meeting a set of ambulatory and hospital measures. The new payment contract ties in with BCBSMA's strategy of "improving the quality and affordability of health care for members, providers, and employers."

15. Hussey, P. S., Sorbero, M. E., Mehrotra, A., Liu, H., and Demberg, C. L. (2009) Episode-Based Performance Measurement and Payment: Making it a Reality. *Health Affairs*, 17(5):1406-1417.

Summary: Using Medicare data, the authors constructed episodes of care using two grouper tools in order to illustrate key design issues associated with defining episodes and attributing accountability to providers. They suggest several areas for future research and demonstration programs that would help move episode-based payment approaches from concept to reality.

16. Hackbarth, G., Reischauer, R., and Mutti, A. (2008) Collective Accountability for Medical Care: Toward Bundled Medicare Payments. *The New England Journal of Medicine*, 359:1.

Summary: Two of the authors on this report are on the Medicare Payment Advisory Commission (MedPAC). The article provides further commentary on MedPAC's recommendation for bundling payments. According to the authors, to ensure "joint accountability for both the volume and the costs of services, payment for physician services as well as hospital and other post-acute services" must be included in a bundle. The authors however highlight that before this payment approach can be implemented, several questions need to be answered, such as whether hospitals and physicians will be able to collaborate and form an entity that can accept and divide a bundled payment.

17. Davis, K. (2007) Paying for Care Episodes and Care Coordination. *The New England Journal of Medicine*, 356:1166-1168.

Summary: In this article, Karen Davis advocates for instituting a global fee for care episodes as a way to reduce variation in payments for acute episodes or for care for patients with chronic conditions. The global fee would cover hospital services, physician services, and other services required for treating acute conditions. A major issue identified by the paper in designing such a system would be how to appropriately assign accountability for care across different settings over time. The author cautions that given the fragmentation of the health system and lack of continuity in patient-physician relations, new payment policies such as bundling payments should be extensively evaluated before being implemented.

18. Kulesher, R. R. and Wilder, M. G. (2006) Prospective Payment and the Provision of Post-Acute Care: How the Provisions of the Balanced Budget Act of 1997 Altered Utilization Patterns for Medicare Providers. *Journal of Health Care Finance*, 33:1-16.

Summary: This study assesses the preliminary impact of extending the prospective payment system to skilled nursing facilities and home health agencies on hospitals, nursing homes, and home health agencies in the mid-Atlantic region and specifically, in Delaware. "In Delaware, hospital-owned nursing homes reduced their Medicare utilization, and proprietary facilities increased their utilization. One-third of the HHAs in Delaware withdrew from Medicare participation."

19. Bryant, L. L., Floersch, N., Richard, A. A. and Schlenker, R. E. (2004) Measuring Healthcare Outcomes to Improve Quality of Care Across Post-Acute Care Provider Settings. *Abstract, Journal of Nursing Care Quality*, 19:368-376.

Summary: This abstract describes a study that reviews existing data sets used in the post-acute setting and examines efforts to create measures for post-acute care and provides future direction for research. The author of the article argues that in order to effectively measure the impact of care on clinical outcomes, "a valid, reliable manner that allows for comparisons to reference or benchmarking data" needs to be developed.

20. Budetti, P. P., Shortell, S. M., Waters, T. M., Alexander, J. A., Burns, L. R., Gilles, R. R., and Zuckerman, H. (2002) Physician and Health System Integration. *Health Affairs*, 21:203-210.

Summary: The primary conclusion of this study is that physicians and health systems are not well-aligned. The authors arrived at this conclusion after studying 14 organized delivery systems and their 11,000 physicians in 69 medical groups and found that health systems paid inadequate attention to issues of importance to physicians.

21. Cotterill, P. G. and Gage, B. J. (2002) Overview: Medicare Post-Acute Care Since the Balanced Budget Act of 1997. *Health Care Financing Review.*

Summary: The authors of this article state that post-acute care providers have historically been highly responsive to payment reform as evidenced by shifts in care settings with the implementation of the SNF and HHA prospective payment system (PPS). The authors further caution that future research would need to focus on "potentially substitutable settings" in response to payment reform in the post-acute setting.

22. Coleman, E. A., Krammer, A. M., Johnson, M., Eilertsen, T. B., and Holthaus, D. (1999) Quality Measurement in Post-Acute Care: The Need for a Unique Set of Measures. *Abstract Book, Association of Health Services Researchers Meeting*, 16:78. Retrieved from: http://gateway.nlm.nih.gov/MeetingAbstracts/ma?f=102194450.html.

Summary: According to the authors of this abstract, quality measurement in the post-acute setting has traditionally built on measures in the long-term care setting. However, since post-acute care has shifted from long-term care to acute care, there is now a need to develop a new set of unique measures for post-acute care that span different care settings. The new measures also need to take into consideration the increasing severity and complexity of conditions treated in the post-acute care setting.

23. Welch, P. (1998) Bundled Medicare Payment for Acute and Postacute Care. *Health Affairs*, 17:6.

Summary: The author of this study sought to determine whether bundling payments for acute and post-acute care will result in additional financial risk for hospitals. He points out that "a key issue is how well bundled payments would match the combined costs of acute and post-acute care." Using Medicare's National Claims History Files from 1994 and 1995, the author calculated each hospital's margin under a bundled payment and under the existing system of reimbursement. He found that the standard deviation (financial risk) for episode of care costs were about the same for acute care. However, including post-acute care in the bundle could increase the financial risk to the typical hospital. The author also highlighted some of the other methodological challenges with the bundled payment system, such as unintended consequences, who should receive the payment, its feasibility in rural areas, and how to deal with competition among providers.

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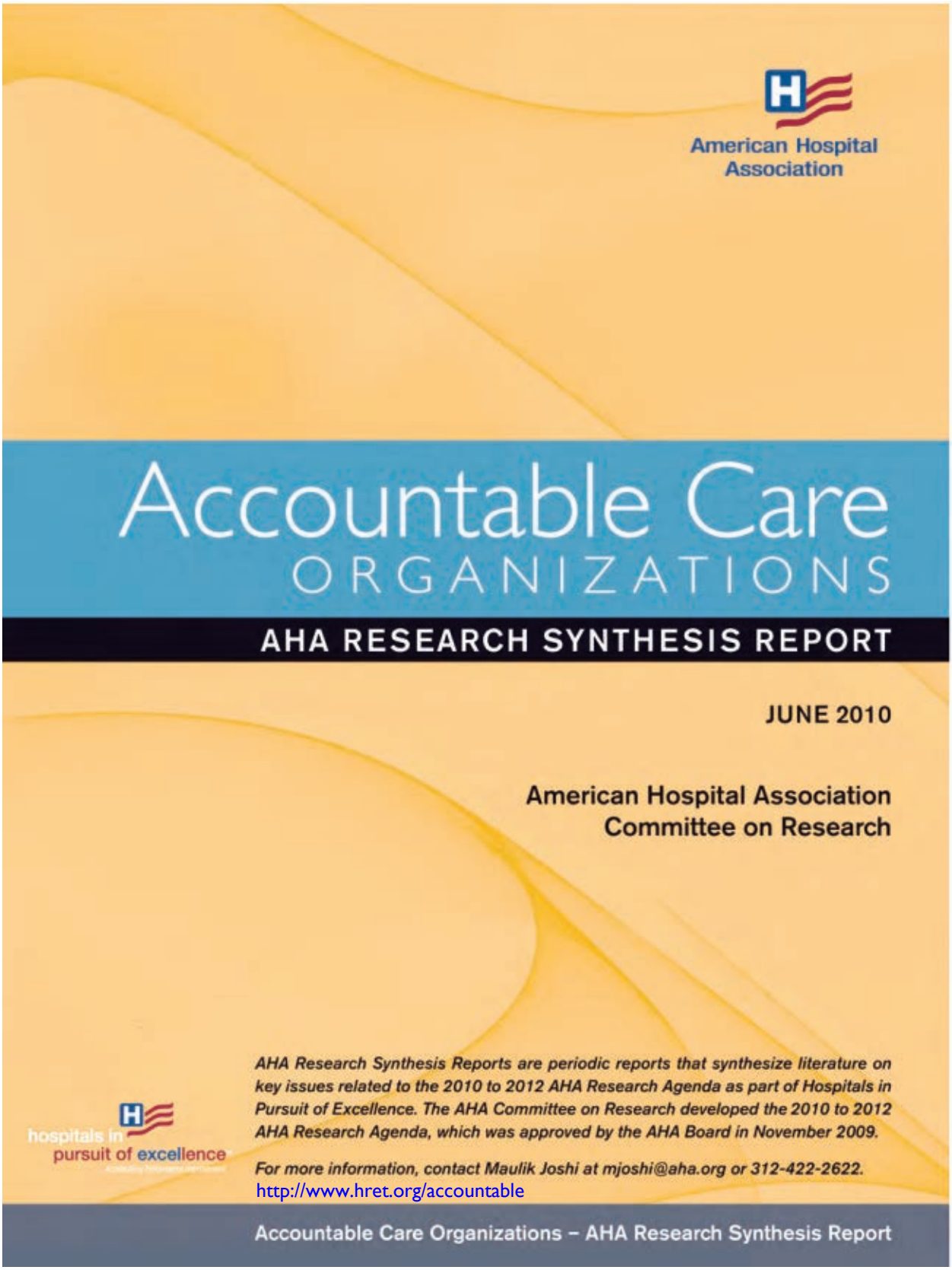
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Accountable Care Organizations – AHA Research Synthesis Report

Accountable Care Organizations – AHA Research Synthesis Report
Executive Summary

Introduction

This AHA Research Synthesis Report presents an overview of Accountable Care Organizations (ACOs), including a discussion on the potential impact of ACOs, key questions to consider in developing an ACO, and a review of the key competencies needed to be an effective ACO. This report focuses on the overall concept of ACO yet highlights the specifics of the ACO model proposed in health reform legislation.

What are ACOs?

The term Accountable Care Organization (ACO) describes the development of partnerships between hospitals and physicians to coordinate and deliver efficient care (Fisher, 2006). The ACO concept envisions multiple providers assuming joint accountability for improving health care quality and slowing the growth of health care costs. The concept was also included in national health care reform legislation as one of several demonstration programs to be administered by Medicare (Patient Protection and Affordable Care Act, 2010). However, ACOs described in health reform legislation are operationally different from other ACO models. The role of ACOs in integrating and aligning provider incentives in care delivery requires participating organizations to posses certain key competencies, as identified in the literature:

	Key Literature on ACOs					
Required Organizational Competencies for ACOs	Health Reform (2010)	Shortell/ Casalino (2010)	McClellan/ Fisher (2010)	Miller (2009)	Fisher/ McClellan (2009)	MedPAC (2009)
1. Leadership	x	x	N/A	x	N/A	N/A
2. Organizational culture of teamwork	N/A	x	N/A	x	N/A	x
3. Relationships with other providers	x	x	x	x	x	x
4. IT infrastructure for population management and care coordination	x	x	x	x	x	x
5. Infrastructure for monitoring, managing, and reporting quality	x	x	x	x	x	x
6. Ability to manage financial risk	N/A	x	x	x	x	x
7. Ability to receive and distribute payments or savings	x	x	x	x	x	x
8. Resources for patient education and support	x	x	N/A	x	N/A	N/A

Information on the impact of ACOs is limited and points to key questions that still need to be answered as both the federal and private sectors prepare for widespread implementation of the model.

Key Questions to Consider

The following are key questions to consider in the development and implementation of ACOs.

1. What are the key competencies required of ACOs?
2. How will ACOs address physician barriers to integration?
3. What are the legal and regulatory barriers to effective ACO implementation?
4. How can ACOs maintain patient satisfaction and engagement?
5. How will quality benchmarks be established?
6. How will savings be shared among ACOs?

Introduction

Under the charge of the AHA Committee on Research, the AHA Research Synthesis Reports seek to answer parts of the AHA's top research questions. This AHA Research Synthesis Report addresses the following question from the AHA Research Agenda:

What is the role of the hospital in a new community environment that provides more efficient and effective health care (e.g., what are the redesigned structures and models, the role and implementation of accountable care organizations, the structures and processes needed to implement new payment models such as bundled payments, and how do organizations transition to this new role)?

This report is the second in the series and presents an overview of Accountable Care Organizations (ACOs), including a discussion regarding the potential impact of ACOs, key questions to consider in developing an ACO, and a specific review of the key competencies needed to be an effective ACO.

What are Accountable Care Organizations?

The term Accountable Care Organization (ACO) was formalized by Dr. Elliott Fisher in a 2006 *Health Affairs* article to describe the development of partnerships between hospitals and physicians to coordinate and deliver efficient care (Fisher, 2006). The ACO concept, which had been in existence before the Elliot Fisher article, seeks to remove existing barriers to improving the value of care, including a payment system that rewards the volume and intensity of provided services instead of quality and cost performance and widely held assumptions that more medical care is equivalent to higher quality care (Fisher et al., 2009).

The ACO concept envisions the development of legal agreements between hospitals, primary care providers, specialists, and other providers to align the incentives of these providers to improve health care quality and slow the growth of health care costs. ACOs would reach these goals by promoting more efficient use of treatments, care settings, and providers (Miller, 2009).

The success of the ACO model in fostering clinical excellence and continual improvement while effectively managing costs hinges on its ability to incentivize hospitals, physicians, post-acute care facilities, and other providers involved to form linkages that facilitate coordination of care delivery throughout different settings and collection and analysis of data on costs and outcomes (Nelson, 2009). This predicates that the ACO will need to have organizational capacity to establish an administrative body to manage patient care, ensure high quality care, receive and distribute payments to the entity, and manage financial risks incurred by the entity.

The ACO model was included in national health care reform legislation as one of several demonstration programs to be administered by the Centers for Medicare and Medicaid Services (CMS), along with bundled payment and other key care delivery approaches. ACOs participating in the CMS program would assume accountability for improving the quality and cost of care for a defined patient population of Medicare beneficiaries. As proposed, ACOs would receive part of any savings generated from care coordination as long as benchmarks for the quality of care are also maintained. Health care reform provides a definition for the ACO model included in the demonstration programs. However, many details have yet to be defined.

Many experts believe ACOs in general will include certain core characteristics, including the participation of a diverse group of providers—including primary care physicians, specialists, and a hospital—and the ability to administer payments, determine benchmarks, measure performance indicators, and distribute shared savings (Deloitte, 2010). However, they could vary in their structure and payment model. For example, the ACO program proposed in health reform legislation limits provider exposure to financial risks, as it does not deviate from the current fee-for-service payment system and includes no payment penalties. On the other hand, ACOs that are being paid a fixed price are responsible for financial gain or loss.

This report focuses on the overall concept of the ACO and will attempt to highlight specifics of the ACO model proposed in health reform legislation where differences appear in existing literature.

Distinguishing Between ACOs and Earlier Care Delivery Initiatives

Health maintenance organizations (HMOs) and patient-centered medical homes (PCMHs) share commonalities with the ACO concept as large-scale attempts to improve health care delivery and payment. Even though the ACO model builds upon these previous attempts at health care delivery reform, there are variations between the ACO model and HMOs and PCMHs.

ACOs and PCMHs

The PCMH model, which emphasizes strengthening and empowering primary care to coordinate care for patients across the continuum of care, can be viewed as being complementary to the ACO model (Devers and Berenson, 2009). Both models promote the utilization of enhanced resources—including electronic health records, patient registries, and increased patient education—to achieve the goal of improved care (Miller, 2009). However, unlike the ACO model, the PCMH does not offer explicit incentives for providers to work collaboratively to reduce costs and improve quality. Also, the PCMH model calls specifically for primary care providers to take responsibility for coordinating care, which could prove challenging if these providers do not have resources or established relationships with other providers to undertake these tasks.

The ACO model is expected to address some of the limitations in the PCMH model. For instance, the ACO model fosters accountability for care and costs by offering a joint payment to all providers involved in the provision of care. Also, the ACO model does not specify any type of provider to take the role as administrator of the ACO, but rather, offers characteristics for the types of organizations/providers that could assume the role of administrator. Also, unlike the PCMH model, a variety of payment models have been proposed for the ACO model, ranging from traditional fee-for-service payment to full capitation. Despite these key differences in the PCMH and ACO models, it is important to note that, far from being competing models, the PCMH structure could aid providers in taking on the additional accountability and administrative activities necessary to become an ACO.

ACOs and HMOs

The key difference between the ACO concept and HMOs lies in the payment structure and level of provider risk involved. While HMOs have typically been arranged around capitation, ACOs

recognize variation in regional health care markets and the ability of providers to accept new payment models (Devers and Berenson, 2009). One proposed payment approach for public and private-sector ACO programs is the "shared savings" approach, used in the Brookings-Dartmouth and Medicare ACO program, where providers receive regular fee-for-service payment but qualify to share in any savings resulting from cost reduction and meeting predetermined performance and/or utilization targets. Other payment methods proposed in current literature for ACOs include a bundled payment, negotiated by the providers and payers, for an episode of care or capitation, similar to HMOs. It is important to note that the type of payment approach adopted is closely related to the level of financial risk that the providers are expected to assume. The primary criticism of the HMO model is that by making cost reduction its primary goal it sometimes sacrificed the quality of care. Providers participating in HMOs have also complained about the inadequate payment rates and high level of financial risk involved in the HMO model. Policymakers believe the ACO model incorporates some of these lessons learned from the HMO model.

ACOs and Health Care Reform

The Patient Protection and Affordable Care Act calls for the creation of an ACO program administered by CMS by January 1, 2012. Qualifying providers, including hospitals, physician group practices, networks of individual practices, and partnerships between hospitals and other health care professionals will be eligible to form ACOs. ACOs will "be willing to become accountable for the quality, cost, and overall care of the Medicare fee-for-service beneficiaries assigned to it" and will also be expected to meet specific organizational and quality performance standards—which are still to be determined by CMS—in order to be eligible to receive payments for shared savings. The legislation does not provide specifics on how ACOs will be held financially accountable, as they will not be subject to financial risks in the form of payment penalties if they do not achieve their savings targets (CMS, 2010). Some of the additional stipulations for ACOs include:

- ACOs must have a formal legal structure to receive and distribute shared savings to participating providers.
- Each ACO must employ enough primary care professionals to treat their beneficiary population (minimum of 5,000 beneficiaries) as deemed sufficient by CMS.
- Each ACO must agree to at least three years of participation in the program.
- Each ACO will have to develop sufficient information about their participating health care professionals to support beneficiary assignment and for the determination of payments for shared savings.
- ACOs will be expected to include a leadership and management structure that includes clinical and administrative systems.
- Each ACO will be expected to have defined processes to promote evidence-based medicine, report on quality and cost measures, and coordinate care.
- ACOs will also be required to produce reports demonstrating the adoption of patient-centered care.

CMS expects to release additional information about the ACO program this fall in a Notice of Proposed Rulemaking (CMS, 2010).

Potential Impacts of ACOs

Given the recent emergence of ACOs, providers considering participation in the CMS program do not have a long history of research on practicing ACOs to review. A limited amount of research exists on payment and delivery initiatives similar to ACOs that have been tested since as early as 1998 (shown in Box 1). These models include a combination of federal, regional, state, and local initiatives. These efforts offer some evidence on the potential impact of ACOs to reduce costs, improve coordination, and better align incentives of providers, payers, and patients. These efforts also share some of the critical characteristics of the ACO concept, including care coordination, evidence-based practice, and the sharing of savings based on improvements in quality and reductions in cost.

