

Foundational Courses for the Baccalaureate Nursing Degree: Enhancing Efficiency for Academic Progression

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ABSTRACT

Background: The Institute of Medicine recommendation for a more educated nursing workforce has triggered significant activity in the area of academic profession, particularly in pre- and postlicensure baccalaureate nursing education. Many innovative academic progression models involving universities and community colleges have emerged. Among the most common barriers to this effort are inconsistent prerequisite course requirements. **Method:** A workgroup convened to discuss commonalities and differences of general education and prerequisite course work and propose core prerequisite coursework for the baccalaureate nursing degree. **Results:** A course menu strategy for foundational baccalaureate nursing courses was proposed that includes four general course categories with credit ranges and common courses or content for each category. The four proposed foundational course categories are general education, basic sciences, social sciences, and human sciences. **Conclusion:** A need exists to reduce barriers affecting academic progression. The foundational course approach proposed has potential to reduce some of these barriers. [*J Nurs Educ.* 2016;55(7):373-378.]

In 2010, the Institute of Medicine (IOM) released its report *The Future of Nursing: Leading Change, Advancing Health*. The report was a thorough examination of how nurses' roles, responsibilities, and education should change to meet the needs of an aging and increasingly diverse population and to respond to a complex, evolving health care system. Recommendations in the report focused on the critical intersection between health care needs across the lifespan and the skills and knowledge required of nurses to address these needs. The recommendations were intended to enhance nurses' contributions to the delivery of care, resulting in improved health care for all Americans. One of the four key messages from the IOM (2010) report was that "nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression" (p. 6). In addition, a specific recommendation was to increase the proportion of nurses with a baccalaureate degree to 80% by the year 2020 (IOM, 2010, p. 12).

During the past several decades, the majority of nurses have been educated in associate degree programs. Data reported by the National Council of State Boards of Nursing (2010, 2015) show a gradual increase in the number of graduates of baccalaureate degree programs taking the National Council Licensure Examination for Registered Nurses (NCLEX-RN®) for the first time (from 39.3% in 2010 to 44.8% in 2015). A significant factor limiting a rapid increase in prelicensure baccalaureate nursing program enrollment is capacity. The American Association of Colleges of Nursing (AACN) reported that more than 50,000 qualified applicants to prelicensure baccalaureate nursing programs were not offered admission (AACN, 2015). Insufficient numbers of qualified faculty to teach, budgetary constraints, insufficient clinical sites and preceptors, and insufficient classroom space were the most commonly cited reasons that applicants were not admitted.

The 80% baccalaureate-prepared nursing workforce recommendation has triggered a significant increase in enrollment and graduation among registered nurses in postlicensure baccalaureate nursing programs (often referred to as RN-to-BSN programs). Between 2010 and 2014, enrollment increased from 74,035 to 122,413 and the number of graduates increased from 21,246 to 45,099 (AACN, 2015). However, RN-to-BSN programs are not always efficient, and many students do not find academic progression particularly

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seamless due to unnecessary barriers created by prerequisite course requirements.

The enrollment and graduation data for pre- and postlicensure baccalaureate nursing education provide some evidence of the significant challenges the nursing profession faces to attain an 80% baccalaureate-prepared nursing workforce. Since the beginning of the campaign for action, the needle has moved only from 49% to 51% (Center to Champion Nursing in America, 2015); thus, greater efforts on academic progression are needed. Achieving this goal will require collaboration between universities and community colleges for a more efficient nursing education system. The purpose of this article is to present the recommendations of an expert panel that developed guidelines to help community colleges and universities develop greater efficiency in academic nursing.

BACKGROUND

A more highly educated nursing workforce is imperative for the care of patients and will affect the viability of quality and affordable health care in the future. Academic progression pathways, particularly for nurses with associate degrees, also represent a key link in the supply chain for future nurse practitioners, nurse scientists, and nursing faculty. Because of an elongated education pipeline with multiple educational entry points into nursing practice and an aging cadre of nurses with advanced degrees, the nation is facing a severe shortage of nursing faculty and advanced practice registered nurses to provide primary care.

