THE Value Initiative

Members in Action: Redesign the Delivery System

Brigham and Women's Hospital – Boston

Home Hospital Program Provides Quality Care at Lower Cost

The AHA's Members in Action series highlights how hospitals and health systems are implementing new value-based strategies to improve health care affordability. This includes work to redesign the delivery system, manage risk and new payment models, improve quality and outcomes, and implement operational solutions.

Overview

In an effort to provide quality care at lower costs, in 2016 Brigham Health launched a home hospital care model where patients receive hospital-level care in the comfort of their own homes. The home hospital model is emerging as a promising approach to improve value for patients, especially as hospitals are reconsidering how and where they deliver care to patients during COVID-19.

Rather than being admitted to inpatient units after an emergency department (ED) visit, selected patients who meet criteria are discharged to their homes, where a team of physicians, nurses and other providers care for them daily at the same levels as if they were in the hospital. Through continuous electronic monitoring, video chats and texts, clinicians track patients' progress between visits.

Patients eligible for care at home live within the hospitals catchment area. Those patients have manageable medical issues, such as pneumonia, asthma, chronic obstructive pulmonary disease, cellulitis or urinary tract infections. Brigham Health estimates approximately 15% or more of its inpatients may meet the criteria for this program.

Impact

Brigham Health serves about 300 patients per year in its home hospital program. They have studied the efficacy of its home hospital program in two randomized controlled trials in *2018* and *2020*. The results of the two trials demonstrate the efficacy of home hospital for improving value:

- 38% lower direct costs than the control group being cared for in the hospital;
- Three lab orders, compared with 15 for patients in the hospital; and
- Imaging rates of 14%, compared with 44% for patients in the hospital.

In addition, post-acute care utilization was decreased for home hospital users. The 30-day readmission rate for home hospital patients was 7% versus 23% for those receiving inpatient care, and 7% versus 13% of control group patients were seen in the ED within 30 days.

While patient experience rated high in both care settings, patients at home reported less anxiety, more control, easier time visiting with family and friends and more physical activity. Patients in the hospital recorded an average of 160 steps during their stay, compared with 1,800 steps for patients at home and spent 18% of the day laying down, compared to 55% in the control group. No patients were transferred back to the hospital.

"We do get 'hip hip hoorays' and cheers in the ER sometimes when patients get to go home," said David Levine, M.D., M.P.H., who leads the program. "Most folks want to go home. We like to say we discharge them from home to home at the end of their stay" in the program.

Dr. David Levine cares for patient William Terry at home as part of Brigham and Women's home hospital care program.

Clinical staff facilitate other services in the home, if needed, such as meals, occupational therapy, physical therapy, social services, home health, ultrasound, X-rays or other care patients would have received in the hospital.

Lessons Learned

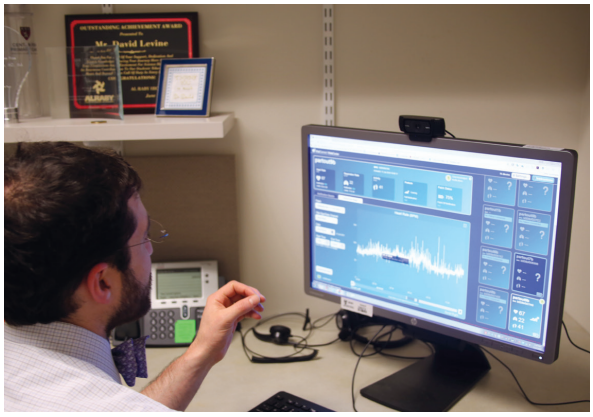
Levine said Brigham Health continues to experiment with the staffing model, saying providers other than physicians and nurses may be appropriate to engage in home care. For example, Brigham Health is considering including staff who can support patient care by making routine home repairs, fixing broken windows or removing rugs that pose fall risks. In addition, community health workers are being considered to address social determinants of health, potentially preventing future hospitalizations.

"We are always evolving," said Levine. "We certainly do not have everything perfect."

Future Goals

Levine envisions Brigham Health will expand the program to include additional diagnoses and more hospitals. He hopes other health systems in the country will adopt home hospital programs and is involved with a pilot looking at how to adapt the home hospital model for rural communities.

Levine is also a leader of a national coalition to share evidence-based approaches through the *Hospital at Home Users Group*. Levine said another essential element to home hospital care becoming standardized is sustainable reimbursement. Some Boston-area commercial payers are impressed with the potential for high-quality care to be available at a lower cost, and in November 2020, the Centers for Medicare & Medicaid Services launched Acute Hospital Care At Home program to provide hospitals with the flexibility to treat some acutely ill patients in their homes.



Patients in the home hospital care program experienced fewer clinical interventions, lower costs and comparable patient satisfaction scores as those being cared for in the hospital.

Contact: David Levine, M.D., M.P.H., Assistant Professor of Medicine, Brigham Health, Harvard Medical School
Telephone: (617) 732-7063
Email: *dmlevine@bwh.harvard.edu*