Box 1 – Precursors of ACOs

Community Care of North Carolina

Since 1998, the state of North Carolina has operated Community Care of North Carolina, an enhanced medical home supported by the state's Medicaid program. The program builds community health networks organized collaboratively by hospitals, physicians, health departments, and social service organizations to manage care. Each enrollee is assigned to a specific primary care provider, while network case managers work with physicians and hospitals to identify and manage care for high-cost patients. A study by the University of North Carolina found that the program saved roughly $3.3 million in the treatment of asthma patients and $2.1 million in the treatment of diabetes patients between 2000 and 2002, while reducing hospitalizations for both patient groups. In 2006, the program saved the state roughly $150 to $170 million (Kaiser Commission, 2009).

Physician Group Practice Demonstration

In 2005, Medicare developed the Physician Group Practice Demonstration, a group of ten provider organizations and physician networks to test shared savings. Providers are incentivized to coordinate care delivered to Medicare patients. Physician groups receive cost and quality performance payments if they achieve Medicare savings of more than two percent and additional bonuses beyond the two percent threshold. Performance payments are designed to reward both cost efficiency and performance on 32 quality measures phased in through the life of the demonstration. Through year three of the program, all ten participating sites achieved success on most quality measures, and five collectively received over $25 million in bonuses as a share of $32 million in Medicare cost reductions (McClellan et al., 2010).

Pathways to Health, Battle Creek, Michigan

In 2006 Integrated Health Partners participated in a chronic disease initiative with Blue Cross Blue Shield of Michigan (BCBSM). The initiative was later restructured into Pathways to Health, a framework that includes several local health care stakeholders such as insurers, consumers, and employers interested in reducing hospitalization and improving chronic care delivery in their area. Pathways to Health features key ACO concepts such as a patient-centered medical home, value-based purchasing, and community buy-in. The collaborative is currently developing a new payment structure and improving its patient data collection efforts. BCBSM reports that hospitalizations for conditions that can be prevented via better ambulatory care have dropped 40 percent over the three-year life of the program (Simmons, 2009).

Even though the models in Box 1 include some characteristics of ACOs and could provide some insight in the impact of ACOs, federal and private sector ACO programs (Box 2) that are currently underway or planned for the future could provide better lessons for providers and payers interested in participating in ACOs.

Box 2 – Sample ACO Pilots

Brookings/Dartmouth Accountable Care Collaborative
The Brookings Institution and the Dartmouth Institute for Health Policy are currently collaborating on the development of an ACO model focusing on local accountability, shared savings, and enhanced performance measurement. Roanoke, Virginia-based Carilion Clinic, a multi-specialty group practice with more than 500 physicians and seven hospitals, has been selected by the Brookings/Dartmouth collaborative as a pilot site for ACO adoption, along with Norton Health System in Louisville and Tucson Medical Center in Arizona.

Baylor Health System
Dallas-based Baylor Health System, a 13-hospital system with 4,500 physicians, is currently developing an ACO model with a bundled payment system to control costs and improve care coordination. Baylor is directly marketing the ACO concept to employers, offering lower costs in exchange for participation in specific health insurance plans (Deloitte, 2010).

Robert Wood Johnson Foundation Medical School
A pilot ACO program at Robert Wood Johnson Foundation Medical School in New Jersey will engage 100-500 physicians, several specialties, and six hospitals (Deloitte, 2010). The ACO's payment structure is still to be determined, but system leaders envision that the effort will link up the Robert Wood Johnson Medical Group—the state's largest multi-specialty network—with the 30 to 40 percent of primary care practices that have existing relationships with the school (Nelson, 2009).

Premier ACO Collaboratives
In May 2010, the Premier health care alliance announced plans to launch a two-track system for its member hospitals to participate in an ACO. The first effort, the ACO Implementation Collaborative, will consist of members who already possess the critical characteristics and relationships needed for successful ACO participation. The second effort, the ACO Readiness Collaborative, is designed to prepare hospitals by helping them to develop the skills and operational capacity necessary to implement in the future. To date, 70 hospitals and 5,000 physicians in 15 states have signed up for the two collaboratives.

Key Questions to Consider

Hospitals and other providers interested in participating in private sector and CMS ACO programs need to consider their preparedness in the face of the limited information available and identify steps to undertake to facilitate participation in the emerging ACO programs. To aid hospitals, physician groups, and other organizations in making this assessment, we identify the following key questions in Box 3 that still need to be addressed and attempt to answer them with information available from the literature.

Box 3 – Key Questions on ACOs

1. What are the key competencies required of ACOs?
2. How will ACOs address physician barriers to integration?
3. What are the legal and regulatory barriers to effective ACO implementation?
4. How can ACOs maintain patient satisfaction and engagement?
5. How will quality benchmarks be established?
6. How will savings be shared among ACOs?

1. What are the key competencies required of ACOs?

In order to qualify for the CMS program, participating ACOs will have to formalize a management structure to coordinate operations between participating providers and create a system for distributing shared payment. In general, the tasks and goals of ACOs will require both the ACO administrator and participating providers to possess certain core competencies. The competencies outlined in Table 1 below are identified in recent key literature on ACOs.

Table 1: Required competencies for ACOs as determined by key ACO literature

Required Organizational Competencies for ACOs	Key Literature on ACOs					
	Health Reform (2010)	Shortell/ Casalino (2010)	McClellan/ Fisher (2010)	Miller (2009)	Fisher/ McClellan (2009)	MedPAC (2009)
1. Leadership	x	x	N/A	x	N/A	N/A
2. Organizational culture of teamwork	N/A	x	N/A	x	N/A	x
3. Relationships with other providers	x	x	x	x	x	x
4. IT infrastructure for population management and care coordination	x	x	x	x	x	x
5. Infrastructure for monitoring, managing, and reporting quality	x	x	x	x	x	x
6. Ability to manage financial risk	N/A	x	x	x	x	x
7. Ability to receive and distribute payments or savings	x	x	x	x	x	x
8. Resources for patient education and support	x	x	N/A	x	N/A	N/A

Legend:

- N/A – indicates that the authors do not explicitly discuss the competency in their literature.
- X – Even though the indicated authors discuss the key competencies, there may be differences in how they perceive the importance and application of the competencies in ACOs.

The structure of some care delivery organizations, such as Integrated Delivery Systems (IDSs) may facilitate the formation of an ACO because they may already possess the competencies identified in the literature. IDSs typically already assume some accountability for cost and quality, and often possess the population health data needed to effectively administer an ACO

(Miller, 2009). IDSs with high-functioning leadership structures to handle the legal and clinical requirements of the ACO model may be best prepared to qualify for an ACO at present (Hastings, 2009). Other care delivery organizations such as Multispecialty Group Practice (MSGP), Physician-Hospital Organization (PHO) and Independent Physician Association (IPA) may possess a partial list of the competencies and need to work on developing others. However, free-standing hospitals, post-acute care providers such as skilled nursing facilities (SNFs), inpatient rehabilitation facilities (IRFs), and long-term care hospitals (LTCHs), and small physician practices, can also position themselves to successfully participate in an ACO with appropriate technical assistance and/or practice redesign.

In addition to the core competencies identified in the literature above, there are other important competencies cited by thought leaders that could help organizations participating in an ACO acclimate to the novel care delivery and payment structure:

- ***Spread*** – ability to aggressively identify and disseminate best practices that promote efficiency of care delivery, improved quality of care, and reduced cost within an organization. This competency is important both at the individual institution level as well as the ACO level.
- ***Reach*** – established linkages between ACOs (or participating organizations) and public health/community resources in their catchment area to facilitate the transition of patients from the care delivery setting back into the community.
- ***Regional Health Information Exchange*** – participation in a multi-stakeholder health information exchange to share health care information with the goal of improving health and care in the community.

2. How will ACOs address physician barriers to integration?

Overcoming physician attitudes favoring autonomy and individual accountability over coordination will pose a major challenge to hospitals pursuing an ACO model, especially if they do not currently enjoy strong affiliations with physician groups who have admitting privileges (Fisher et al., 2006). Physician groups who are already part of integrated health systems may have an early edge in comparison to independent practice associations preparing to join an ACO. Physician groups will also have to be convinced that a strong business case exists for ACO development, and some groups may resist capitation and potential penalties for physicians related to quality performance, as have been proposed for some ACO models (Deloitte, 2010).

Other challenges may include deciding on the appropriate reimbursement model that is attractive to physicians and that falls within the existing legal requirements. Organizations participating in an ACO will also need to navigate differences in what they consider to be the appropriate use of potential shared savings. While hospitals may choose to use savings to offset any expenditures related to the ACO implementation or decrease in revenue stream resulting from reduction in volume, primary care physicians may choose to use the savings to pay for care management and information technology infrastructure (Miller, 2009).

3. What are the legal and regulatory barriers to effective ACO implementation?

The actualization of the ACO concept will prove challenging in the current legal environment. Sharing financial incentives across providers and incentivizing the use of evidence-based protocols can place participating providers at risk of violating federal laws that govern physician

self-referral for Medicare patients and laws that protect patients and federal health care programs from fraud and abuse.

Hospitals preparing to join both federal and private-sector ACO programs may need to assess and potentially revise their existing contracts with other providers also taking part in the ACO. Implementing the ACO concept, which may require hospitals and physicians and other providers to accept one payment for all services and share financial incentives, could be in violation of previous interpretations of the Anti-Kickback Statute and Civil Monetary Penalty Law (Fader, 2010). Uncertainty about the antitrust consequences will deter precompetitive, innovative arrangements. Nonprofit hospitals would need to determine whether their involvement with participating, for-profit physician practices as part of an ACO complies with IRS guidelines for nonprofit institutions (Fader, 2010).

The health care reform bill does not create safe harbors or exceptions that address the operation of ACOs under current laws. However, the bill does permit the Secretary of Health and Human Services (HHS) to waive the requirements of the Anti-kickback, Stark, and Civil Monetary Penalty laws as necessary to administer ACOs (Bass, Berry, and Sims, 2010).

4. How can ACOs maintain patient satisfaction and engagement?

Medicare beneficiaries participating in the ACO program may not necessarily be aware of their assignment within an ACO and will be able to continue to choose their providers, including those who are not participating in their assigned ACO (CMS, 2010). However, adequate patient education will still be necessary to ensure that patients do not regard the ACO model unfavorably. Patients will need to understand how ACOs will impact the care they receive in the form of better quality, efficient care, and improved health outcomes resulting from coordinated care.

Since health outcomes are largely dependent on patients' participation in care, providers will need to actively engage consumers in the care that they receive and ensure that patients have a basic understanding of health care costs and the importance of efficient care delivery (Miller, 2009). Lastly, ACOs could maintain accountability to patients by measuring and reporting on patients' experience of care, in addition to reporting on costs and health outcomes (Miller, 2009).

5. How will quality benchmarks be established?

A critical component of the administration of ACOs that has not been determined in federal health reform and other key literature pertains to the quality benchmarks to which providers will be held accountable. Health reform legislation leaves the final decision of measure selection for ACOs to federal health officials, and the available literature does not provide guidance on how to choose appropriate measures.

As the CMS program and other private ACO initiatives are established, it is important to ensure that the quality benchmarks established and how they are interpreted and reported are standardized nationwide. The measures will also have to be applicable to different care providers and span care settings to accommodate the set of providers included in an ACO.

Lastly, the benchmarks will need to include a combination of process, outcome, and patient experience measures in order to accurately evaluate all aspects of care provided.

6. How will savings be shared among ACOs?

Payment reform is an important component of ACOs, since it is the main vehicle for holding providers accountable for the quality and cost of care that they provide. Experts have proposed several payment approaches for ACOs, which correlate with the level of risk that providers are expected to assume. Shortell and Casalino propose a three-tiered approach for risk-reward payment. In the first tier, which involves no risk, providers will receive shared savings and bonuses for meeting defined quality measures and staying under the expected costs of delivering care to patients. In the second tier, providers will receive shared savings for managing costs and hitting quality benchmarks, and will be liable for care that exceeds spending targets. In the third tier, providers assume greater risk and are paid through full or partial capitation. They could also qualify for substantial bonuses for meeting quality and patient experience targets (Shortell and Casalino, 2010).

The proposed payment model in health reform is a combination of the first and second tier of the Shortell/Casalino model. However, the specifics of it are yet to be defined by federal health officials. The model of payment for any ACO, as well as associated bonuses and penalties, will have to be substantial enough to generate change in the way care is delivered.

Conclusions

While some parallels exist between ACOs and existing efforts to coordinate care and integrate provider activities, substantial gaps exist in how an ACO will be structured and the impact that it will actually have on care delivery, quality, and costs. The early consensus emerging from ACO researchers appears to be that the model shows some promise as a driver of both quality improvement and cost control via care coordination (Devers and Berenson, 2009).

Hospitals and health systems considering ACO participation should assess their capabilities in several key core competencies that will likely be necessary for successful ACO implementation, including IT infrastructure, resources for patient education, team-building capabilities, strong relationships with physicians and other providers, and the ability to monitor and report quality data. Providers should be prepared to make major investments in these areas where necessary (Shortell and Casalino, 2010). ACOs whose members already possess many of these characteristics are expected to be most successful at implementation in the short run (Deloitte, 2010). However, even providers who already possess key organizational, technical and clinical competencies may find that adjusting to an ACO will still require the sustained development and strengthening of those capacities in order to be successful (Devers and Berenson, 2010).

Appendix – Medicare ACO Q & A Document

Medicare "Accountable Care Organizations"
Shared Savings Program – New Section 1899 of Title XVIII

Preliminary Questions & Answers

CMS/Office of Legislation

The Affordable Care Act (ACA) improves the health care delivery system through incentives to enhance quality, improve beneficiary outcomes and increase value of care. One of these key delivery system reforms is the encouragement of Accountable Care Organizations (ACOs). ACOs facilitate coordination and cooperation among providers to improve the quality of care for Medicare beneficiaries and reduce unnecessary costs. This document provides an overview of ACOs and the Medicare Shared Savings Program.

Q: What is an "Accountable Care Organization"?

A: An Accountable Care Organization, also called an "ACO" for short, is an organization of health care providers that agrees to be accountable for the quality, cost, and overall care of Medicare beneficiaries who are enrolled in the traditional fee-for-service program who are assigned to it.

For ACO purposes, "assigned" means those beneficiaries for whom the professionals in the ACO provide the bulk of primary care services. Assignment will be invisible to the beneficiary, and will not affect their guaranteed benefits or choice of doctor. A beneficiary may continue to seek services from the physicians and other providers of their choice, whether or not the physician or provider is a part of an ACO.

Q: What forms of organizations may become an ACO?

A: The statute specifies the following:

1) Physicians and other professionals in group practices
2) Physicians and other professionals in networks of practices
3) Partnerships or joint venture arrangements between hospitals and physicians/ professionals
4) Hospitals employing physicians/professionals
5) Other forms that the Secretary of Health and Human Services may determine appropriate.

Q: What are the types of requirements that such an organization will have to meet to participate?

A: The statute specifies the following:

1) Have a formal legal structure to receive and distribute shared savings
2) Have a sufficient number of primary care professionals for the number of assigned beneficiaries (to be 5,000 at a minimum)
3) Agree to participate in the program for not less than a 3-year period
4) Have sufficient information regarding participating ACO health care professionals as the Secretary determines necessary to support beneficiary assignment and for the determination of payments for shared savings.

5) Have a leadership and management structure that includes clinical and administrative systems
6) Have defined processes to (a) promote evidenced-based medicine, (b) report the necessary data to evaluate quality and cost measures (this could incorporate requirements of other programs, such as the Physician Quality Reporting Initiative (PQRI), Electronic Prescribing (eRx), and Electronic Health Records (EHR), and (c) coordinate care
7) Demonstrate it meets patient-centeredness criteria, as determined by the Secretary.

Additional details will be included in a Notice of Proposed Rulemaking that CMS expects to publish this fall.

Q: How would such an organization qualify for shared savings?

A: For each 12-month period, participating ACOs that meet specified quality performance standards will be eligible to receive a share (a percentage, and any limits to be determined by the Secretary) of any savings if the actual per capita expenditures of their assigned Medicare beneficiaries are a sufficient percentage below their specified benchmark amount. The benchmark for each ACO will be based on the most recent available three years of per-beneficiary expenditures for Parts A and B services for Medicare fee-for-service beneficiaries assigned to the ACO. The benchmark for each ACO will be adjusted for beneficiary characteristics and other factors determined appropriate by the Secretary, and updated by the projected absolute amount of growth in national per capita expenditures for Part A and B.

Q: What are the quality performance standards?

A: While the specifics will be determined by the HHS Secretary and will be promulgated with the program's regulations, they will include measures in such categories as clinical processes and outcomes of care, patient experience, and utilization (amounts and rates) of services.

Q: Will beneficiaries that receive services from a health care professional or provider that is a part of an ACO be required to receive all his/her services from the ACO?

A: No. Medicare beneficiaries will continue to be able to choose their health care professionals and other providers.

Q: Will participating ACOs be subject to payment penalties if their savings targets are not achieved?

A: No. An ACO will share in savings if program criteria are met but will not incur a payment penalty if savings targets are not achieved.

Q: When will this program begin?

A: We plan to establish the program by January 1, 2012. Agreements will begin for performance periods, to be at least three years, on or after that date.

Source: https://www.cms.gov/OfficeofLegislation/Downloads/AccountableCareOrganization.pdf

Key References

Proposals:

1. Fisher, E.S., Staiger, D.O., Bynum, J. and Gottlieb, D.J. (2006) Creating Accountable Care Organizations: The Extended Hospital Medical Staff. *Health Affairs* (26: w44-w57).

Summary: The article introduces the concept of accountable care organizations and explores the concept of the ~~-~~extended hospital medical staff," defined as a hospital-associated multi-specialty group practice tightly aligned to a specific hospital through direct or indirect referrals. The article assesses a group of hospitals and their extended medical staffs on their performance with heart attacks, colon cancer, and hip fractures, finding that hospitals and extended medical staffs who performed high on quality measures tended to have tighter affiliations with each other. The authors conclude that the extended medical staff model can bolster performance measurement, foster local accountability for capacity decisions, and improve quality and lower costs. The article also outlines some of the barriers to change, including the fee-for service payment system, the cultural importance U.S. physicians traditionally place on autonomy and the difficulty less tightly aligned hospitals and physician groups will have in adjusting to a new model.
http://content.healthaffairs.org/cgi/content/abstract/26/1/w44

2. Fisher, E., McClellan, M., Bertko, J., Lieberman, S., Lee, J., Lewis, J. and Skinner, J. (2009) Fostering Accountable Health Care: Moving Forward in Medicare. *Health Affairs (Web exclusive).*

Summary: The authors survey the variation in health care costs and outcomes in the United States, and propose the ACO model as part of a major realignment of payment incentives to support providers in improving care. The article advocates for increased accountability for providers to improve quality and manage costs, a shift away from practices that reward providers based on the volume and intensity of services and the use of transparent, meaningful performance measures to evaluate results. The article calls for ACOs to create formal legal structures, assume responsibility for a defined population of Medicare beneficiaries, and participate in public reporting of performance measures. In exchange, ACOs would receive shared savings for meeting quality standards while keeping costs below defined benchmarks.
http://content.healthaffairs.org/cgi/reprint/28/2/w219

3. Shortell, S. and Casalino, L. (2010) Implementing Qualifications Criteria and Technical Assistance for Accountable Care Organizations. *Journal of the American Medical Association*, 303 (17): 1747-1748.

Summary: The authors suggest a three-tiered system of ACO qualification, with each level representing graduated levels of assumed risk and payment incentives. In this model, Level I ACOs would assume no financial risk but would be eligible for shared savings for meeting quality and spending targets. Level II ACOs would receive greater proportions of shared savings but would assume some risk for not meeting agreed-upon targets. Level III ACOs would be

paid through full or partial capitation. The article also explores the implementation hurdles that prospective ACOs must pass, including practice redesign, process improvement, EHR implementation and leadership development.