A joint initiative of the Robert Wood Johnson Foundation (RWJF) and AARP, The Future of Nursing: Campaign for Action at the Center to Champion Nursing in America is a nationwide effort to implement recommendations from the *Future of Nursing* report. It supports 51 state-based action coalitions, each of which is working to advance one or more of the IOM recommendations. All state action coalitions have projects associated with academic progression; the majority are working specifically to increase the proportion of baccalaureate-prepared nurses in the workforce to 80%. Since 2012, RWJF has invested millions of dollars in academic progression by providing grants to state action coalitions through two initiatives: Academic Progression in Nursing (APIN) and the State Implementation Program (SIP). APIN is an initiative of RWJF in partnership with the Tri-Council for Nursing, administered by the American Organization of Nurse Executives. SIP grants to state action coalitions are administered by the Campaign for Action and support the development and implementation of innovative practices that support seamless academic progression (RWJF, 2015a, 2015b).

As the APIN grantees pursued their projects, it became clear there were many common challenges and barriers to supporting the academic progression of nurses from associate to baccalaureate degrees. Action coalitions that had collaborative projects involving multiple nursing programs across a state or region to enhance pre- or postlicensure baccalaureate nursing education also faced a series of challenges. To address those shared challenges and remove commonly faced barriers, RWJF and the APIN National Program Office convened a national Moving

Forward meeting (involving grantees and participants from accreditation bodies, academia, and practice) in April 2014. The purpose of the meeting was to discuss issues and challenges related to seamless academic progression (including accreditation, academic processes, and employer practices) and propose innovative solutions. One of the primary issues identified and discussed was the variability and lack of consensus regarding non-nursing course requirements for the BSN degree. Because of the lack of this consistency, nursing faculty attempting to develop seamless statewide nursing curricula struggled to gain agreement about what pre-nursing courses to require. In addition, students enrolled in RN-to-BSN curricula faced duplication of credits, credits not accepted, or requirements to complete courses unique to a particular institution; these inconsistencies represent barriers to seamless progression from one degree to the next. It was clear that the lack of consistency for BSN general education requirements needed further investigation.

As a result of the Moving Forward meeting, the APIN National Program Office convened a small expert panel of APIN grantees, community college, university, regulation, and practice representatives to analyze existing prerequisites and general education requirements for the baccalaureate degree and propose an ideal set of these requirements for the baccalaureate degree. The following section presents the findings and recommendations of the panel.

ANALYSIS OF PREREQUISITES AND GENERAL EDUCATION REQUIREMENTS

The panel analyzed a sample of prerequisites and general education requirements at several community college and university nursing programs to identify commonalities and differences. The sample, collected by the APIN National Program Office, included curricula from the nine states with one or more collaborating institutions offering academic progression programs. The analysis involved comparing and contrasting the nine academic plans, including the type of course and the course credits, with a goal to identify consistencies and, if possible, the source of inconsistencies. The process included an attempt to identify common patterns of courses required, the number of credits for each of the courses required, laboratory requirements for science courses, and the sequence of courses in the curriculum.

As a result of the analysis, a number of variations and inconsistencies in credits or content areas were identified. For example, chemistry was required in some but not all nursing programs. Some nursing programs required a specific sequence of basic science courses, which may have reflected a department or university requirement and not a specific curriculum decision made by nursing faculty. Basic science courses such as biology, chemistry, and microbiology varied in terms of credit hours and laboratory requirements. Some students were required to repeat course content if one college or university specifically required a laboratory component for a course and the student's previous institution did not.

There was variability in the number of credits required for groups of courses, such as pathophysiology or growth and development. For example, some programs require a 3-credit

course in pathophysiology, but others require up to 6 credits. There were also inconsistencies when content was combined with, or integrated into, other courses at an institution. For instance, pathophysiology may have been offered in a course that also included anatomy and physiology; when this was the case, the total number of credits may have differed. As another example, some curricula require a separate nutrition course, whereas others integrate nutrition into nursing courses.