4. Miller, H. (2009) How to Create Accountable Care Organizations. *Center for Healthcare Quality and Payment Reform*.

Summary: This comprehensive assessment surveys the potential of the ACO model for improving quality and controlling costs, and examines the ways ACOs will impact primary care physicians, hospitals and consumers. The article notes several potential areas of improvement for hospitals participating in ACOs, including improved efficiency of patient care, the use of less costly treatment avenues, reductions in health care-acquired conditions and reductions in preventable admissions. The author concludes that ACOs will not adhere to a single formula, and asserts that while long-term improvements are possible, providers should prepare both organizationally and financially for an extended transition period.
http://www.chqpr.org/downloads/HowtoCreateAccountableCareOrganizations.pdf

5. MedPAC (2009) *Report to the Congress: Improving Incentives in the Medicare Program.* Chapter 2.

Summary: The report explores different potential models for ACOs administered by CMS, including a voluntary program with bonuses for meeting quality and spending targets and a mandatory model with physicians assigned to hospitals based on Medicare claims. The article concludes that ACOs could slowly incentivize change, emphasizing the importance ACOs will need to place on coordination, system thinking and constant refinement.
http://www.medpac.gov/chapters/Jun09_Ch02.pdf

6. Devers, K. and Berenson, R. (2009) Can Accountable Care Organizations Improve the Value of Health Care by Solving the Cost and Quality Quandaries? *Robert Wood Johnson Foundation.*

Summary: The authors survey the potential of ACOs for managing patients' continuum of care across different institutional settings, better allocation of resources and serving as a framework for improved performance measurement of patient populations. The article concludes that ACOs have the potential to improve quality and reduce costs, but will require years of practice and refinement to reach those goals.
http://www.rwjf.org/qualityequality/product.jsp?id=50609

Evaluation of demonstration projects:

7. Simmons, J. (2010) The Medical Home as Community Effort. *Health Leaders.* (April 2010, pp. 50-51).

Summary: The author looks at the three-year-old Pathways to Health collaborative in Battle Creek, Michigan, an effort that brought together Integrated Health Partners, Battle Creek Health

System and local health plans to create a framework including a patient-centered medical home, value-based purchasing and community buy-in. The article focuses on the development of the ACO, as providers, consumers and health plans met and ultimately formed a leadership team. The article details efforts to retain accurate patient data and implement Plan-Do-Study-Act ideals, while creating a new bundled payment structure. So far, Blue Cross Blue Shield of Michigan reports that hospitalizations ~~f~~for those conditions that better ambulatory care can prevent" have dropped forty percent.
http://www.healthleadersmedia.com/content/MAG-249300/Quality-The-Medical-Home-as-Community-Effort

8. Kaiser Commission on Medicaid and the Uninsured. (2009) *Community Care of North Carolina: Putting Health Reform Ideas into Practice in Medicaid.*

Summary: This article assesses North Carolina's Community Care of North Carolina program, an enhanced medical home model operated by the state's Medicaid program. The program relies on nonprofit community networks of hospitals, physicians, health departments and social service organizations to manage care, and notes that the program saved roughly $3.3 million in the treatment of asthma patients and $2.1 million in the treatment of diabetes patients between 2000 and 2002, while reducing hospitalizations for both patient groups. In 2006, the program saved the state roughly $150 to $170 million. The article concludes that the practices developed by CCNC show promise as tools to implement health reform national and provide ~~c~~coordinated, cost effective care to low-income individuals with significant health needs."
http://www.kff.org/medicaid/upload/7899.pdf

9. Nelson, Bryn. (2009) Quality over Quantity. *The Hospitalist.*

Summary: The article considers the role integrated systems have played in inspiring ACOs, and surveys a handful of ACO pilots, including Carilion Clinic in Virginia and Robert Wood Johnson Medical School in New Jersey. The article explores possible ACO frameworks, noting that successful models will include the key concepts of local accountability, shared savings and enhanced performance measurements.
http://www.the-hospitalist.org/details/article/477391/Quality_over_Quantity.html

Other Published Literature

10. CMS Office of Legislation (2010) *Medicare Accountable Care Organizations Shared Savings Program: Preliminary Questions And Answers.*

Summary: The document provides an overview of the ACO Shared Savings Program as established in the 2010 Patient Protection and Affordable Care Act, and explores some of the questions emerging from providers regarding ACO participation, including eligibility for shared savings, quality performance standards and the release of future information from CMS concerning the ACO program.

https://www.cms.gov/OfficeofLegislation/Downloads/AccountableCareOrganization.pdf

11. McClellan, M., McKethan, A.N, Lewis, J.L., Roski, J., and Fisher, E.S. (2010) A National Strategy to Put Accountable Care Into Practice. *Health Affairs.* (29, No. 5: 982-990).

Summary: The authors analyze ACOs in the context of recent health care reform legislation, suggesting that ACOs should have flexibility in terms of design but should broadly be provider-led organizations centered on primary care, with payments linked to quality improvement and cost reduction, and increasingly sophisticated performance measurement. The article discusses the structures of a variety of potential payment models, including partial capitation models integrating flat payments with bonuses and penalties related to performance and cost benchmarks, and "symmetric" payment models that offer providers proportionately larger bonuses as they assume greater accountability for costs. The authors conclude that ACOs may have a modest impact on the transformation of payment models in the short-term, but have the potential to drive clinical and financial transformation in the long run.
http://content.healthaffairs.org/cgi/content/abstract/29/5/982

12. Davis, G. and Rich, J. (2010) Health Care Reform: ACOs and Developments in Coordinated Care Delivery, Shared Savings and Bundled Payments. *McDermott Newsletters*.

Summary: The authors compare ACOs to Physician Hospital Organizations (PHOs), arguing that while PHOs were organized mainly to facilitate managed care contracting, while ACOs aim to better coordinate care as a means to both improve quality and control costs. The article also notes some of the key elements of an effective ACO—including medical homes, networks of specialists, care integration and reimbursement models that reward cost-effective high-value-care, and summarizes the provisions of recent health care reform legislation related to ACOs and bundled payment.
http://www.mwe.com/index.cfm/fuseaction/publications.nldetail/object_id/6699b22c-127a-4cf0-a80b-bab7a75767de.cfm

13. Burke, T. and Rosenbaum, S. (2010) Accountable Care Organizations: Implications for Antitrust Policy. *Robert Wood Johnson Foundation*.

Summary: The authors detail the relationship between ACOs and federal antitrust policy. Specifically, the article outlines the emphasis the judiciary system has placed on clinical and financial integration as a prerequisite to joint efforts between providers, and notes that arrangements that do not meet financial integration standards are susceptible to violating antitrust statute. The article summarizes several recent antitrust cases brought by the Federal Trade Commission in the context of clinical integration, with examples of both sustained partnerships and those rejected by the legal system. The article concludes that taken together, the decisions support the enforcement agencies' position that in order to justify anti-competitive practices, partnerships between providers must demonstrate collective effort to improve quality and control costs beyond what would have been achieved independently.
http://www.rwjf.org/qualityequality/product.jsp?id=57509

14. Fader, Henry C. (2010) Are Accountable Care Organizations in Your Vocabulary? *Pepper Hamilton, LLP.*

Summary: The author details the legal framework for structuring an ACO, arguing that the entity will require a separate administrative staff that is separate from both the hospital and

physicians. That staff would be charged with monitoring and providing care both within the hospital and outside the hospital. The article also emphasizes the importance of clinicians in an ACO model, and assesses the hurdles ACOs will have to overcome to comply with antitrust and anti-kickback statutes.
http://www.pepperlaw.com/publications_update.aspx?ArticleKey=1757

15. Deloitte. (2010) *Accountable Care Organizations: A New Model for Sustainable Innovation.*

Summary: The article outlines the promise of the ACO model for improving care delivery, summarizing the structural guidelines of ACOs included in recent health reform legislation and discussing emerging ACO pilots in Massachusetts, Vermont and Colorado. The article argues that the degree of integration within current physician models may be a predictor of early success in creating an ACO. The authors assert that successful ACOs will be defined by strong leadership, governance and operational clinical management capabilities, and outlines the challenges of physician buy-in, consumer response, the structure of payments and managing risk before concluding that ACOs will need to carefully structure provider relationships, accept that results may be slow in materializing and commit themselves to continual improvement as clinical conditions change over time.
http://www.deloitte.com/view/en_US/us/Industries/US-federal-government/center-for-health-solutions/research/bc087956da618210VgnVCM100000ba42f00aRCRD.htm

16. Hastings, D.A. (2009) Accountable care organizations and bundled payments in Health Reform. *Health Law Reporter.*

Summary: The author surveys the landscape of proposed health reform legislation, and notes several legal challenges to ACO development, including the revision of contracts between providers participating in ACOs, compliance with anti-kickback and antitrust statutes, new compliance responsibilities related to adherence to ACO regulations and public reporting, the increased responsibilities of leadership and board management and the integration of bundled payments with ACOs. The article concludes that ACOs and bundled payments both show promise as drivers of health care quality improvement.
http://www.ebglaw.com/files/37716_BNA%20Article%20-%20Accountable%20Care%20Organizations%20and%20Bundled%20Payments%20in%20Health%20Reform.pdf

17. Bass, Berry, and Sims (2010) *The ABCs of ACOs.*

Summary: The article analyzes the legal requirements and hurdles providers will face as they prepare for ACO implementation. Specifically, the article explores ACO compliance with the Anti-Kickback Statute, the Stark Law, antitrust laws and the Civil Monetary Penalty Law, noting that while health care reform legislation did not create safe harbors or exceptions to these statutes in connection to the development of ACOs, the Secretary of HHS has been authorized to waive requirements of these statutes as necessary.
http://www.bassberry.com/files/Publication/f55dbab0-b844-4a1f-bf0a-0e34ebab8d7d/Presentation/PublicationAttachment/a98eb254-ce4f-48f3-924b-0e91896128f7/HealthReformImpact29April2010.pdf

American Hospital Association

Patient-Centered MEDICAL HOME

AHA RESEARCH SYNTHESIS REPORT

SEPTEMBER 2010

American Hospital Association
Committee on Research

hospitals in pursuit of excellence
Accelerating Performance Improvement and Implementing Health Reform

AHA Research Synthesis Reports are periodic reports that synthesize literature on key issues related to the 2010 to 2012 AHA Research Agenda as part of Hospitals in Pursuit of Excellence. The AHA Committee on Research developed the 2010 to 2012 AHA Research Agenda, which was approved by the AHA Board in November 2009.

http://www.hret.org/patient-centered

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Executive Summary

Introduction

This synthesis report presents an overview of the Patient-Centered Medical Home (PCMH), including key features, discussion of federal, state, and private sector medical home models, and considerations for hospitals interested in developing a PCMH.

What is a Patient-Centered Medical Home?

The medical home concept, which was originally developed in the 1960s, refers to the provision of comprehensive primary care services that facilitates communication and shared decision-making between the patient, his/her primary care providers, other providers, and the patient's family. The PCMH concept was included as a program in national health care reform legislation with components similar to joint principles developed by the American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP), American College of Physicians (ACP), and the American Osteopathic Association (AOA):

- *Personal physician* – Each patient has an ongoing relationship with a personal physician trained to provide first contact, continuous, and comprehensive care.
- *Physician directed medical practice* – The personal physician leads a team of individuals at the practice level who collectively take responsibility for the ongoing care of patients.
- *Whole person orientation* – The personal physician is responsible for providing for all the patient's health care needs or taking responsibility for appropriately arranging care with other professionals.
- *Care is coordinated and/or integrated* across all elements of the complex health care system (e.g., subspecialty care, hospitals, home health agencies, nursing homes) and the patient's community.
- *Quality and safety* are hallmarks of the medical home, supporting the attainment of optimal, patient-centered outcomes.
- *Enhanced access* to care is available through systems such as open scheduling, expanded hours, and new options for communication between patients, their personal physician, and practice staff.
- *Payment* appropriately recognizes the added value provided to patients who have a PCMH.

The specific role of hospitals in a PCMH

The definition and structure of most PCMH initiatives do not include a unique role for hospitals. However hospitals can participate in the PCMH model in a supportive, complementary role to primary care practices, in the following ways:

- *Convene physicians*
- *Offer capital and IT infrastructure*
- *Offer staff resources and other functionalities*
- *Serve as a catalyst and offer management expertise*
- *Serve as an administrator of bundled payment*

Hospitals looking to participate in a PCMH can get started with the following recommended steps:

- *Assess current organizational capabilities and resources*
- *Identify opportunities in the community for partnership*

Conclusion

The PCMH model offers significant promise as a method of both improving the patient experience and reducing cost. Hospitals face the challenge of not having a defined role in the PCMH model. Still, researchers believe that hospitals will begin a migration to embrace the PCMH model in coming years as a natural extension of clinical IT investments and increasing care coordination (Deloitte, 2008).

Introduction

The AHA Committee on Research develops the *AHA Research Synthesis Reports* to explore answers to AHA's top research questions. This report addresses the following question from the AHA Research Agenda:

What is the role of the hospital in a new community environment that provides more efficient and effective health care (e.g., what are the redesigned structures and models, the role and implementation of the patient-centered medical home, the structures and processes needed to implement new payment models such as bundled payments, and how do organizations transition to this new role)?

This report is the third in the series of synthesis reports, and presents an overview of the Patient-Centered Medical Home (PCMH), including key design features, discussion of federal, state, and private sector medical home models, and considerations for hospitals interested in developing a PCMH.

Overview of the Patient-Centered Medical Home

The medical home concept, which was originally developed in the 1960s, generally refers to the provision of comprehensive primary care services that facilitates communication and shared decision-making between the patient, his/her primary care providers, other providers, and the patient's family. This patient-centric care model is led by the personal physician who provides continuous and coordinated care for the patient across the care team. Over the past few years, there have been more than 100 medical home initiatives aimed at more effectively supporting both primary care and chronic disease management (Fields et al., 2010; Fisher, 2008).

In 2007, the American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, and the American Osteopathic Association developed joint principles for the PCMH model.[1] These principles informed the NCQA's Physician Practice Connections® - Patient-Centered Medical Home™ (PPC-PCMH) standards. The PPC-PCMH program includes nine PPC standards, including 10 ~~-m~~ust pass" elements, such as adopting and implementing evidence-based guidelines, tracking referrals with paper-based or electronic systems, and measuring clinical performance.[2] Provider organizations can apply for one of three PCMH recognition levels – basic, intermediate, and advanced. The Accreditation Association for Ambulatory Health Care (AAAHC) also offers PCMH accreditation. Most of the PCMH

AAFP, AAP, ACP, AOA Joint Principles for PCMH:

- Personal physician
- Physician directed medical practice
- Whole person orientation
- Care is coordinated and/or integrated
- Quality and safety improvement,
- Enhanced access
- Payment

[1] Further information on the joint principles is included in the Appendix.
[2] Further information on the PPC-PCMH standards is included in the Appendix

principles identified by AAFP, AAP, ACP, and the AOA as well as the AAAHC measures are based on tools and processes that translate into higher quality care (Friedberg et al., 2009). Researchers continue to explore and develop a systematic evidence base that informs the specific capabilities and processes that are central to the PCMH's effectiveness and efficiency.

Opportunities and Challenges

The PCMH model leverages many of the benefits of primary care, such as access to care, established patient-physician relationships, and comprehensiveness of care to improve patient care. Approximately 65 million Americans live in officially designated primary care shortage areas, and a recent survey found that only 27 percent of U.S. adults can easily reach their primary care physician by telephone, obtain after-hours care or advice and schedule timely office visits (Health Affairs/Robert Wood Johnson Foundation 2010). The PCMH model places emphasis on managing the health of patients and increasing access to health care. This may include going beyond the walls of the physician's office, conducting outreach to patients who need health care services, and networking in meaningful ways with community partners and providers. Researchers believe that transforming primary care to a PCMH could lead to a reduction in health care costs while also improving quality for patients with chronic conditions (Jaen et al., 2009). Proponents of the PCMH model argue the approach could improve physician-patient relationship and realign payment incentives more closely with evidence-based medicine (Deloitte, 2008). The PCMH model could also address racial, ethnic, and socioeconomic disparities in health care outcomes.

Successful implementation of a PCMH will however require significant investments on the part of primary care practices and other providers. Hospitals could play a key role in inspiring the practice leadership and personnel, taking pressure off them so they can engage in transformation, and helping them overcome inertia.

Most physicians in primary care practices are not trained or reimbursed to provide care coordination and do not have the resources to acquire the necessary information technology to undertake care coordination (Deloitte, 2008). The reimbursement models used in current PCMH initiatives attempt to strengthen the link between payment and the goals of the PCMH. Some medical home pilot projects, such as the model described in Section 3502 of the Affordable Care Act, involve new and improved versions of capitation. Other medical home initiatives use the traditional fee-for-service approach or involve any combination of fee-for-service, capitation fees, and extra payments for care coordination and management, treating high-risk patients, and meeting quality and efficiency goals.

In addition, effective care coordination is dependent on not only improved clinical information, but on a willingness by physicians to participate in collaborative decision-making (Fisher, 2008). Practice redesign poses several challenges for primary care practices. However, researchers caution that primary care practice redesign is not enough on its own to generate significant cost reductions and quality improvements in a PCMH; it also requires the active participation of patients in their care. There is emerging evidence that shared decision-making will be an

important component of the PCMH (O'Connor et al., 2009). Patient engagement will require extensive patient education by providers. To date, engagement of patients in their care is still uncertain, despite efforts to increase patient-centeredness that date back to the 1970s (Kilo and Wasson, 2010).

The PCMH Model and Health Care Reform

Section 3502 of the Patient Protection and Affordable Care Act directs the Secretary of Health and Human Services (HHS) to provide grants to or enter into contracts with "eligible entities" to establish community-based interdisciplinary, interprofessional teams ("health teams"). The "health teams" will support primary care providers in the entity's hospital service area in the creation of "medical homes." The grants will provide capitated payments to providers. The primary care teams eligible for capitated payments may include medical specialists, nurses, pharmacists, nutritionists, dieticians, social workers, behavioral and mental health providers, doctors of chiropractic medicine, licensed complementary and alternative medicine practitioners and physician assistants. The definition of a medical home provided in legislation mirrors the components identified in the PCMH Joint Principles.

Prospective community health teams eligible for capitated payments through Section 3502 will be required to:

- Submit plans for achieving long-term financial sustainability within three years
- Submit plans for integrating prevention initiatives, patient education, and care management resources with care delivery
- Create an interdisciplinary health team that meets HHS standards
- Provide services to eligible patients with chronic conditions

<u>Current Medical Home Programs</u>

The proliferation of public and private medical home demonstrations presents both an opportunity and challenge for providers. States have especially been active in this area: 31 states are planning or implementing PCMH pilots within Medicaid or the Children's Health Insurance model (Health Affairs/Robert Wood Johnson Foundation, 2010). Several states have PCMH language in their Medicaid programs and may offer financial support for setting up a PCMH. Some are transitioning Medicaid to a medical home model. Numerous private sector efforts have also been launched by payer and provider organizations, and national and regional collaboratives.

Federal Medical Home Demonstrations

- *Multi-Payer Advanced Primary Care Practice (MAPCP) demonstration*

Under the terms of MAPCP, CMS will be participating in state-sponsored multi-payer initiatives that promote Advanced Primary Care (APC), defined as prevention, health information technology, care coordination, and shared decision-making among patients and their providers. In exchange, participating providers will receive enhanced payments for Medicare patients.

Applications for participation were due in August 2010; the demonstration will formally begin in early 2011.

- *Federally Qualified Health Centers Advanced Primary Care Practice (FQHCAPC) demonstration*

The FQHCAPC demonstration is designed to ~~-~~evaluate the impact of the advanced primary care practice model on the accessibility, quality, and cost of care provided to Medicare beneficiaries served by Federally Qualified Health Centers" (CMS, 2010). Earlier this year, CMS established an email box for interested individuals to submit comments or questions about the initiative.

- *Department of Veterans Affairs*

The U.S. Department of Veterans Affairs (VA) is in the middle of a $250 million effort to adopt the PCMH model nationwide at its clinics, with the expectation of 80 percent participation by 2012 and full participation by 2015 (Health Affairs/Robert Wood Johnson Foundation, 2010). Core features of the VA initiative include team-based care, a larger role for nurses in care coordination, email and other alternative forms of contact with patients, and increased attention to behavioral health issues. The VA also plans to study the medical home with several regional research initiatives designed to test different PCMH elements and their impact on quality, safety, patient satisfaction, and economic viability (Veterans Health Administration Research and Development, 2010).

State Medical Home Programs

- *Colorado Children's Healthcare Access Program (CCHAP)*

CCHAP began in 2006 as an 18-month pilot project to help private pediatric and family practices serve Medicaid patients, in the interest of providing medical homes for low-income children. The pilot included seven pediatric practices serving 7,000 children in the Denver metro area. CCHAP worked with private practices to receive enhanced Medicaid payments in exchange for providing preventive services, and also provided support services to providers, including care coordination, a resource hotline, and Medicaid billing assistance. The pilot increased immunization rates, reduced emergency department use, increased preventive care visits, and reduced Medicaid costs in affiliated practices. A second pilot, launched in 2007, also led to improvements in preventive care and reductions in emergency department visits and hospitalizations. As of January, 2010, the program includes 116 practices and 405 providers, representing 93 percent of private pediatric practices and pediatricians in Colorado (Silow-Carroll and Bitterman, 2010).

- *Michigan Children's Healthcare Access Program (MCHAP)*

The Michigan Children's Healthcare Access Program was launched in 2008 to provide access to medical homes for low-income children in Grand Rapids and surrounding Kent County, Michigan. MCHAP provides enhanced Medicaid payments to pediatric providers, while helping organize community-based care coordination, supportive services, and family provider

education. A one-year pilot program reported lower emergency room use and inpatient use among CHAP patients (Silow-Carroll and Bitterman, 2010).

- *Community Care of North Carolina*

Since 1998, the state of North Carolina has operated Community Care of North Carolina, an enhanced medical home supported by the state's Medicaid program. The program builds community health networks organized collaboratively by hospitals, physicians, health departments, and social service organizations to manage care. Each enrollee is assigned to a specific primary care provider, while network case managers work with physicians and hospitals to identify and manage care for high-cost patients. A study by the University of North Carolina found that the program saved roughly $3.3 million in the treatment of asthma patients and $2.1 million in the treatment of diabetes patients between 2000 and 2002, while reducing hospitalizations for both patient groups. In 2006, the program saved the state roughly $150 to $170 million (Kaiser Commission, 2009).

Private Sector Medical Home Programs

- *TransforMED National Demonstration Project (NDP)*

In 2006, TransforMED, a subsidiary of the American Academy of Family Physicians launched the National Demonstration Project as a two-year experiment to analyze aspects of the PCMH model. The 36 participating family practices received ongoing assistance from a change facilitator, consultations from economists, health IT and quality improvement training, and regular group conference calls. Following the completion of the 2-year test, evaluators found that to effectively establish a medical home, individuals in practices needed to change their ‗roles and identities' within the practice. The evaluation also found that the focus on implementing the technological components of the NDP potentially took away from the patient experience. This might explain why patient ratings of their PCMH declined on four measures: easy access to first-contact care, comprehensive care, coordination of care, and personal relationship over time (Jaen et al., 2010).

Some researchers argue that the NDP demonstrated the need for PCMH initiatives to focus resources on patient-centered care and proven primary care practices, instead of on disease management and information technology improvements (Crabtree, 2010). Other researchers note that organizational ―adaptive reserve," or a practice's ability to provide both participatory leadership and be a learning organization, will significantly impact its ability to implement a PCMH model (Jaen, 2010).

- *Group Health, Seattle*

In 2006, Group Health, which provides insurance and care to 500,000 residents in the Pacific Northwest, piloted the PCMH redesign at one Seattle-area clinic. As part of the pilot, Group Health decreased the number of patients each primary care doctor was responsible for from 2,300 to 1,800, thereby allowing physicians to spend more time with the patient and coordinate his/her care. Group Health also invested $16 more per patient per year to staff the medical

home pilot clinic. An evaluation conducted at the end of a two-year period found that the model reduced physician and care team burnout, improved quality scores, and reduced emergency, specialty, and avoidable hospitalization use and costs. The success of the demonstration prompted Group Health to spread the medical home model to all its medical centers in early 2010 (Reid et al., 2010). According to one analysis, Group Health generated a return of $1.50 for every $1 invested in the medical home demonstration (Health Affairs/Robert Wood Johnson Foundation, 2010).

- *Geisinger Health System*

In 2005, Pennsylvania-based Geisinger Health System began implementing a PCMH model, or "ProvenHealth Navigator," predicated on round the clock access to primary and specialty care, and tied to care coordination, care management support, and tele-monitoring. To encourage participation, the system offers physicians $1,800 monthly payments and stipends of $5,000 per 1,000 Medicare patients to pay for additional staff. Preliminary data suggests the PCMH model has produced a 20 percent reduction in hospital admissions and a 7 percent savings in total medical costs (Paulus et al., 2008).

The Hospital and the PCMH

The definition and structure of a PCMH does not include a unique role for hospitals. While hospitals are not specifically referred to in Section 3502 of the Affordable Care Act, the requirements for the creation of the care teams mentioned in the Act stipulate that the new entities "incorporate health care providers, patients, caregivers, and authorized representatives in program design and oversight." More importantly, delivery and payment reforms such as bundled payments and accountable care organizations will require collaboration between hospitals, physician groups, and other providers, thereby making the PCMH model a logical step for health care providers in the evolving care delivery and payment structure.

The current private and public sector PCMH programs differ in design and focus. A recent article that analyzed seven PCMH pilot and demonstration programs identified variations in population of focus, target conditions, type of financial incentives used, and practice-level features such as the use of electronic health records. The article however found four common and critical features across the seven medical home models. All of the PCMH programs utilized the services of a dedicated, trained, non-physician care manager to coordinate patient care. The programs also provided expanded access to providers, including access outside of provider's regular office hours. The practices involved in the seven PCMH programs also had analytic tools that provided them with real-time data on their performance and patient status. Finally, the programs also used effective incentive payments to encourage physicians to take on care coordinating responsibilities. An example of an incentive payment is additional per member per month payment (Fields et al., 2010).

Hospitals looking to participate in the PCMH model will likely assume a supportive, complementary role to primary care practices. The four features of successful PCMHs identified in the previous section are areas where primary care practices are ill-equipped or do not have the required resources and expertise to implement. Specifically, hospitals can support primary care practices in the following ways:

> *Participating hospitals will likely assume a supportive, complementary role to primary care practices in a PCMH.*

- *Convene physicians:* Hospitals may be able to bring together affiliated physicians to further develop the strong relationships necessary for a successful PCMH. For instance, primary care providers in a PCMH will need to track patients to ensure they follow up with specialists (Fields, 2010). Currently, no incentives exist for specialists to work collaboratively with primary care providers in a PCMH. Hospitals may be able to able to link PCMH initiatives with their affiliated specialists. This arrangement also provides a platform for implementing an ACO.

- *Offer capital and IT infrastructure:* Hospitals may be able to play a critical role in new PCMH models by offering information technology networks and capital resources to primary care providers. Currently, few local, independent physician practices and local community centers have the IT capabilities to seamlessly communicate with local hospitals. Hospitals considering participation in a PCMH should consider the substantial resources to be invested in IT capabilities (Deloitte, 2008) and analyze whether they will be able to offer those resources to the newly formed PCMH and their prospective partners.

- *Offer staff resources and other functionalities:* Hospitals may also be able to support PCMHs with staff resources and other functionalities. Most of the members of the ‗health teams' described in health reform, such as medical specialists, nurses, pharmacists, nutritionists, dieticians, social workers, health educators/health system navigators, behavioral, and mental health providers are all resources that hospitals may already have in-house. Hospitals may be able to leverage these staff resources in a PCMH. It is also conceivable that hospitalists, in their role as care managers for hospitalized patients and those responsible for returning patients to their primary physicians at discharge, could have a role to play in care coordination in the PCMH model.

- *Serve as a catalyst and offer management expertise:* Many primary care providers may not possess the management or knowledge translation expertise required to effectively administer a PCMH initiative. Hospitals could thus serve as a catalyst by providing leadership, a clearly articulated vision, a curriculum or roadmap for change and may be able to lend administrative expertise to PCMH initiatives.

- *Serve as an administrator of bundled payment* – Hospitals are able to use their management capacity and organizational structure to develop payment allocation methods for components of the payment bundle that are the responsibilities of primary care,

specialists, hospital inpatient and outpatient units, and related facilities. An important function of the bundled payment administrator is to assume overall accountability for the financial and clinical integration of patient care; a potential role that hospital management is well positioned to assume.

Hospitals, faced with competing priorities, may be inclined to dedicate available resources to other care delivery innovations, such as developing an accountable care organization, rather than developing a PCMH. It is however important to note that the PCMH can be viewed as being complementary to or critical to the formation of an ACO (Devers and Berenson, 2009). The chart below highlights the key similarities and differences between the ACO and PCMH along five components.

Table 1: Side-by-side of components of ACO and PCMH (Affordable Care Act)*

	PCMH	**ACO**
Key Players	Primary care practice teams, including medical specialists, nurses, pharmacists, nutritionists, dieticians, social workers, health educators/health system navigators, behavioral and mental health providers, doctors of chiropractic medicine, licensed complementary and alternative medicine practitioners, and physician assistants	Hospitals, physician group practices, networks of individual practices, and partnerships between hospitals and other health care professionals
Delivery Structure	Focus on patient-physician relationship (single practice); physician-led practice; enhanced access to care; coordinated and integrated care; comprehensive, continuous care	Multiple providers; complete and timely information about patients and services they are receiving; resources & support for patient education and self-management support; coordinated relationships of PCP with specialists
Required Resources	interoperable EHR: Resources to provide 24-hour care management and support during transitions in care, including on-site visits, discharge plans, counseling, medication management, referrals for behavioral health as needed; serve as liaison to community prevention and treatment programs	Technology and skills for population management and coordination of care
Accountability	Rests primarily with the primary care practice	Joint accountability for care by all providers involved
Payment Structure	Grants or contracts from HHS to interdisciplinary, interprofessional teams	Traditional fee-for-service, supplemented by annual shared savings for participating ACOs that meet specified quality performance standards at expenditure benchmarks

*Level of detail and specificity provided for each program in the Affordable Care Act varies

Next Steps for Hospitals

Hospitals looking to participate in the PCMH can get started with the following recommended steps:

- *Assess current organizational capabilities and resources:* Hospitals may not be able to provide support to a PCMH in all the areas identified in the previous section; however, conducting a scan of available resources and capabilities will help to guide the scope of involvement in a PCMH.
- *Identify opportunities in the community for partnership:* Hospitals can use existing partnership with physician organizations to establish a PCMH, and subsequently, an ACO. Hospitals who currently do not have those affiliations can proactively reach out to primary care practices in their service area to establish such linkages. Hospitals that are able to position themselves as a ‗community medical center' can leverage that position to serve as a business unit for chronic disease management and improved transitions across care settings.

Conclusion

Private and public sector demonstrations have shown that the PCMH model offers significant promise as a method of both improving the patient experience and reducing cost. However, major barriers to PCMH adoption persist, including insufficient IT capabilities among primary care physicians, patient uncertainty about a gatekeeper approach, and the need for clinicians to adopt a model emphasizing shared decision-making (Fisher, 2008). Hospitals also face the additional challenge of not having a defined role in the PCMH model. Hospitals considering PCMH participation in either the national health reform initiative or other efforts should note that the complementary role they would play in the PCMH model does not diminish the ability of the PMCH to contribute to other quality improvement and care delivery goals that they are currently pursuing. While some integrated health systems have developed hospital-based PCMH models, most PCMH initiatives, including the pilot demonstration established in health reform legislation, are constructed to give primary care practices a leading role in guiding the patient experience. Still, many analysts believe that hospitals will begin a migration to embrace the PCMH model in coming years as a natural extension of clinical IT investments and increasing care coordination (Deloitte, 2008).

Appendix

A. The National Committee for Quality Assurance 2011 PCMH standards

The National Committee for Quality Assurance has proposed new PCMH standards, building upon its existing 2008 standards with new goals to increase patient-centeredness, align the requirements with processes that improve quality, increase the emphasis on patient feedback, enhance the use of clinical performance measure results, integrate behaviors affecting health, mental health, and substance abuse, and enhance care coordination. The six proposed standards are:

- Access and Continuity
- Identify and Manage Patient Populations
- Plan and Manage Care
- Self-Management Support
- Track and Coordinate Care
- Performance

B. The Joint Principles for the Patient-Centered Medical Home

http://www.medicalhomeinfo.org/downloads/pdfs/jointstatement.pdf

American Academy of Family Physicians (AAFP)
American Academy of Pediatrics (AAP)
American College of Physicians (ACP)
American Osteopathic Association (AOA)
Joint Principles of the Patient-Centered Medical Home
March 2007

Introduction

The Patient-Centered Medical Home (PCMH) is an approach to providing comprehensive primary care for children, youth and adults. The PCMH is a health care setting that facilitates partnerships between individual patients, and their personal physicians, and when appropriate, the patient's family. The AAP, AAFP, ACP, and AOA, representing approximately 333,000 physicians, have developed the following joint principles to describe the characteristics of the PCMH.

Principles

Personal physician – each patient has an ongoing relationship with a personal physician trained to provide first contact, continuous, and comprehensive care.

Physician directed medical practice – the personal physician leads a team of individuals at the practice level who collectively take responsibility for the ongoing care of patients.

Whole person orientation – the personal physician is responsible for providing for all the patient's health care needs or for appropriately arranging care with other qualified professionals.

This includes care for all stages of life, acute care, chronic care, preventive services, and end of life care.

Care is coordinated and/or integrated – across all elements of the complex health care system (e.g., subspecialty care, hospitals, home health agencies, nursing homes) and the patient's community (e.g., family, public and private community-based services). Care is facilitated by registries, information technology, health information exchange and other means to assure that patients get the indicated care when and where they need and want it in a culturally and linguistically appropriate manner.

Quality and safety are hallmarks of the medical home.

- Practices advocate for their patients to support the attainment of optimal, patient-centered outcomes that are defined by a care planning process driven by a compassionate, robust partnership between physicians, patients, and the patient's family.
- Evidence-based medicine and clinical decision-support tools guide decision-making.
- Physicians in the practice accept accountability for continuous quality improvement through voluntary engagement in performance measurement and improvement.
- Patients actively participate in decision-making and feedback is sought to ensure patients' expectations are being met.
- Information technology is utilized appropriately to support optimal patient care, performance measurement, patient education, and enhanced communication.
- Practices go through a voluntary recognition process by an appropriate non-governmental entity to demonstrate that they have the capabilities to provide patient centered services consistent with the medical home model.
- Patients and families participate in quality improvement activities at the practice level.

Enhanced access to care is available through systems such as open scheduling, expanded hours, and new options for communication between patients, their personal physician, and practice staff.

Payment appropriately recognizes the added value provided to patients who have a patient-centered medical home. The payment structure should be based on the following framework:

- It should reflect the value of physician and non-physician staff patient-centered care management work that falls outside of the face-to-face visit.
- It should pay for services associated with coordination of care both within a given practice and between consultants, ancillary providers, and community resources.
- It should support adoption and use of health information technology for quality improvement.
- It should support provision of enhanced communication access such as secure e-mail and telephone consultation.
- It should recognize the value of physician work associated with remote monitoring of clinical data using technology.

- It should allow for separate fee-for-service payments for face-to-face visits. (Payments for care management services that fall outside of the face-to-face visit, as described above, should not result in a reduction in the payments for face-to-face visits).
- It should recognize case mix differences in the patient population being treated within the practice.
- It should allow physicians to share in savings from reduced hospitalizations associated with physician-guided care management in the office setting.
- It should allow for additional payments for achieving measurable and continuous quality improvements.

C. The PPC-PCMH Standards - http://www.ncqa.org/tabid/631/default.aspx[3]

Standard 1: Access and Communication

A. Access and communication processes**

B. Access and communication results**

Standard 2: Patient Tracking and Registry Functions

A. Basic system for managing patient data
B. Electronic system for clinical data
C. Use of electronic clinical data
D. Organizing clinical data**
E. **Identifying important conditions****
F. Use of system for population management

Standard 3: Care Management

a. Guidelines for important conditions **
b. Preventive service clinician reminders
c. Practice organization
d. Care management for important conditions
e. Continuity of care

Standard 4: Patient Self Management Support

A. Documenting communication needs
B. **Self-management support****

Standard 5: Electronic Prescribing

A. Electronic prescription writing
B. Prescribing decision support - safety
C. Prescribing decision support - efficiency

Standard 6: Test Tracking

A. Test tracking and follow up**
B. Electronic system for managing tests

Standard 7: Referral Tracking

[3] ** : Must-Pass Elements

A. Referral tracking**

Standard 8: Performance Reporting and Improvement

A. Measures of performance **
B. Patient experience data
C. Reporting to physicians **
D. Setting goals and taking action
E. Reporting standardized measures
F. Electronic reporting to external entities

Standard 9: Advanced Electronic Communications

A. Availability of interactive website
B. Electronic patient identification
C. Electronic care management support

D. ACOs vs. PCMH Comparison (Yoder, 2010)[4]

PCMH	ACO
• Personal physician, focus on patient-physician relationship (single practice)	• Provider-led organization, multiple providers, practices organized
• Physician-led team	• Culture of teamwork among staff of practices
• Whole person model of care, patient and family-centered	• Complete and timely information about patients and services they are receiving
• Enhanced access to care	• N/A
• Care coordinated, integrated	• Resources & support for patient education and self management support
• Comprehensive, continuous care	• Coordinated relationships of PCP with specialists and other providers
• Continuous improvement	• Manage full continuum of care for populations
• Quality and safety, guide all care individual/population	• Accountable for quality and safety for populations • Technology and skills for population management and coordination of care • Ability to measure and report on quality
• Payment supports patient-centered care, and is value driven	• Accountable for overall costs • Infrastructure and skills for management of financial risk • Leaders committed to improving value of health care services

[4] Ernie Yoder, M.D., vice president of Medical Education and Research for St. John Health, developed this chart comparing the PCMH and ACO models for a July 2010 presentation to the Michigan Association of Health Plans.

References

Legislation and proposals:

1. Patient Protection and Affordable Care Act, Section 3502: Establishing community health teams to support the patient-centered medical home (2010). http://docs.house.gov/energycommerce/ppacacon.pdf

   Summary: This section of federal health care reform describes the stipulations for physicians, hospitals and other providers wishing to participate in the CMS PCMH demonstration.

2. Patient-Centered Medical Home 2011 Draft Standards Overview. *National Committee for Quality Assurance.* http://www.ncqa.org/Portals/0/PublicComment/Draft_Standards_PCMH.pdf

   Summary: The article lays out the proposed, up-to-date NCQA draft standards for the patient-centered medical home, building upon the existing 2008 standards with new goals to increase patient-centeredness, align the requirements with processes that improve quality, increase the emphasis on patient feedback, enhance the use of clinical performance measure results, integrate behaviors affecting health, mental health and substance abuse and enhance care coordination.