In addition to these types of inconsistencies, a number of arbitrary requirements were found—often as program requirements that were unique to a college or university. As an example, a college or university might require a specific course on state history or religion to meet requirements set by the university's governing board.

Wide variability was also seen in what were considered prerequisite courses (taken prior to admission into a nursing program), as opposed to courses taken after admission to a nursing program. These variations are often associated with the type of program or the point of entry into a program; thus, what was considered a prerequisite nursing course in one program may have been a nursing course or a general education requirement in another. For example, pharmacology may have been offered prior to starting a nursing program at one institution and offered as one or more courses within a nursing program at another. Likewise, microbiology may have been offered as a prerequisite to the nursing program at one institution and offered in the early semester after admission to the program at another. Thus, the term *prerequisite* was context specific and not necessarily the best term to use to describe such courses. The inconsistency in prerequisite courses in nursing education is largely the result of the multiple pathways into the profession. Benner, Sutphen, Leonard, and Day (2010) noted this issue when comparing medical education (that has standard core prerequisite courses with limited variability) to nursing education, which lacks standardization of, or equivalence in, prerequisite courses in the various educational pathways.

This analysis led to the conclusion that there is general consistency in the content areas seen in prenursing and general education courses for both baccalaureate and associate degrees in nursing, but a complete lack of consistency exists in how these content areas are applied within the curricula. These inconsistencies become barriers for transferring students or those who are seeking advanced degrees and for nurse educators, particularly in developing consortium or partnership models among multiple schools.

PROPOSING RECOMMENDATION

The initial charge for the panel was to propose standardized prerequisite coursework and general education requirements for nursing education, with a particular focus on baccalaureate nursing education. Authors of the Carnegie study on nursing education previously noted the need for a careful reevaluation of nursing education prerequisites, suggesting that a multidisciplinary national advisory group should “agree on content that pre-requisite courses must cover before students can start a nursing program” (Benner et al., 2010, p. 37). An attempt to

make specific recommendations, course-by-course and with course sequencing, quickly led to circular discussions, with no agreement among members of the panel. This issue was recognized as one that nurse educators in multischool consortiums were experiencing when trying to develop innovative academic progression models; thus, we concluded that this was not a reasonable strategy.

An alternative strategy—best described as a course menu approach—was explored. The course menu term for the strategy was adopted based on the following analogy used to facilitate the work:

A balanced and nutritious diet includes a variety of foods eaten from four food groups; there are also guidelines regarding a target range of calories and percentage of diet that is ideally consumed from each of the food groups.

Using this as a basis for our thinking, we began talking about groups of courses as opposed to specific courses. Four categories of foundational courses were identified: general education, basic sciences, social sciences, and human sciences. These categories are shown in **Table 1**, with examples of the type of courses and content each represents. An expected range between 60 and 64 credits for the total number of foundation course credits (roughly half of the credits required for a baccalaureate degree) is recommended. The panel also recommended a general target number credits for each category, with a \pm notation to acknowledge the need for variability (as opposed to mandating specific credit requirements for each course group). Subtle variations in target credits for each category are necessary to accommodate the variability found in various state and institutional policies. Furthermore, at this time, no evidence exists to support a specific credit mandate or range for any course group. Also note that the details for courses listed within each category are intentionally nonspecific because general parameters within each category are established. The specific parameters for how they are applied are to be determined by the schools collaborating in a consortium.

The panel also intentionally avoided the term *prerequisite* and instead used the terms *non-nursing* or *foundational* course content, acknowledging that courses could be offered before or after admission to a nursing program in a variety of sequences. For example, some prelicensure nursing programs admit students to the nursing program as freshman and some admit students in the sophomore or junior years; thus, the term *prerequisite* is relative to the admission point and unique sequencing of courses as opposed to a specific structure. Likewise, curricula for postlicensure baccalaureate programs vary as far as admission and sequencing; therefore, the concept of foundational content may be met by courses taken as part of the nursing program or before transferring into a program; some of the courses could be completed in a community college setting. The panel determined that these distinctions are less important than focusing on the type of content required. Members of the panel also conceded that content could be the focus of an individual course or integrated into several courses.