3. Multi-Payer Advanced Primary Care Practice Demonstration Fact Sheet. Centers for Medicare & Medicaid Services (2010). http://www.cms.gov/demoprojectsevalrpts/md/itemdetail.asp?itemid=cms1230016

   Summary: The fact sheet describes the parameters of participation in CMS‘s MAPCP demonstration.

Evaluation of demonstration projects:

4. Crabtree, B.F., Nutting, P.A., Miller, W.L., Stange, K.C., Stewart, E.E., Jaen, C.R. (2010) Summary of the National Demonstration Project and Recommendations for the Patient-Centered Medical Home. *Annals of Family Medicine* (Vol. 8, Supplement 1). http://www.annfammed.org/content/vol8/Suppl_1/

   Summary: The article summarizes findings from the National Demonstration Project, a PCMH test of 36 family care practices. The article concludes that PCMH initiatives should focus more on patient-centered care and proven primary care practices than on disease management and information technology. The article also argues that the PCMH model is dependent on widespread systemic reform.

5. Silow-Carroll, S., Bitterman, J. (2010) Colorado Children's Healthcare Access Program: Helping Pediatric Practices Become Medical Homes for Low-Income Children. *The Commonwealth Fund* (Vol. 47). http://www.commonwealthfund.org/Content/Publications/Case-Studies/2010/Jun/Colorado-Childrens-Healthcare-Access.aspx

   Summary: The article analyzes the Colorado Children's Healthcare Access Program's efforts to help private pediatric and family practices serve Medicaid patients, in the interest of providing medical homes for low-income children. The authors found an 18-month pilot project led to increased immunization rates, reduced emergency department use, increased preventive care visits and led to reductions in Medicaid costs in affiliated practices. A second pilot, launched in 2007, also led to improvements in preventive care and reductions in emergency department visits and hospitalizations. The program now includes 116 practices and 405 providers, representing 93 percent of private pediatric practices and pediatricians in Colorado.

6. Jaen, C.R., Ferrer, R.L., Miller, W.L., Palmer, R.F., Wood, R., Davila, M., Stewart, E.E., Crabtree, B.F., Nutting, P.A., Stange, K.C. (2010) Patient Outcomes at 26 Months in the Patient-Centered Medical Home National Demonstration Project *Annals of Family Medicine* (Vol. 8, Supplement 1). http://www.annfammed.org/cgi/content/short/8/Suppl_1/S57

   Summary: The authors analyze patient outcomes from the PCMH National Demonstration Project, focusing on two questions: Whether adoption of the NDP model would be superior in practices which worked with a facilitator or those who adopted them in a self-directed process, and whether adoption of the model would improve patient outcomes. The analysts found that facilitated practices adopted more of the components of the NDP model, but did not generate statistically significant improvements in quality outcomes relative to the self-directed group. The researchers also found that adoption of the NDP model was not associated with patient-rate outcomes other than access. Finally, the researchers noted that implementation of the project's technological components was not associated with improved patient care, and suggest that the effort need to implement IT improvements may interfere with patient-centered care delivery.

7. Reid, R.J., Fishman, P.A., Yu, O., Ross, T.R., Tufano, J.T., Soman, M.P., Larson, E.B. (2009) Patient-Centered Medical Home Demonstration: A Prospective, Quasi-Experimental, Before and After Evaluation. *American Journal of Managed Care* (Vol. 15, No. 9). http://www.ajmc.com/articles/managed-care/AJMC_09sep_ReidWEbX_e71toe87

   Summary: The authors consider a PCMH demonstration at Group Health, which provides in insurance and care to 500,000 residents in the Pacific Northwest. In 2007, Group Health launched a comprehensive PCMH redesign, which included staffing increases for physicians and other clinicians, redesigned processes for team huddles, pre-visit outreach and chart review and the introduction of patient-centered quality deficiency reports. The article

concludes that the PCMH demonstration led to significant improvements in patients‘ and clinicians‘ experiences and in the quality of clinical care, and notes that despite a significant investment, the costs of the PCMH redesign were recouped in the first year.

8. Kaiser Commission on Medicaid and the Uninsured (2009) *Community Care of North Carolina: Putting Health Reform Ideas into Practice in Medicaid.* http://www.kff.org/medicaid/upload/7899.pdf

   Summary: This article assesses North Carolina‘s Community Care of North Carolina program, an enhanced medical home model operated by the state‘s Medicaid program. The program relies on nonprofit community networks of hospitals, physicians, health departments and social service organizations to manage care, and notes that the program saved roughly $3.3 million in the treatment of asthma patients and $2.1 million in the treatment of diabetes patients between 2000 and 2002, while reducing hospitalizations for both patient groups. In 2006, the program saved the state roughly $150 to $170 million. The article concludes that the practices developed by CCNC show promise as tools to implement health reform national and provide ~~c~~coordinated, cost effective care to low-income individuals with significant health needs.”

9. Paulus, R.A., Davis, K. and Steele, G.D. (2008) Continuous Innovation in Health Care: Implications of the Geisinger Experience *Health Affairs* (Vol. 27, No. 5). http://www.geisinger.org/info/innov_conf/medicalHomeConf/references/2008%20Continuous%20Innovation.pdf

   Summary: The authors discuss innovations at Geisinger Health System in Pennsylvania, including efforts to implement a PCMH model predicated on round-the-clock access to primary and specialty care and tied to care coordination, care management support and home-based monitoring. The authors discuss reimbursement incentives and IT advances used to develop the program, and conclude that the PCMH has led to a 20 percent reduction in hospital admissions and a 7 percent savings in total medical costs.

10. Next-Generation Primary Care: Coming To a VA Clinic Near You (2010) *Veterans Health Administration Research and Development* http://www.research.va.gov/news/features/primary_care.cfm

    Summary: This article takes a comprehensive look at the VA‘s $250 million effort to adopt the PCMH model at its clinics, with the goal of complete adoption by 2015. The article also explores the VA‘s plans to study the medical home with several regional research initiatives designed to test different PCMH elements and their impact on quality, safety, patient satisfaction and economic viability.

Other Published Literature

11. Fields, D., Leshen, E. and Patel, K. Driving Quality Gains and Cost Savings Through Adoption of Medical Homes (2010) *Health Affairs* (Vol. 29, No. 5 p. 819-826). http://content.healthaffairs.org/cgi/content/abstract/29/5/819

    Summary: The article analyzes the potential for the medical home model to create value. The article considers the medical home guidelines developed by the National Committee for Quality Assurance and the Center for Medical Home Improvement, and analyzes seven medical home initiatives to determine the intrinsic characteristics of a medical home project. The article identifies four common features of medical home projects as the use of dedicated care managers, expanded access to health practitioner, data-driven analytic tools and the use of incentives. The article concludes that successful medical home initiatives will hinge on the ability of physician practices to embrace teamwork, expand access to their primary care services and modify their clinical management to utilize quality performance data.

12. Kilo, C.M. and Wasson, J.H. (2010) Practice Redesign and the Patient-Centered Medical Home: History, Promises and Challenges. *Health Affairs* (Vol. 29, No. 5). http://content.healthaffairs.org/cgi/content/abstract/29/5/773

    Summary: The authors summarize the history of primary care and practice redesign dating back to the 1960s, and analyze current challenges to successful PCMH implementation. The authors conclude that while the PCMH model faces many challenges to widespread implementation—including physician shortages, unrealistic expectations and uncertain engagement from patients—the model holds promise as primary care continues to evolve.

13. Broccolo, B. (2010) Toward Accountable Care: How Healthcare Reform Will Shape Provider Integration. *McDermott, Will & Emery LLP.* www.healthlawyers.org/Events/Programs/Materials/.../broccolo.pdf

    Summary: This presentation outlines key aspects of health care reform in the context of provider integration, including the portions of reform that relate to the PCMH model.

14. Scholle, S.H., Torda, P., Peikes, D., Han, E. and Genevro, J. (2010) Engaging Patients and Families in the Medical Home. *Agency for Healthcare Research and Policy* (Publication No. 10, June 2010). http://www.pcmh.ahrq.gov/portal/server.pt/community/pcmh__home/1483

    Summary: This article catalogues the evolution of the role of the patient in the medical home model, and considers several different PCMH models in terms patient and family-centered care. The article suggests a three point framework for patient engagement in the PCMH predicated on care for the individual patient, practice improvement and policy design and implementation.

15. Yoder, E. (2010) Patient-Centered Medical Home: Embracing Federal Reform. www.mahp.org/events/.../2010/.../YoderPostConferenceHandout.doc

Summary: This presentation offers a comprehensive assessment of the PCMH and ACO initiatives included in health reform legislation, including a comparison chart detailing the critical similarities and differences between each model.

16. Reid,R.J., Coleman K., Johnson, E.A., Fishman, P.A., Hsu, C., Soman, M.P., Trescott, C.E., Erikson, M. and Larson, M.B. (2010)The Group Health Medical Home At Year Two: Cost Savings, Higher Patient Satisfaction, And Less Burnout For Providers. *Health Affairs*. (Vol. 29, No. 5)

Summary: The authors of the article found that the ~~"p~~patient-centered medical home" model launched by Group Health Cooperative in Seattle, paid off after a two-year period. According to the article, the model improved outcomes, including better-quality care, better experiences for patients, less burnout for clinicians and cost neutrality in the first-year results. By the second year, most of these outcomes were more pronounced, particularly for costs: the overall return on investment was 50 percent, mostly from curbing visits to emergency rooms and hospitals, according to the study's findings.

17. Devers, K. and Berenson, R. (2009) Can Accountable Care Organizations Improve the Value of Health Care by Solving the Cost and Quality Quandaries? *Robert Wood Johnson Foundation.* http://www.rwjf.org/qualityequality/product.jsp?id=50609

Summary: The authors survey the potential of accountable care organizations for managing patients‘ continuum of care across different institutional settings, better allocation of resources and serving as a framework for improved performance measurement of patient populations. The article also compares the ACO model with the PCMH model, noting important similarities and differences. The article concludes that ACOs have the potential to improve quality and reduce costs, but will require years of practice and refinement to reach those goals.

18. The Medical Home: Disruptive Innovation for a New Primary Care Model. (2008) *Deloitte Center for Health Solutions*. http://www.deloitte.com/view/en_US/us/Insights/centers/center-for-health-solutions/c67f5264b03fb110VgnVCM100000ba42f00aRCRD.htm

Summary: The authors briefly summarize the history of the PCMH model, dating back to its initial coinage in 1967 by the American Academy of Pediatrics to refer to a central location for archiving a medical record that was connected to specialty services and support functions. The article analyzes the potential return on investment for a PCMH model, considering its implications for individual primary care physicians, hospitals with primary care referral networks and commercial health plans. The article concludes that while the

PCMH model will have to overcome several obstacles—including insufficient training of to provide care coordination, physician shortages, competition between providers and uncertain financial savings—it holds strong promise as a delivery model that, given the proper incentives, can be financially sustainable.

19. Fisher, E.F. (2008) Building a Medical Neighborhood for the Medical Home. *New England Journal of Medicine* (September 2008) http://www.nejm.org/doi/full/10.1056/NEJMp0806233

    Summary: The author surveys the challenges and opportunities offered by the PCMH model of care, noting that high expectations for PCMH persist despite major clinical and financial barriers to widespread adoption. The article notes challenges for providers considering PCMH adoption, including needed IT integration, the historical reluctance of physicians to make decisions collaboratively, the uncertain response by patients to the new model and uncertain financial returns. The article calls for aligning medical homes with the goals of effective communication and care coordination among all provides, payments aligned with creating shared electronic health records and broadened performance measures that assess the patient‘s care experience. The article concludes by noting that while the medical home model has great potential, its success is dependent on more effectively aligning the interests of physicians and hospitals with the improvement of patient care.

20. Health Policy Brief: Patient-Centered Medical Homes. (2010) *Health Affairs*/*Robert Wood Johnson Foundation* http://www.rwjf.org/pr/product.jsp?id=68929

    Summary: This policy brief outlines current developments and trends concerning the PCMH model, highlighting the concept‘s inclusion in recent reform legislation and exploring emerging standards and existing PCMH initiatives. The article includes several key questions about the PCMH model that address patient and physician readiness, necessary resources and changes to payment systems.

21. Medical Home 2.0: The Present, The Future. (2010) *Deloitte Center for Health Solutions* http://www.deloitte.com/view/en_US/us/Industries/US-federal-government/center-for-health-solutions/research/f25a02f31251b210VgnVCM2000001b56f00aRCRD.htm

    Summary: This issue brief provides key references on emerging PCMH standards, existing pilots and key characteristics of the PCMH concept. The article concludes that the model can yield results with significant investments, noting challenges that include physician adoption and health IT readiness. The article also advocates for a three-tiered PCMH reimbursement model consisting of a monthly care coordination payment, visit-based fee for service arrangements and performance-based payments centered on the achievement of quality and efficiency targets.

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Early Learnings from the Bundled Payment Acute Care Episode Demonstration Project

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Suggested Citation
Hund C, Joshi M, Early Learnings from the Bundled Payment Acute Care Episode Demonstration Project. Health Research & Educational Trust, Chicago, IL. July 2010 (Updated April 2011)
http://www.hret.org/reform/projects/acute-care-episode-demonstration-project.shtml

EXECUTIVE SUMMARY

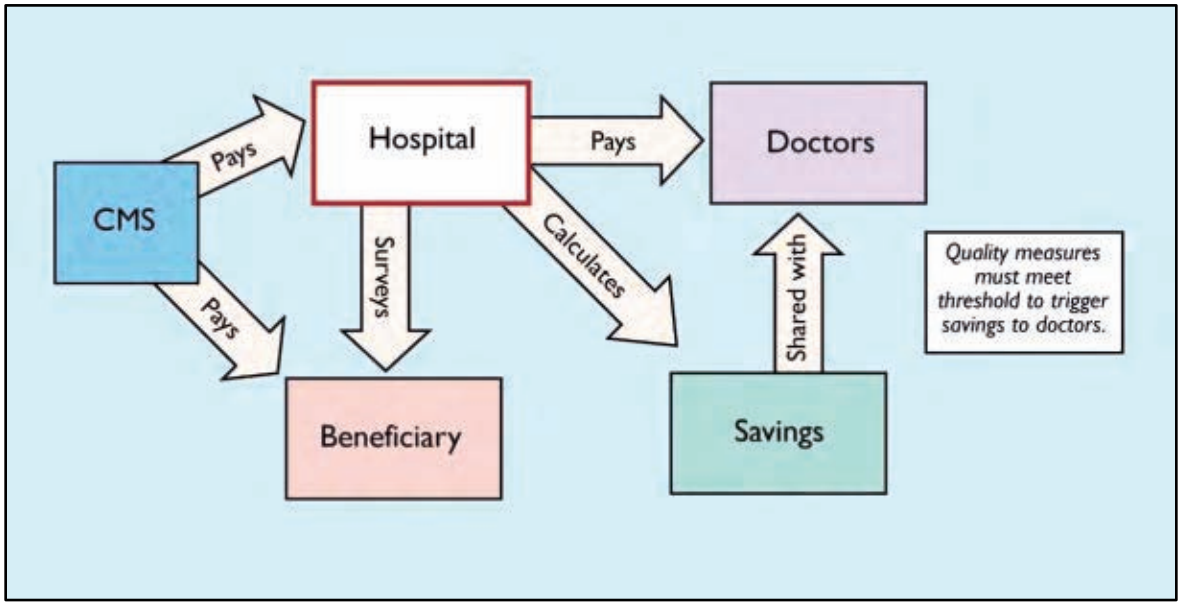
Early Learnings from the Bundled Payment Acute Care Episode Demonstration Project aims to explain the Acute Care Episode Demonstration or ACE Demo from the Centers for Medicare & Medicaid Services (CMS). Although it is a small demo (five test hospitals), the implications of the success of the program are far-reaching. From CMS' perspective, the goals of the project are to:

1. Improve coordination and quality of care
2. Align incentives between hospitals and physicians using bundled payment and other incentives
3. Designate *Value Based Care Centers*
4. Provide financial incentive for Medicare beneficiaries

Beneficiaries must be both Medicare Part A and Part B fee for service participants with conditions that fall under a variety of either cardiac or orthopedic MS-DRGs. The eligible MS-DRGs can be found in the appendix of this guide.

One of the five test sites, Hillcrest Medical Center, is the focus of this report. This Tulsa, Oklahoma hospital started the process of the ACE Demo first, so they are the farthest along in the three-year demonstration. Also of note is that Hillcrest Medical Center (and the adjoining Oklahoma Heart Institute) is a test site for both cardiac and orthopedic MS-DRGs.

The diagram below gives a quick overview of how the ACE Demo works at Hillcrest. The program is governed by a board of managers who direct the project. This board meets quarterly and consists of three committees (quality, financial, and gain sharing). The committees work with continual clinical oversight. While the hospital is required to lower costs, Hillcrest has done so without reducing reimbursement to its physicians. In fact, the doctors may participate in provider incentive payments if they share in implementing efficiency and quality improvements.



Throughout the early stages of the ACE Demo, Hillcrest has reported the following lessons learned. These lessons are expounded upon throughout the guide as Hillcrest's journey is examined.

1) Constructing a framework before beginning is helpful. This framework includes quality improvement initiatives, cost-accounting systems, and a robust data warehouse.
2) Getting more patient volume isn't as important as getting market share with supply vendors through renegotiation of contracts.
3) Bringing physicians on board early in the process to drive cost-cutting measures, quality metrics, and negotiations with suppliers is vital.
4) The monetary incentive, as designed by CMS, may not be a driver for patients when choosing a hospital.
5) Hiring a full-time case manager is necessary to track all patients in the program from admission to post-discharge.
6) Having prior health plan experience is a plus.

Questions still remain to be answered in the early stages of the ACE Demo, mostly due to the fact that the situations where they will be posed haven't actually occurred yet. However, the following are a list of questions that need to be answered as the process moves forward.

1) How can the ACE Demo be expanded into a post-hospital setting? What would a post-acute payment bundle that goes 30–60 days post discharge look like?
2) What will the provider incentives look like as the project enters future years of the demo, especially if it is harder to find savings as the "low-hanging fruit" is all picked.
3) How does the project work if there are multiple, competitive hospitals doing the same thing in the same market? Granted, the money doesn't seem to be an incentive to drive patient volume. But, how do vendors react if all hospitals in one market are working in this type of program?
4) How can this be expanded to non-surgical MS-DRGs? The benefit of the currently selected MS-DRGs is that there are very few outliers. Would this program work well for cancer patients, for example?
5) How do you create better beneficiary incentives? Are the incentives even worthwhile as the demo expands?
6) What quality measures do you use for other MS-DRGs? There are not easily measurable quality measures for everything.

INTRODUCTION

The Acute Care Episode Demonstration, or ACE Demo, is a demonstration project by the Centers for Medicare & Medicaid Services (CMS). The demonstration project works under the following three assumptions:

1. That the beneficiaries have to be both Part A *and* Part B Medicare fee for service
2. That the program utilizes a bundled payment system from admit to discharge, to include all related inpatient services.
3. That the program focuses on either orthopedic MS-DRGs or cardiac MS-DRGs (or both). The appendix lists the MS-DRGs for both areas of focus.

The five participant hospitals in the ACE Demo had to go through a selective RFP process. Two of these locations, Hillcrest Medical Center in Tulsa, Oklahoma, and Lovelace Health System in Albuquerque, New Mexico, are a part of Ardent Health Services. There is a twofold reason as to why Hillcrest Medical Center became the focus of this guide on the early learnings from the ACE Demo. For one, Hillcrest would be demonstrating on both the cardiovascular and orthopedic aspects of the project. The second reason is that Hillcrest was the first out of the gate and because of this they not only are the farthest along but they have also begun to serve as a mentor hospital for other organizations that are not as far along in the process.

Hillcrest Medical Center is a 691-bed facility that adjoins the newly opened (March 2009) Oklahoma Heart Institute. By virtue of participating in the ACE Demo, they've been designated a Value Based Care Center by CMS. This designation is one of four of CMS' goals for the ACE Demo. The goals are

1. Improve care coordination to improve quality of care.
2. Align incentives between hospitals and physicians through bundled payment and cost-saving incentives.
3. Designate selected facilities as Value Based Care Centers.
4. Provide financial incentives for Medicare beneficiaries.

The last goal is what makes the ACE Demo a somewhat unprecedented affair. Medicare beneficiaries who meet the Part A and Part B requirements and whose care falls under one of the eligible MS-DRGs will receive an incentive payment from Medicare. The incentive payment is 50% CMS' savings created by the program, which are not to exceed the typical annual Part B premium and carry a maximum rate of $1,157. Not all beneficiaries receive an incentive payment this high. The joint replacement MS-DRGs, have an average payment of $350.

What could possibly be the impact and the importance of such a small demonstration program on the current state of health affairs and health reform? How could the actions of a small group of hospitals in the middle of the county affect the wider health care community? The answer to this question is elegantly addressed by Atul Gawande in an example from a different field (agriculture) and a different time (early 20th Century). In the example provided by Gawande, demonstration farm projects engaged one farmer in a local community, this farmer, following all the suggestions of the USDA invariably ended up outperforming the other local farmers which then led to the spread of the new farming best practices across the local community. Farmers may not have trusted an outsider from the USDA to teach them new techniques to increase crop yields, lower prices, increase quality, and increase profit. But, if there was just one local farmer who could show these ideas in practice then the farmers would try them

themselves.[1] That is the power of the demonstration project. If Hillcrest Medical Center and the other participants of the ACE Demo can show the success of bundled payments and other cost-saving incentives then hospitals everywhere might take up the same practices.

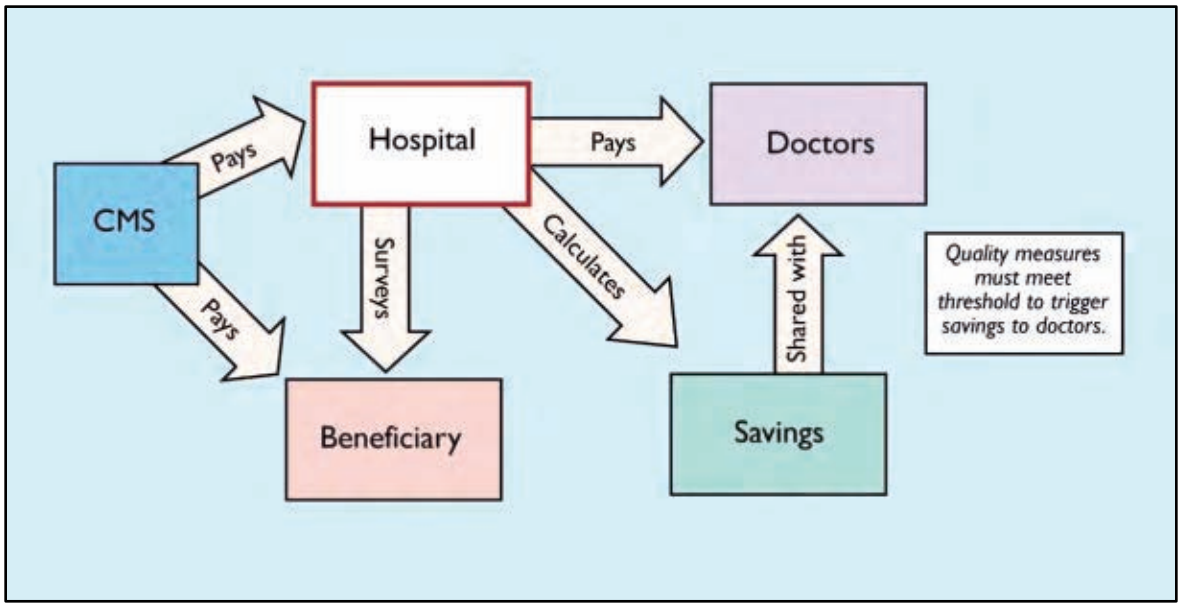
The purpose of this guide then is to share early learnings from the ACE Demo at Hillcrest Medical Center. If it accelerates the uptake of such practices, all the better. However, the main purpose of the guide is to share what is going on in the field and to allow others to form their own opinions as to whether the CMS "testing of new model opportunities" are something they are interested in engaging with and piloting.

PART 1: ACE in Action

Hillcrest is the farthest hospital along in the ACE Demo process. The process has been entirely engrained in the lifecycle of the two service lines (cardiology and orthopedics—hip and knee replacements). All patients that are eligible are included in the program. There is no choice.

The ACE Demo impacts all Hillcrest teams' work from clinical departments to billing and marketing. And it has done so with the addition of a limited amount of funds to the bottom line. In fact, Hillcrest has only hired one full-time employee (FTE) as a case manager. Other than that, direct costs have been mostly towards marketing the program. Hillcrest has cut costs and increased efficiency all while saving the money on supply chain issues and not cutting payment to their physicians.

The diagram gives a quick overview of how the ACE Demo works at Hillcrest. Following the diagram is a detailed description of ACE in action at Hillcrest.



[1] Gawande, A. "Testing, Testing," *The New Yorker.* December 14, 2009. Accessed online at: http://www.newyorker.com/reporting/2009/12/14/091214fa_fact_gawande, on June 16, 2010.

The program is governed by a board of managers that direct the project. This board meets quarterly and consists of three committees that carry out much of the work to support the project. The three committees are:

1) Finance committee: monitors the cost savings needed to be successful in the ACE demo
2) Quality committee: monitors the quality data that is used in order to trigger payment to the doctors. The quality metrics used are national.
3) Gain sharing committee: this committee includes a patient advocate for the community. It ensures gain sharing program requirements are met prior to distributing provider incentive payments to physicians.

The committees must go through the proper clinical channels when making any care-related decisions. However, these committees also enjoy a degree of autonomy that allows them to make decisions regarding aspects of the program like what can be addressed to save further funds, quality thresholds to trigger financial incentives, and then the actual savings distribution.

While part of the program requires that hospitals provide savings for CMS through competitive bidding. Hillcrest has not cut costs by lowering payment to their physicians. In fact, the physicians have the opportunity to receive additional compensation through the gain sharing program. As the diagram shows, provider incentive payments are not automatic. Instead, they are triggered by the physicians meeting a certain threshold of nationally benchmarked quality measures.

Physicians also benefit from this program by a possible increase in number of patients. It is hard to say with any certainty, however, whether the ACE Demo is driving any new business to Hillcrest. There has been a 28% increase in volume for the cardiologists. However, the recent opening of the highly advertised high-tech Oklahoma Heart Institute may cloud this data. There has also been a 31% increase in the orthopedic product line.

The main areas where Hillcrest Medical Center has beneficial lessons to share with the wider hospital community are in the following areas, which will be covered, along with lessons learned, throughout the following section.

Beneficiary outreach and marketing
Incentives
Case management
Materials management

Beneficiary Outreach and Marketing

In order to drive more potential patients to Hillcrest, the marketing team advertised using traditional forms of media. They stressed the fact to the public that there was an incentive payback for coming in for care at Hillcrest. These forms included newspaper, radio, and television as well as public relations outreach to local newspapers and community organizations. Advertisements included a facility contact number for patients to call with questions and additional information requests.

Direct outreach to beneficiaries went along less traditional advertisement lines as well. A proactive orthopedist agreed to hold symptom-based seminars. Seminars that focused on chronic knee or back pain drew large crowds of locals and the orthopedic staff followed up each individual with a phone call. Outreach was also needed for community physicians, physicians within the Hillcrest family, and Hillcrest staffers. Education and training sessions explained the ins and outs of who was eligible and the goals and benefits of the program.

Lessons Learned: Beneficiary Outreach and Marketing

- Advertisements can drive up volume on the orthopedic side.
- Symptom-based seminars also drive up volume—10%–25% of attendees came in for an appointment.
- Advertisement and outreach isn't as successful on the cardiac side.
- Since many of the cardiac MS-DRGs utilized by this demo were of an emergent nature, patients typically went to the facility where they had an established relationship with their physician or brand recognition of the facility.
- The best way to reach the patients with the cardiac MS-DRGs was through their cardiologists and physicians.

Incentives for Patients, Providers, and the Hospital

Financial provider incentives vary between the cardiac and the orthopedic settings at Hillcrest under the ACE Demo. The orthopedic physicians are an independent group so they are each eligible to receive a share of the savings out of the gain sharing plan. The cardiologists are employed by the Oklahoma Heart Institute and therefore do not receive direct payment. However, they benefit from the gain sharing through money being put aside for cardiac-related initiatives. Physicians also benefit from the higher volumes that may be the result of the ACE Demo and may also result in the increase attention paid to them by the marketing group and the interested media and public in general.

Incentives for the hospital include working closely with CMS and benefiting from being early adopters if bundled payment becomes an imminent reality. It has also forced the hospital to analyze their way of doing things. As a result of participating in the ACE Demo already high quality metrics improved and many lean processes have been enacted. Since no reduction in reimbursement was passed along to the physicians, Hillcrest continues to be forced to reexamine their processes and to find other ways to foster further cost reductions (see materials management section).

Quite plainly, the most obvious incentive for patients is the maximum patient incentive payment of $1,157.00. This incentive comes directly from Medicare and not from Hillcrest. However, Hillcrest reported that patients did not report that the incentive payment was a driver for them to attend the hospital. Despite the marketing outreach, patients may not have known about or understood the incentive payment or process. As the reimbursement comes in the form of a check directly from Medicare, patients may not have understood that the incentive was in any way tied to Hillcrest. Patients may have also been driven to Hillcrest because of the orthopedic outreach sessions or the simple fact that their cardiologist was employed by the Oklahoma Heart Institute.

Other incentives for patients are improved quality of care and outcomes because of the increased collaboration between staff and physicians on these issues. Patients also benefit from the enhanced care coordination that comes with a bundled payment program. Individual instances of care are no longer considered; instead the entire stay at the hospital for one of these MS-DRGs is one unit. The physicians, nurses, and other clinicians all work tightly together to create the same high quality outcomes of care consistently from patient to patient. The hospital is reimbursed the same per patient per DRG and does not receive case related outlier payments; outlier amounts were considered in the competitive bid.

Lessons Learned: Incentives

- By not lowering the reimbursement levels of physicians, there will be physician support
- The Lean processes and focus on outcomes has lead to a better patient experience
- Patients do not list the financial incentive as the reason for choosing the hospital
- Patients seem more interested in the fact that the hospital has been validated as a good place to have treatment by CMS (by an outsider)
- Conversely there may be a possible problem with the CMS term "value based" providing the perception to some that the services are slightly less than the highest quality

Case Management

A dedicated case manager is the only new FTE hired for ACE Demo at Hillcrest. The case manager may be the most important person in the entire process as he or she sets the process in motion by identifying qualified patients eligible for the program. Most of this reconnaissance work by the case manager is done with the cardiac patients. Based on their scheduled procedure, orthopedic patients are easier to identify on admission. Most of the eligible orthopedic MS-DRGs are primarily elective in nature.

Many of the eligible cardiac MS-DRGs come in through the emergency department or are direct admits and unplanned. Often times, it is easier to work through the cath lab to catch the cardiac patients because the emergency departments do not have the direct knowledge of what will happen to a cardiac patient upon being admitted. However, by the time the cath lab becomes a part of the patient's care, it is more certain as to the specific MS-DRG.

Once the case manager identifies the patient is eligible it is vital that the patient is flagged for the ACE Demo as early as possible. The role of the case manager in the ACE Demo is as follows:

1) Find all eligible patients and feed them into program
2) Follow traditional RN case management model by giving quality service to patient
3) Facilitate and coordinate staff to better serve the patient
4) Communicate to patient expectations of the program
5) Explain that the program will not impact future Medicare benefits
6) Communicate post-hospitalization

Lessons Learned: Case Management

- Case managers must be proactive in identifying eligible cases.
- It is imperative that eligible cases are found early in the process so they get into the demonstration as soon as possible.
- Patients will often believe that they should receive full financial benefit when in fact case managers need to explain $1,157 is maximum benefit. Many of the cardiac MS-DRGs have lower levels of patient incentive payment.
- Post-hospital communication is a key to continuing patient understanding of the project. It also may be helpful in reducing readmissions.

Materials Management

In the cardiac and orthopedic MS-DRGs there are many supplies used that can be considered physician preference items (PPIs). These PPIs are often implants and other supplies common in these sorts of procedures. The main source of savings for Hillcrest Medical Center in the ACE Demo has come from reconstructing the system for selecting these supplies.

Physician choice has not been taken away. However, the materials management team has approached the physicians of both disciplines with reports of how much their supplies cost. Since there is physician interest in lowering cost so they can increase the potential gain-sharing they may receive, the physicians have looked closely at the price of their supplies. They see that if they are willing to select one or two supplies instead of a multitude of PPIs they are able to get a better deal from vendors.

The materials management team has approached the vendors with the idea that they can obtain market share within Hillcrest Medical Center if they come up with the right price. This has led to reduced costs and to the physicians assisting with contract negotiations. Instead of the materials management team telling physicians to change supplies to cut costs, the physicians are telling the materials management people that they are willing to cycle between a variety of different vendors and brands in order to save money.

Lessons Learned: Materials Management

- Physicians will steer the ship towards lower cost when they see the cost of the supplies
- Physician brand loyalty is replaced by financial and clinical consideration
- ACE is a bargaining tool because vendors know they can move market share
- It is more useful to look at supplies through the lines of MS-DRG instead of product line

PART II: ADVICE TO THE FIELD

The following advice is culled from the lessons learned at Hillcrest Medical Center throughout the CMS ACE Demo. Some of the following advice is expounded upon in the lessons learned sections above while other advice is listed here solely.

Constructing a framework before beginning is helpful.

Certain systems need to be in place and running well before an endeavor along the lines of the ACE Demo is attempted. These systems include a robust data warehouse, a cost accounting system, and a quality accounting system. The investment in quality at Hillcrest came through tracking CMS core measures, hospital-acquired conditions, never events, and readmissions.

Getting more patient volume isn't as important as getting market share with the vendors.

Hillcrest learned that by far its greatest level of savings came not from a higher volume of patients drawn to the facility because of the incentives provided because of participation in the ACE Demo. Instead, the great savings came from creating opportunities for vendors to get market share for supplies related to the eligible MS-DRGs.

Bringing physicians on board early in the process is vital.

Physicians are concerned about hospitals controlling the revenue stream, even though at Hillcrest reimbursement to physicians was not reduced so there was no financial downside to their participation. Physicians should be given influence over supply selection and materials management issues as well as other cost saving measures. By doing this they have a hand in creating their own gain-sharing in the savings.

Understanding that money may not be a driving incentive for patients is important.

Although volume did go up for both the orthopedic departments and the cardiac departments at Hillcrest, there were a variety of mitigating elements that could have caused the increase. When surveyed, patients often did not list the patient incentive as the main reason for going to Hillcrest. Increased volume is not the key incentive therefore for hospitals. Instead, it is saving money, becoming more efficient, and increasing quality.

Hiring a full time case manager is necessary.

A case manager is needed first to shepherd all the eligible patients into the program, especially for the cardiac MS-DRGs since they are often unplanned admissions.

Having prior health plan experience is a plus.

From a financial perspective, during the ACE Demo Hillcrest effectively became an insurance plan for the eligible procedures.

PART III: QUESTIONS TO BE ANSWERED

The good work of Hillcrest Medical Center has been in the face of a great deal of risk and the strides they have made in the short months of their participation in the ACE Demo are remarkable. However, by their own account, they've gone after "low-hanging fruit" when reducing costs and increasing efficiencies and quality. What are the other areas that can be addressed in order to continue to increase efficiencies? Many other questions are also unanswered simply because the nature of the ACE Demo has not brought them to the forefront—yet.

7) How can the ACE Demo be expanded into a post-hospital setting? What would a post-acute payment bundle that goes 30–60 days post discharge look like?
8) What will the provider incentives look like as the project enters future years of the demo, especially if it is harder to find savings as the "low-hanging fruit" is all picked.
9) How does the project work if there are multiple, competitive hospitals doing the same thing in the same market? Granted, the money doesn't seem to be an incentive to drive patient volume. But, how do vendors react if all hospitals in one market are working in this type of program?
10) How can this be expanded to non-surgical MS-DRGs? The benefit of the currently selected MS-DRGs is that there are very few outliers. Would this program work well for cancer patients, for example?
11) How do you create better beneficiary incentives? Are the incentives even worthwhile as the demo expands?
12) What quality measures do you use for other MS-DRGs? There are not easily measurable quality measures for everything.

As the conversation continues around this demonstration project and others put forward by CMS, it is imperative that hospitals take the same risks as Hillcrest and the other participants have and stride forward. For those that aren't the demonstration sites, it is equally vital that they engage in conversation about the demonstrations and then be ready to implement the successful strategies in the same way farmers once embraced new methods of planting and raising their crops.

ACKNOWLEDGMENTS

The authors appreciate the time and opportunity provided by Nancy Harrison, Director Acute Care Episode Project and Shannon Fiser, Vice President of Financial Operations, as well as that of all the administrators and staff members at both Ardent Health Services and Hillcrest Medical Center. Their graciousness and generosity of time and of expertise was essential in the creation of this guide.

APPENDIX: ELIGIBLE MS-DRGs IN THE ACE DEMO

Orthopedic MS-DRGs

MS-DRG	Description
461	Bilateral or multiple major joint procedures of lower extremity w/MCC
462	Bilateral or multiple major joint procedures of lower extremity w/o MCC
466	Revision of hip or knee replacement w/MCC
467	Revision of hip or knee replacement w/CC
468	Revision of hip or knee replacement w/o CC/MCC
469	Major joint replacement (hip)
470	Major joint replacement (knee)
488	Knee procedures w/o primary diagnosis of infection w/ CC/MCC
489	Knee procedures w/o primary diagnosis of infection w/o CC/MCC

Cardiac MS-DRGs

MS-DRG	Description
216	Cardiac valve and other major cardiothoracic proc. w/cardiac cath w/MCC
217	Cardiac valve and other major cardiothoracic proc. w/cardiac cath w/CC
218	Cardiac valve and other major cardiothoracic proc. w/o cardiac cath w/o CC/MCC
219	Cardiac valve and other major cardiothoracic proc. w/o cardiac cath w/MCC
220	Cardiac valve and other major cardiothoracic proc. w/o cardiac cath w/CC
221	Cardiac valve and other major cardiothoracic proc. w/cardiac cath w/o CC/MCC
226	Cardiac defib implant w/o cardiac cath w/MCC
227	Cardiac defib implant w/o cardiac cath w/o MCC
231	Coronary bypass w/PTCA w/MCC
232	Coronary bypass w/PTCA w/o MCC
233	Coronary bypass w/cardiac cath w/MCC
234	Coronary bypass w/cardiac cath w/o MCC
235	Coronary bypass w/o cardiac cath w/MCC
236	Coronary bypass w/o cardiac cath w/o MCC
242	Permanent cardiac pace implant w/MCC
243	Permanent cardiac pace implant w/CC
244	Permanent cardiac pace implant w/o CC/MCC
246	Percutaneous cardiovascular procedure w/drug-eluting stent w/MCC or 4+ vessels/stents
247	Percutaneous cardiovascular procedure w/drug-eluting stent w/MCC
248	Percutaneous cardiovascular procedure w/ non drug-eluting stent w/MCC or 4+ vessels/stents
249	Percutaneous cardiovascular procedure w/ non drug-eluting stent w/MCC
250	Percutaneous cardiovascular procedure w/o coronary artery stent or AMI w/MCC
251	Percutaneous cardiovascular procedure w/o coronary artery stent or AMI w/o MCC
258	Cardiac pacemaker device replacement w/MCC
259	Cardiac pacemaker device replacement w/o MCC
260	Cardiac pacemaker revision ex. device replacement w/MCC
261	Cardiac pacemaker revision ex. device replacement w/CC
262	Cardiac pacemaker revision ex. device replacement w/o CC/MCC

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A Guide to Achieving High Performance in Multi-Hospital Health Systems

March 2010

THE COMMONWEALTH FUND

HRET
HEALTH RESEARCH & EDUCATIONAL TRUST
In Partnership with AHA

Suggested Citation: Yonek J., Hines S., and Joshi M. *A Guide to Achieving High Performance in Multi-Hospital Health Systems.* Health Research & Educational Trust, Chicago, IL. March 2010.
http://www.hret.org/quality/projects/identifying-best-practices-to-improve-multi-hospital-health-system-performance.shtml

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Executive Summary

Multi-hospital health system leaders have a significant impact on the quality of health care in the United States. The 200 largest hospital systems (a hospital system being defined as having 2 or more general acute care hospitals) account for over half of all hospital admissions in the United States.