Collaborating schools developing a shared curriculum model can use this approach to reduce or eliminate the problems associated with variability between schools, as long as there is agreement among the collaborating schools of the acceptable

TABLE 1

Categories and Credit Ranges of Foundational Courses for the Baccalaureate Degree and Course Examples

General education courses (24 credits ±)
Communications
English
Humanities/Fine Arts
Statistics/Logic
Basic Sciences (12 credits ±)
Chemistry
Biology
Microbiology
Physics
Social Sciences (9 credits ±)
Growth and Development
Psychology
Sociology
Human Sciences (16 credits ±)
Anatomy and Physiology
Pathophysiology
Nutrition
Pharmacology
Total foundational credits: 60-64 credits

range of variation in each category. In other words, this approach allows flexibility in how each individual school actualizes foundational courses within a consortium, as long as each meets the general category requirements set by the consortium. Although this approach is intended to facilitate collaboration, this does not eliminate the need for administrative leaders within nursing programs to advocate for exemptions to institutional policies when needed. For example, if a university has a policy requiring a specific course as a graduation requirement for all undergraduate students and a transferring consortium student has met the minimum number of credits within the course category, nursing administrators need to be willing to request exemptions to such policies within their institutions to reduce academic progression barriers. Institutional policy exemption requests are more likely to be granted when a compelling argument can be made, such as providing evidence of how a policy change enhances the educational pathways for nursing students through collaborative arrangements.

APPLICATION OF COURSE MENU APPROACH IN A NURSING CONSORTIUM

Application of the course menu approach is relatively simple, but it requires planning and negotiation among collaborating schools in a consortium. The following exemplars demonstrate how this process can be applied.

Exemplar 1

Four nursing schools agree to collaborate as a consortium in an academic progression model. Based on state regulations, the four schools are limited to 122 credits for a BSN degree program. It is decided that the curriculum will be based on 60 credits earned in foundational courses and 62 credits earned in nursing courses, with admission to the program in the junior year after completion of all 60 credits in the foundation courses. Nursing faculty leading the curriculum revision from the four schools use the information in **Table 1** to develop parameters for the foundational courses. The sum of the target credits in each of the four categories shown in **Table 1** is 61. The curriculum committee faculty agrees to adopt the recommended credit targets for General Education courses, Basic Science courses, Social Science courses, and agree to a minimum credit requirement of 15 credits for the Human Sciences courses. The leaders also agree not to stipulate the specific courses within the General Education, Basic Science, and Social Science categories, but to require courses in the following content areas for the Human Science category: Anatomy and Physiology, Pathophysiology, Nutrition, and Pharmacology. An example of how prerequisite courses taken by students from two different schools meet the agreed upon foundational course requirements is shown in **Table 2**.

Exemplar 2

Two state-funded colleges offering an RN-to-BSN program agree to partner with six community college programs to streamline progression of the associate degree graduates into the RN-to-BSN program. Using the course menu approach, the schools agree on the following foundational course requirements: 24 credits in General Education with at least one course in statistics; 12 credits in Basic Sciences, 12 credits in Social Sciences, and 16 credits in Human Sciences, with at least 6 of those credits in pathophysiology content. The sum of all foundational courses equals 64 credits. Up to 32 transferable credits earned in the associate degree nursing program are applied toward the BSN degree. Students complete 24 credits of RN-to-BSN courses and 6 upper division elective credits at the university. The total number of credits on this plan equals 126.

BENEFITS: WHY IS THIS IMPORTANT?

The adoption of a streamlined approach for foundational courses through course groups will standardize the preparation for professional nursing practice and will benefit students and nursing programs, especially for nursing programs building collaborative partnerships. Students have consistently reported that having to repeat coursework to satisfy unique requirements for a specific program was a barrier to continuing their education in RN-to-BSN programs or to transferring from one nursing program to another. The menu approach can also be used to enhance transferability and acceptance of credits for associate degree nursing program graduates who want to pursue further education and allows for flexibility without penalizing students if they transfer from another institution. Perhaps one of the greatest benefits for students is the reduced cost and time to attain more advanced degrees by eliminating unnecessary repeti-

tion of previously completed coursework.

For nursing programs, a menu approach provides a clear guideline for administrators and advisors to accept credits for students transferring from another institution or for those progressing from associate to baccalaureate nursing programs. A menu approach will also lead to a more consistent framework to facilitate collaborative curriculum development among nursing programs. Such collaborations may include two or more programs developing an agreement for RN-to-BSN progression or for multiple schools (associate or baccalaureate) working on regional or statewide common curricula. Widespread adoption of this approach could eventually lead to a common agreement and standardized preparation for professional nursing practice.

IMPLICATIONS FOR NURSING EDUCATION

This is a dynamic and unique time in the history of the nursing profession. Community college and university nurse leaders are working collaboratively for the benefit of students and patients. The synergy is compelling and unique, and the nursing community is no longer working in silos. There is recognition that graduates of community college programs are part of the solution when it comes to improving the quality of patient care across all settings, addressing the nurse faculty shortage, preparing nursing scientists and advanced practice nurses, diversifying the nursing workforce at all levels, and developing a more highly educated nursing workforce. Community colleges foster a culture that promotes and values academic progression. However, this progression needs to be seamless, and students should not be confronted with so many obstacles when moving from an associate's degree to a baccalaureate degree in nursing.

There has been a recent emergence of many innovative models focused on baccalaureate nursing education involving regional or statewide adoption of a standardized curriculum (Close, Gorski, Sroczyński, & Farmer, 2015; Gains & Spencer, 2013; Giddens, Keller, & Liesveld, 2015; Hall, Causey, Johnson, & Hayes, 2012; Magnussen, Niederhauser, Ono, Johnson, Vogler, & Ceria-Ulep, 2013). Such models are built on formal partnerships among the participating community colleges and universities and an agree-

TABLE 2
Nursing School Consortium Foundation Course Requirements and Application

Foundational Course Requirements	School 1 (No. of Credits)	School 2 (No. of Credits)
General education (24 credits)	Public Speaking (3)	Speech (4)
	English 101 (3)	English 101 (3)
	English 102 (3)	English Composition (3)
	History (3)	World History (3)
	Intro Algebra (3)	Intro Women Issues (3)
	Arts in Culture (3)	Medieval History (3)
	Music Appreciation (3)	Intro to Humanities (3)
	Statistics (4)	Math for Logic (3)
Basic sciences (12 credits)	Chemistry 101 (4)	Biology 111 (3)
	Microbiology 121 (4)	Biology 120 (3)
	Biology 112 (4)	Microbiology 132 (6)
Social sciences (9 credits)	Psychology 114 (3)	Psychology 101 (3)
	Growth & Development (3)	Life Span Development (4)
	Intro to Sociology 100 (3)	Intro Social Science (3)
Human sciences (15 credits)	Anatomy & Physiology (3)	Anatomy & Physiology (4)
	Pathophysiology I (3)	Pathophysiology (5)
	Pathophysiology II (3)	Nutrition (3)
	Nutrition (3)	Pharmacology (3)
	Pharmacology (4)	
Total minimum credits = 60		

ment on curricular requirements. The foundational course approach has the potential to facilitate the development and implementation of these and future curriculum models.

Universities and colleges have long allowed students many options for completing general education courses, although some universities may have a specific requirement (e.g., a foreign language). Building on the flexibility offered by general education courses, a menu approach extends the flexibility into the other foundational course categories where flexibility is less common. Valiga (2015) has encouraged nurse educators to “rethink our reliance on specifying pre-requisites” by instead “specifying the knowledge skills and values that students must have to enter our courses” (p. 183). Nursing faculty must have clarity regarding how key concepts from foundational coursework are effectively built upon within nursing courses to deepen students' learning experience. The goal should be to extend students' ability to apply such principles in nursing practice, ultimately leading to safe and effective health care delivery.

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