Through generous support from The Commonwealth Fund, the Health Research & Educational Trust (HRET) embarked on a project to identify and disseminate best practices associated with high performing health systems. Through the use of publicly available quality data, interviews with leaders of 45 multi-hospital health systems, and analysis, identified below are three major themes, four major best practice categories and seventeen specific best practices that are associated with high performance.

Major Themes

1. No one system type was most associated with high performance

We examined the relationships of many system characteristics to an overall composite measure of quality as well as to more specific measures, such as the HQA core measures, overall patient satisfaction, and a combined, risk-adjusted readmission rate and mortality rate. From the analysis, it was evident that high quality scores were achieved by a variety of different system types—large or small systems, geographically regional or multi-regional systems, systems from all regions of the country, and systems with differing levels of teaching components.

2. No one factor was clearly associated with high performance

Over 50 system factors that might distinguish between top performing systems and those with lower quality scores were analyzed, and no one factor clearly separated the top systems from the others. In every single case, factors that were observable in high performing systems also existed in at least some of the lower performing systems. Moreover, there was no unanimity among top performing systems with respect to factors associated with high performance. As discussed in this guide, success depends on a range of actions.

3. Creating a culture of performance excellence, accountability for results, and leadership execution are the keys to success

From the study, a culture of performance excellence and accountability for results was strongly exhibited during the interviews with the high performing health systems. This was best defined through cultural markers such as: focusing on continuous improvement, driving towards dramatic improvement or perfection versus incremental change, emphasizing patient-centeredness, adopting a philosophy that embraces internal and external transparency with regard to performance, and a having a clear set of defined values and expectations that form the basis for accountability of results. The other finding connected with the culture of performance excellence was a disciplined and persistent focus by leadership on execution and implementation to achieve the lofty goals. The culture of performance and excellence was strongly connected to leadership's execution doctrine.

Best Practices Associated with High Performing, Multi-Hospital Health Systems

1. Establish a System-wide Strategic Plan with Measurable Goals
A. Set both measurable short and long-term goals.
B. Set goals for quality and safety based on the pursuit of perfection rather than improvement.
C. Link the system's quality goals with its operational and financial goals.

A system-wide strategic plan for quality and safety with measurable goals across multiple dimensions is a best practice for improving system performance. Many systems also establish threshold, stretch, and (in some cases) high stretch goals. They then track the progress of achieving these through frequently using system performance dashboards.

2. Create Alignment Across the Health System with Goals and Incentives
A. Establish system-level quality steering/oversight committees to provide direction to system leaders in setting system-wide goals and aligning them with all hospitals.
B. Embed health system goals into individual hospital leaders' goals.
C. Link annual bonuses for system and hospital leaders to performance targets in the system's key strategic areas.
D. Align incentive pay and/or accountability for achieving system-level quality and patient safety targets into contracts with physicians.
E. Align emphasis on culture with efforts to understand and improve it.

Aligning the system's quality and safety goals with the goals of the individual hospitals as well as the hospital leaders' is a practice used by top performing systems to improve system performance. Having highly aligned goals facilitates performance tracking and reporting across multiple hospitals and promotes standardization in performance measurement. Additionally, aligning performance incentives (financial or other) for system and hospital executives with the system's strategic goals (e.g., quality, patient satisfaction, financial) is a strategy top performing systems use to improve overall performance.

3. Leverage Data and Measurement Across the Organization
A. Use an "all or none" or "perfect care" approach to set targets for all performance measures.
B. Consider setting targets based upon event counts (numerator) as well as rates.
C. Share dashboards with hospital leaders and staff frequently to identify areas in need of improvement and then take immediate actions to get back on track.
D. Post dashboard information on the system's intranet.
E. Engage in national benchmarking initiatives to achieve greater transparency as well as foster healthy competition between hospitals.
F. Utilize corporate support through data mining of existing information systems, frequent analyses, and reporting of measures for hospital-level performance improvement.

High performing systems use dashboards (e.g., a balanced scorecard) to measure and manage system performance. Setting system-level targets within each strategic priority area is also a strategy used by top performing systems to improve performance across hospitals. Additionally, sharing system dashboards regularly with hospital leaders, clinicians, and other staff helps promote quality improvement and accountability.

4. Standardize and Spread Best Practices Across the Health System
A. Establish a process to identify and select practices for standardization.
B. Use ongoing education and skills development to spread best practices.
C. Effectively disseminate best practices across the system.

In order to successfully adopt best practices, the standardization of care processes and the use of education and skills development programs are vital in the spread of best practices as well as the acceleration of their use among the entire health system.

Multi-hospital health system leaders can employ a variety of practices to improve care across their multi-facility organizations that focus upon overall system improvement. However, the keys to success are not the specific practices themselves, but the execution of those practices and the creation of a culture that supports performance improvement.

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The HRET Disparities Toolkit

A Guide for Collecting Race, Ethnicity, and Primary Language Information from Patients

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Acknowledgments

Special thanks to the National Advisory Panel members and the Consortium Members for their input, and to David Baker, MD, MPH, and colleagues at Northwestern University Feinberg School of Medicine for their contribution to the research that informs this work.

Many thanks to the Robert Wood Johnson Foundation for their support of the work for collecting race, ethnicity, and primary language data in hospitals under the Expecting Success: Excellence in Cardiac Care program and for their ongoing grant support to improve data collection. We would also like to thank the Commonwealth Fund for their support of research projects that continue to inform this work.

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Suggested Citation

Hasnain-Wynia, R., Pierce, D., Haque, A., Hedges Greising, C., Prince, V., Reiter, J. (2007) Health Research & Educational Trust Disparities Toolkit. hretdisparities.org accessed on (date). http://www.hretdisparities.org/

HRET Disparities Toolkit

A Toolkit for Collecting Race, Ethnicity, and Primary Language Information from Patients

Endorsed by the National Quality Forum

The Health Research & Educational Trust Disparities Toolkit provides hospitals, health systems, clinics, and health plans information and resources for systematically collecting race, ethnicity, and primary language data from patients. We trust you will find this Toolkit useful for educating and informing your staff about the importance of data collection, how to implement a framework to collect race, ethnicity, and primary language data at your organization, and ultimately how to use these data to improve quality of care for all populations.

An online version of the HRET Disparities Toolkit is available at http://www.hretdisparities.org/.
The online version contains many additional resources and web links.

How to Use the Toolkit

The Toolkit is designed to help hospitals, health systems, community health centers, medical group practices, health plans, and other users understand the importance of collecting accurate data on race, ethnicity, and primary language of persons with limited English proficiency and/or who are deaf or hard of hearing. By using this Toolkit, health care organizations can assess their organizational capacity to collect this information and implement a systematic framework designed specifically for obtaining race, ethnicity, and primary language data directly from patients/enrollees or their caregivers in an efficient, effective, and respectful manner. This section provides information about the Toolkit's design and contents.

Toolkit Design

The Toolkit's contents are outlined below. Each section has a main heading followed by subheadings. In some instances, these subheadings are broken down further. We designed the Toolkit so you can quickly look at information targeted specifically to your role or needs within your organization. There is considerable overlap in the content for different audiences. We hope you will target the items in the list of contents that are most useful for you and find the Toolkit easy to navigate.

Toolkit Contents

The Toolkit content is designed to help you navigate the most frequently encountered questions about collecting race, ethnicity, and primary language data. The topics include information about:

- Who should use the Toolkit
- Why collect race, ethnicity, and primary language data
- Why collect data using a uniform framework

- The nuts and bolts of data collection
- How to ask questions about race, ethnicity, and primary language
- How to use race, ethnicity, and primary language data to improve quality of care
- How to train staff to collect this information
- How to inform and engage the community
- How to address the communication access needs of deaf and hard of hearing populations
- Available tools and resources
- Answers to frequently asked questions

Resources (Check the online version at http://www.hretdisparities.org.)

- Overview presentation on collecting race, ethnicity, and primary language data
- Staff training presentation on collecting race, ethnicity, and primary language data
- Presentation on addressing concerns from patients with applicable questions and answers
- Survey on collection of race and ethnicity data by hospitals
- Office of Management and Budget's race and ethnicity definitions
- Office of Management and Budget's granular code set on race and ethnicity
- Centers for Disease Control and Prevention's granular code set on race and ethnicity
- Reference booklet for staff on data collection categories

Who Should Use the Toolkit

We designed the Toolkit so you can look at information targeted specifically to your role or needs within your organization quickly. This section provides targeted information for the following specific audience or stakeholder:.

- Chief Executive Officer
- Legal Affairs Department
- Quality Improvement
- Clinicians
- Patients/Consumers
- Registration/Admission
- Information Technology Department
- Interpreter Services

Chief Executive Officer

Health care leaders are charged with advancing and managing individual organizational priorities. As hospitals and health care organizations work toward serving diverse populations, leaders must recognize the importance of understanding the unique characteristics of the communities they serve. Efforts to improve health care delivery require working with key staff. Leaders can be most effective by helping others develop the abilities and tools to create the best responses to problems and opportunities.

Improving the quality of care for all patients and eliminating health care disparities are central challenges facing our health care system. As emphasized by two Institute of Medicine reports *(Crossing the Quality Chasm* and *Unequal Treatment),* the need for better data about patients' race, ethnicity, and primary

language is critical. Each section of the Toolkit provides information to hospital and health system leaders about collecting race, ethnicity, and primary language information from patients.

Legal Affairs Department

The law permits health care organizations to collect race, ethnicity, and primary language data from patients for quality improvement purposes. For example, the collection of race, ethnicity, and primary language data is permitted under Title VI of the Civil Rights Act of 1964. Additionally, the collection and assessment of information about the communication access needs of individuals who are deaf or hard of hearing promotes compliance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act.

Quality Improvement

The ultimate goal for collecting information about patient's race, ethnicity, and primary language is to improve the quality of care for all patients. Evidence indicates that quality improvement efforts, when linked to data on race and ethnicity, can improve quality of care and reduce health care disparities. These data can be linked to assess technical quality (clinical measures) and service quality (wait times) within your health care organization The Toolkit's online version provides background information and tools (questionnaires) to help hospitals assess their current practices collecting race, ethnicity, and language data as well as surveys to determine whether complete and accurate information is being collected from patients once a systematic framework is implemented.

Clinicians

Doctors, nurses, and other health care practitioners are central to the functioning of health care systems and to societies as a whole. However, few societies have been as racially, ethnically, and culturally diverse as the United States, presenting challenges and opportunities. Each new wave of immigration provides a reminder of these challenges and opportunities.

In their individual encounters with patients, other clinical professionals who care for diverse populations need to incorporate knowledge about their patients' perceptions of illness and disease, belief systems, individual preferences, communication styles, and preferred language. In doing so, clinicians can provide the best possible care to their patients and equip them with appropriate resources.

The need for accurate data is critical so hospitals can target the resources clinicians need (interpreter services, patient educational materials, food, etc.) to provide quality health care to their patients. The Toolkit's online version provides more background information about the importance of collecting information about patients' race, ethnicity, and language and about how to collect the data.

Patients/Consumers

Patients should understand why they are being asked to provide information about their racial and ethnic background and primary language. Providers do not want to alienate patients by asking these questions, so it is important to explain why the information is being collected and how it will be used ("to ensure that everyone receives the highest quality of care"). The Why Collect Race, Ethnicity, and Primary Language section provides information about why collecting this data is important for providing patient-centered care, protecting privacy, and involving members of the community in the process.

Resources for Information About Privacy and Confidentiality

The Institute for Ethics at the American Medical Association has built a toolkit for health care organizations to assess whether their policies, practices, and organizational culture are consistent with protecting patient privacy, including the federal Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule.

1. The toolkit provides four self-evaluation instruments for health care organizations to use to assess their policies and practices for safeguarding patient privacy and confidentiality including a *Practitioner Survey*, *Patient Survey*, *Policy Checklist*, and *Facility Evaluation Form*. To obtain more information about the privacy toolkit, go to http://www.ama-assn.org/ama/no-index/physician-resources/3592.shtml.

2. To access the report entitled "The Domain of Health Care Information Privacy: Protecting Identifiable Health Care Informational Privacy: A Consensus Report on Eight Content Areas for Performance Measure Development," go to http://www.ama-assn.org/ama/pub/physician-resources/medical-ethics/the-ethical-force-program/privacy-confidentiality/consensus-report.shtml.

3. The Joint Commission and the National Committee for Quality Assurance (NCQA) released a joint publication, *Protecting Personal Health Information: A Framework for Meeting the Challenges in a Managed Care Environment* (1998). The document makes several recommendations and addresses accountability; consent; educating patients and providers about privacy policies, procedures, rights, and responsibilities; technology; providing legislative support; and guiding research.

4. Georgetown University's Institute of Health Policy and Research is sponsoring the Health Privacy Working Group (HPWG). The HPWG has developed a set of principles for health privacy and issued a report entitled *Best Principles for Health Privacy.* The Health Privacy Project has prepared a practical, comprehensive guide to state health privacy laws. For more information, go to http://www.cdt.org/issue/health-privacy.

For more information about the HIPAA Privacy Rule, including summaries, tools, and frequently asked questions, go to www.hhs.gov/ocr/privacy.

Registration/Admission

Patient registration/admission staff are often the first point of contact for many patients, and they are responsible for collecting information directly from patients or caregivers. Registration staff have expressed concern that asking patients to provide information about their race and ethnicity may alienate them. Our research and field work have shown that when registration staff are partners in the process and receive the training—which focuses on the reasons for collecting this information, how to ask patients and address their concerns—they feel comfortable asking and patients respond positively as well. The Toolkit's online version includes information for registration/admission staff about asking patients to provide information about their race, ethnicity, and primary language and about how to ask for this information and respond to patients' concerns and questions.

Information Technology Department

The IT department and staff are key in implementing the framework for collecting patient race, ethnicity, and primary language data within a hospital or health system. IT staff can identify infrastructure capacity and needs and are best able to integrate the necessary elements of the framework (codes, fields, etc.)

into existing systems or to modify the systems, if necessary. The most often asked questions or points of clarification for IT staff to consider include:

- Is it possible to incorporate the actual script (for asking the questions) on the registration screen so front-line staff can explain or provide the rationale for why they are asking patients to provide information about their race and ethnicity?
- Can a "declined" response category be added for those patients who do not want to answer this question and decline to do so (this is different than "unavailable")? Is it possible to flag these responses in different colors to make it easier for staff (e.g., "declined" indicates do not ask again and "unavailable" indicates ask again)?
- Do the order of the questions matter (i.e., race before ethnicity question or vice versa)? Some hospitals could not change the order on the registration screens.
- Will the old race/ethnicity data be purged or stored?
- Can modifications be made to the fields to match the OMB categories?
- Can a separate field for ethnicity be added (for those hospitals which only have a race field)?
- Will all registration staff (in the hospital and those off-site) see the same registration screens once modifications are made?

The Toolkit's online version has information on different coding schemes for race and ethnicity data and provides one example of a registration system that has incorporated the framework for data collection.

Interpreter Services

More than 55 million people---over 20% of the U.S. population---speak a language other than English at home. Health care providers from across the country have reported language difficulties and inadequate funding of language services to be major barriers to limited English proficient (LEP) individuals' access to health care and a serious threat to the quality of care they receive. Whether large or small, urban or rural, hospitals and health systems are encountering more and more patients with LEP.

A recent survey conducted by the Health Research & Educational Trust found that 63% of hospitals reported treating LEP patients either daily or weekly and an additional 17% reported seeing LEP patients at least monthly. Seventy-nine percent (79%) of hospitals in the survey indicated that training on how to respond to patients and family members who do not speak English would facilitate providing language services. Though 66% of hospitals indicated that they maintain information about a patient's primary language in medical records, only 38% said that they maintain a database of patients' primary language that they could use to track changes over time or make decisions about allocating resources for language services in the hospital.

The Toolkit provides information about collecting primary language information from patients and family members. It also addresses collecting data and providing services for deaf and hard of hearing populations.

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Signature Leadership Series

Health Care Leader Action Guide on Implementation of Electronic Health Records

July 2010

CHIME College of Healthcare Information Management Executives

HRET HEALTH RESEARCH & EDUCATIONAL TRUST In Partnership with AHA

About HRET

Founded in 1944, the Health Research and Educational Trust (HRET) is a private, not-for-profit organization involved in research, education and demonstration programs addressing health management and policy issues. HRET, an American Hospital Association affiliate, collaborates with health care, government, academic, business and community organizations across the United States to conduct research and disseminate findings that shape the future of health care. Visit HRET's Web site at www.hret.org.

About CHIME

The College of Healthcare Information Management Executives (CHIME) is an executive organization dedicated to serving chief information officers and other senior health care IT leaders. With more than 1,400 CIO members and over 70 healthcare IT vendors and professional services firms, CHIME provides a highly interactive, trusted environment enabling senior professional and industry leaders to collaborate; exchange best practices; address professional development needs; and advocate the effective use of information management to improve the health and health care in the communities they serve. For more information, please visit www.cio-chime.org.

Disclaimer: This guide is intended for educational purposes only. Consult a qualified expert when implementing an electronic health record.

EXECUTIVE SUMMARY

The purpose of this guide is to provide hospital chief executive officers and other members of the executive team with a basic understanding of the challenges of implementing an electronic health record. The guide is organized into high-level categories that executive teams should consider in planning and implementing an EHR.

This guide does not fully address the EHR selection process or meaningful use certification. When the meaningful use final rule is announced and fully understood, CHIME and the AHA will provide more specific guidance that will complement the information in this guide. For specific questions, please contact hpoe@aha.org or staff@cio-chime.org.

The high-level categories that CEOs should consider include:

Gather the Executive Team
The success of any EHR implementation hinges on an inclusive executive team, including a CIO, CMO, CNO, CFO and COO. Many organizations are creating new positions of chief medical/nursing information officers to gain clinician acceptance.

Develop a Strategic Plan
Information technology should be considered as a tool to achieve organizational goals. Leaders need to look at their overall strategic plan and include technology as a way to achieve objectives.

Perform Gap Analysis
To plan for implementing an EHR, the organization should measure where it currently stands in implementing technology and where it needs to go.

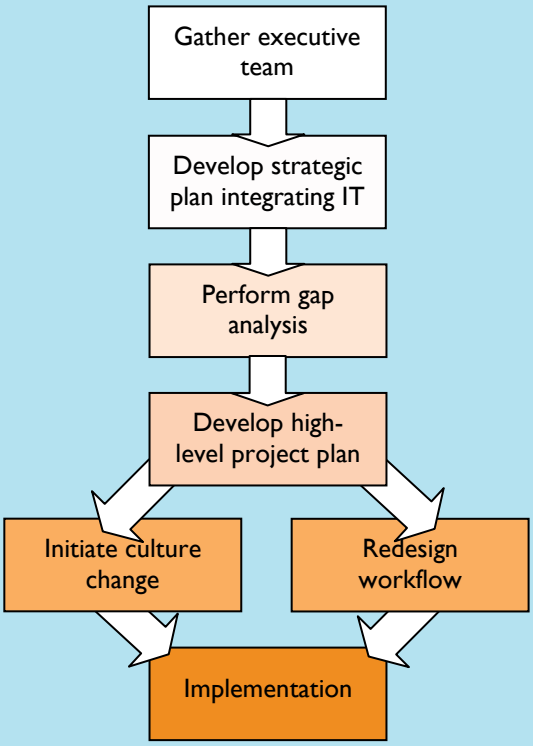
Develop a High-Level Project Plan
Committee members can drill down and establish timelines for implementation.

Initiate Culture Change
Culture change can make or break an EHR implementation. Having individuals own a piece of the plan can enlist their support of an electronic health record system implementation project.

Redesign Workflow Processes
An EHR should not automate already broken processes. This is an opportunity to establish new processes to improve overall patient care.

Implementation
Training and ongoing support will smooth the transition from paper to electronic health records. Upfront planning is crucial for successful implementation.

Implementation Roadmap — EHR Implementation



TIPS

Tips on Gathering a Team

- While the CIO is the point person to achieve meaningful use objectives, HIT initiatives will affect all aspects of hospital operations. Thus, there is an obvious need for visible backing from the CEO and other senior executive team members to assure success.
- The CIO and CFO should form a close working relationship. The IT needed to achieve meaningful use will require large capital outlays and involve ongoing support expenses.
- Encourage CIOs to participate in educational activities that increase their understanding of HITECH/ARRA provisions. In addition to federal initiatives, state plans are also expected to vary, so CIOs should be urged to get involved in initiatives that help them stay abreast of specific rules for their state.
- The senior IT executive should play a lead role in authoring and updating an IT strategic plan that supports overall organization strategic operating plans, including necessary components for meaningful use.
- The CIO also should be involved in efforts to keep the entire organization informed about the progress of a new system and progress toward achieving meaningful use. For example, the CIO can develop a task force charged with attaining meaningful use and grants, and have them report directly to the board.

TIPS (continued)

Planning Tips

- The IT plan is part of the foundation for the organization's pillars—quality, service, finance, people, growth, community.
- Use existing committees, such as an EHR steering committee, in assessing the current state and creating a desired future state. Or form a cross-functional committee, such as a meaningful use subcommittee, to address achievement of these objectives. One hospital organization has gone so far as to create a meaningful use czar and team dedicated only to this task.
- Task senior executives to get involved in aspects of the assessment where appropriate – for example, the chief medical officer can help assess current clinical systems and what needs to be done to improve them.
- Conducting gap analysis is not merely determining what technology is or isn't in place. It also involves assessment of corporate readiness for change, and requires a game plan to assess people and processes.
- Measure progress, gaps and work to be done on a scorecard or "readiness matrix" that visually presents the work that lies ahead.

Culture Tips

- Communication from the CEO sets the tone of the project, lays out the projected steps, and links it to the overall vision of the hospital.
- Project champions should be tasked with communicating progress to their departments.
- Physician communication requires special attention and effort. For familiarization and information briefings, use staff newsletters, focused e-mail, handouts, meetings with medical staff and office managers, and office visits.
- Absolute transparency and honesty are critical to maintaining credibility.
- Organizations need to provide a non-threatening way of providing feedback after implementation.
- Milestone events, such as go-lives and achieved targets, merit celebrations.

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Signature Leadership Series

Health Care Leader Action Guide to Reduce Avoidable Readmissions

January 2010

THE COMMONWEALTH FUND

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Acknowledgements

The Health Research & Educational Trust (HRET), an affiliate of the American Hospital Association (AHA), is dedicated to transforming health care through research and education. This guide was funded by The Commonwealth Fund and The John A. Hartford Foundation.

HRET would like to express our sincere gratitude to the following important contributors who attended a workshop to discuss how to spread and implement strategies to reduce avoidable readmissions:

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Suggested Citation

Osei-Anto A, Joshi M, Audet AM, Berman A, Jencks S, *Health Care Leader Action Guide to Reduce Avoidable Readmissions.* Health Research & Educational Trust, Chicago, IL. January 2010.
http://www.hret.org/care/projects/guide-to-reduce-readmissions.shtml

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Executive summary

Reducing avoidable hospital readmissions is an opportunity to improve quality and reduce costs in the health care system. This guide is designed to serve as a starting point for hospital leaders to assess, prioritize, implement, and monitor strategies to reduce avoidable readmissions.

Steps for hospital leaders to reduce avoidable readmissions

Recognizing that hospitals may be at different points in the process, this guide follows a four-step approach to aid hospital leaders in their efforts to reduce avoidable readmissions. The four steps are:

1. **Examine your hospital's current rate of readmissions.**
2. **Assess and prioritize your improvement opportunities.**
3. **Develop an action plan of strategies to implement.**
4. **Monitor your hospital's progress.**

Major strategies to reduce avoidable readmissions

This guide is meant to address readmissions that are avoidable and not all readmissions. Many readmissions, in fact, could represent good care; such as those that are part of a course of treatment planned in advance by the doctor and patient, or readmissions that are done in response to trauma or a sudden acute illness unrelated to the original admission. Neither public policy nor hospital actions should deter these readmissions from occurring. Instead, this guide is meant to better equip hospitals to address the readmissions that are unplanned and potentially the result of missteps in care either during the hospitalization or in the period immediately following the hospitalization. Hospitals should focus on these potentially avoidable readmissions to see if they can act – or they can encourage others to act - in such a way as to reduce their occurrence. This document suggests strategies that hospitals could pursue at different stages of the care continuum to reduce avoidable readmissions.

The strategies on the tables below are the foundational actions in the different interventions to reduce avoidable readmissions.

Table 1: During Hospitalization	Table 2: At Discharge	Table 3: Post-Discharge
• Risk screen patients and tailor care • Establish communication with primary care physician (PCP), family, and home care • Use "teach-back" to educate patient/caregiver about diagnosis and care • Use interdisciplinary/multi-disciplinary clinical team • Coordinate patient care across multidisciplinary care team • Discuss end-of-life treatment wishes	• Implement comprehensive discharge planning • Educate patient/caregiver using "teach-back" • Schedule and prepare for follow-up appointment • Help patient manage medications • Facilitate discharge to nursing homes with detailed discharge instructions and partnerships with nursing home practitioners	• Promote patient self management • Conduct patient home visit • Follow up with patients via telephone • Use personal health records to manage patient information • Establish community networks • Use telehealth in patient care

Using Workforce Practices to Drive Quality Improvement: A Guide for Hospitals

June 2010

AHRQ Agency for Healthcare Research and Quality
Advancing Excellence in Health Care • www.ahrq.gov

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In Partnership with AHA

ACKNOWLEDGMENTS

The Health Research & Educational Trust (HRET), an affiliate of the American Hospital Association (AHA), is dedicated to transforming health care through research and education. The research and publication costs for this guide were funded by the Agency for Healthcare Research and Quality (Contract No. HHSA290200600022, Task Order No. 5).

HRET would like to express our sincere gratitude to the following important contributors who served as advisors to this project:

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Suggested Citation

McHugh M, Garman A, McAlearney A, Song P, and Harrison M, *Using Workforce Practices to Drive Quality Improvement: A Guide for Hospitals*. Health Research & Educational Trust, Chicago, IL. March 2010.

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The authors of this report are responsible for its content. The authors and investigators have all provided assurances to AHA and AHRQ that they did not have any affiliations or financial involvement that created a conflict of interest with respect to any of the material or conclusions presented in this publication. Funding of the Guide by the Agency for Healthcare Research and Quality in the U.S. Department of Health and Human Services was provided to collect and disseminate employment practices that have yielded high quality outcomes. The contents of the Guide should not be interpreted as mandatory national standards of clinical practice or quality health care.

INTRODUCTION

There is ample evidence showing that health care quality in the United States is poorer than it should be and that lapses in patient safety are common and preventable. Health care organizations have been investing significant resources to implement systems and processes to improve care quality, but must pursue these efforts strategically in order to maximize their effectiveness within an environment of growing resource constraints.

A considerable amount of information suggests that workforce practices may represent an important and underutilized resource for supporting quality improvement activities in health care organizations. The availability of a stable, capable health care workforce has been shown repeatedly to be critical to the efficient and effective delivery of health services. Although researchers are still investigating links between workforce practices and care quality, the findings so far suggest that that several practices hold the potential to positively affect organizational outcomes.

The purpose of this guide is to provide hospital leaders and human resources staff a basic description of four high performance work practices (HPWPs) that hold the potential to improve an organization's capacity to effectively attract, select, hire, develop, and retain and deploy personnel in ways that best support a high-performing health care system, and to offer approaches and recommendations for implementing HPWPs in their organizations. These HPWPs fall into four categories.

HPWP Category 1: Organizational Engagement Practices

Practices that ensure all employees' awareness, understanding, and personal stake in the organization's vision, including its current level of success in pursuing that vision

Communicating mission, vision, and values
Sharing performance information
Involving employees in key decisions
Tracking and rewarding performance

HPWP Category 2: Staff Acquisition and Development Practices

Practices that build the quality of the organization's workforce through attention to attracting, selecting, and developing staff

Rigorous recruiting
Selective hiring
Extensive training
Career development

HPWP Category 3: Frontline Empowerment Practices

Practices that affect the ability and motivation of frontline staff to improve the quality of care that their teams provide

Employment security
Reduced status distinctions
Teams/decentralized decision making

HPWP Category 4: Leadership Alignment and Development Practices

Practices that develop leaders and align behavior with organizational goals.

Management training linked to organizational needs
Succession planning
Tracking and rewarding performance

Facilitators

These numerous HPWPs can be facilitated by the following actions, which will be expanded upon in a later section of this guide:

Commit to an organizational culture that focuses on quality and safety
Engage senior leadership support
Involve the human resource department in strategic planning
Identify opportunities for shared learning
Hire human resources professionals with training and experience in HPWPs
Involve employee representatives
Monitor progress

The implementation recommendations presented below were distilled from a review of peer-reviewed and gray literature covering health care and other industries, and from findings from case studies of five health care organizations that have been recognized for their successful workforce practices (e.g., *Fortune* magazine's "Best Companies to Work For," Baldrige National Quality Award). A checklist for readers to document and assess the extent to which HPWPs are used in their organizations is available in the complete guide.

ABOUT *HOSPITALS IN PURSUIT OF EXCELLENCE*

Hospitals in Pursuit of Excellence (HPOE) is the American Hospital Association's strategic platform to accelerate performance improvement and delivery system transformation in the nation's hospitals and health systems. HPOE provides education on best practices through multiple channels, develops evidence-based tools and guides, provides leadership development through fellowships and networks, and engages hospitals in national improvement projects. Working in collaboration with allied hospital associations and national partners, HPOE synthesizes and disseminates knowledge, shares proven practices, and spreads innovation to support care improvement at the local level.

Education

Through HPOE, the AHA disseminates proven practices in performance improvement and delivery system transformation through webinars, case studies and articles in AHA publications, and a dedicated website – www.hpoe.org. The website includes nearly 800 case studies of innovative practices and links to resources in the following areas:

- Care coordination
- Efficiency
- Health and wellness
- Health care equity
- Health information technology
- Healthcare-acquired infections
- Medication management
- New payment and care delivery models
- Patient safety
- Patient throughput
- Workforce

So far in 2011, four national webinars—on disparities in care, hospital employee health and wellness programs, and medication safety—have been produced as part of the HPOE *Live!* webinar series, reaching health care professionals in more than 900 hospitals. Several additional webinars are planned for the remainder of 2011, focusing on such topics as disparities, diversity, population health, quality improvement, care coordination, health information technology and end-of-life care.

Tools and Guides

To support improvement in clinical and operational efficiency and effectiveness, a variety of toolkits and guides that provide resources and strategies are produced. These publications, designed to be practical and action-oriented, help leaders readily identify leading-edge practices and strategies that can drive performance improvement in their organization. More than 40,000 downloads of these publications have been made during the past 18 months.

Six new HPOE guides have been published to date this year and are included in this Compendium:

- A Call to Action: Creating a Culture of Health
- Health Care Leader Action Guide to Understanding and Managing Variation
- Health Care Leader Action Guide: Hospital Strategies for Reducing Preventable Mortality
- Improving Health Equity Through Data Collection AND Use
- Striving for Top Box: Hospitals Increasing Quality and Efficiency
- Building a Culturally Competent Organization: The Quest for Equity in Health Care

Additional guides to be published later this year will focus on improvement spread, leadership development, quality improvement, data and measurement, and clinical integration strategies.

Leadership Development

The nationally renowned **AHA-NPSF Patient Safety Leadership Fellowship (PSLF)**, now in its 10th class, prepares experienced health care professionals to assume leadership roles in advancing patient safety and quality in health care organizations. Since its first class in 2002, more than 300 individuals have taken part in this unique program – representing a diverse mix of health care settings, professions and perspectives. The year-long curriculum includes live learning retreats, self-directed readings, and the completion of a major patient safety improvement project. The current (2011-12) class is comprised of 30 fellows, including physicians, nurses, risk managers, pharmacists, and administrative leaders with a wide range of backgrounds and interests. The fellowship program is co-sponsored by AHA and the National Patient Safety Foundation (NPSF), in partnership with the American Organization of Nurse Executives (AONE), American Society for Healthcare Risk Management (ASHRM), Health Research & Educational Trust (HRET), Health Forum, and the Society for Hospital Medicine (SHM).

In 2011, this successful model has been applied to the launch of a new fellowship program – the **AHA Health Care System Reform Fellowship**. This new program is a six-month highly interactive learning experience designed to provide health care leaders with the tools and skills needed to design, lead and manage emerging care delivery and payment models, such as medical homes, bundled payment arrangements, and accountable care organizations. Through a combination of in-person educational sessions and webinars, participants will learn about the challenges and key success factors in implementing these models through first-hand accounts from organizations that have already started down the path. These sessions will focus on new payment and care delivery models, financial risk management and clinical integration. Fellows will also complete a six-month implementation project, with the goal of advancing their organization's efforts towards implementation of one of the care delivery models.

National Improvement Projects

With funding from the Agency for Healthcare Research and Quality (AHRQ) and in collaboration with state hospital associations nationwide, the Health Research & Educational Trust (HRET), the AHA's research affiliate, is engaging a growing number of hospitals in its initiatives to expand implementation of the Comprehensive Unit-based Safety Program (CUSP) to help prevent healthcare-associated infections, specifically central line-associated bloodstream infections (CLABSIs) and catheter-associated urinary tract infections (CAUTIs). *On the CUSP: Stop BSI* has attracted participation from more than 1,000 hospitals in 46 states, the District of Columbia and Puerto Rico. Preliminary data from adult ICUs in more than 350 hospitals in 22 states show a reduction in CLABSI rates by an average of 35 percent. With an estimated attributable cost of $29,000 per infection, these efforts translate into meaningful improvements in cost and quality.

On the CUSP: Stop CAUTI is in its early stages and will be expanding to multiple states to reduce catheter-associated urinary tract infections. In addition, HRET has received AHRQ funding to launch a project to develop and implement resources to reduce infections in dialysis facilities.

In another national implementation project, HRET is working closely with state hospital associations and several national organizations to promote and support the successful implementation of patient safety tools and resources produced by the Agency for Healthcare Research and Quality (AHRQ). Through this project, more than 600 hospitals participated in live training sessions or webinars on AHRQ's Quality Indicators, Door-to-Doc, and TeamSTEPPS tools during 2010. In addition, more than 350 individuals received certification as TeamSTEPPS master trainers. Also, more than 200,000 copies of AHRQ consumer patient safety educational materials have reached hospitals in 44 states.

Hospitals in Pursuit of Excellence is a collaborative initiative across the AHA enterprise which involves several AHA entities:

- **AHA Solutions, Inc.** is a resource to hospitals pursuing operational excellence. As an AHA member service, AHA Solutions collaborates with hospital leaders and market consultants to conduct product due diligence and identify solutions to hospital challenges in the areas of finance, human resources, patient flow and technology. AHA Solutions provides related marketplace analytics and education to support product decision making. As a subsidiary of the AHA, the organization convenes people with like interests for knowledge sharing centered on timely information and research. AHA Solutions is proud to reinvest its profits in the AHA mission: creating healthier communities.

- The **American Organization of Nurse Executives** (AONE) is the national professional organization for nurses who design, facilitate and manage care. With more than 7,500 members, AONE is the leading voice of nursing leadership in health care. Since 1967, the organization has provided leadership, professional development, advocacy and research

to advance nursing practice and patient care, promote nursing leadership excellence and shape public policy for health care. AONE is a subsidiary of the AHA.

- The **Center for Healthcare Governance** is a dynamic community of hospital and health system board members, executives and thought leaders dedicated to advancing excellence, innovation and accountability in health care governance. Membership with the Center provides unprecedented access to information and resources, from healthcare strategic planning and hospital performance to the leading practices in governance and board development.

- Founded in 1944, the **Health Research & Educational Trust** (HRET) is a private not-for-profit organization involved in research, education and demonstration programs addressing health management and policy issues. An affiliate of the AHA, HRET collaborates with health care, government, academic, business and community organizations across the United States to conduct research and disseminate findings that shape the future of health care.

- **Health Forum** provides communications, information, education and research products and services that advance leadership for health. These services empower health care providers, suppliers, payers and consumers with new knowledge and learning toward the advancement of organizational leadership, market leadership, clinical and medical leadership, and community leadership.

- The **Institute for Diversity in Health Management**, a 501(c)(3) nonprofit organization, works closely with health services organizations and educators to expand leadership opportunities for ethnic minorities in health services management. The Institute's mission is to increase the number of people of color in health services administration to better reflect the increasingly diverse communities they serve, and to improve opportunities for professionals already in the health care field. To accomplish this, the Institute manages several initiatives to generate significant long-term results through educational programs, summer internships, professional development and leadership conferences.

- The **Personal Membership Groups (PMGs)** of the American Hospital Association offer individual membership in the AHA and provide specific education, publications, networking, leadership opportunities, and recognition to targeted healthcare professionals. The societies are organized around distinct professional groups and range in size from 1000 to nearly 6000 members. Professional groups currently represented by the PMGs include healthcare engineering, human resources administration, risk management, community health improvement, resource and materials management, volunteer resource professionals, environmental services, consumer advocacy, and strategy and market development.

Through *Hospitals in Pursuit of Excellence*, the American Hospital Association and its affiliates are committed to assisting the hospital field in performance improvement and focused on sharing and supporting the implementation of best practices. Together, the AHA and the nation's hospitals and health systems continue to actively support our nation's objectives in achieving a health care delivery system that provides safe, timely, effective, efficient, equitable, and patient-centered care.

For more information, visit www.hpoe.org.

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