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Review Article

A Geriatric Education Model for Graduate Entry Students

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Abstract

The United States is experiencing the onset of a "silver tsunami" as increasing numbers of adults reach age 65 over the next couple of decades. The expansion of this population will have a major impact on the health care system. To meet these older adults' current and future health care needs, schools of nursing must prepare students in geriatric care at the pre-licensure and graduate levels. The Geriatric Internship Program at our graduate nursing school was one component of a larger project, Comprehensive Geriatric Nursing and Education across Settings I, designed to increase the knowledge of nursing students, faculty, and personnel to improve the quality of care for older adults. Students in the program increased their understanding of the complexities of geriatric care while making a commitment to further their education in advanced practice nursing specialties with this population focus.

Keywords: Geriatrics; Nursing education; Graduate entry students

Introduction

The number of older adults in the United States is expected to increase exponentially over the next three decades. The population of Americans 65 years and older is projected to more than double to 70 million by the year 2030, while the number of centenarians will increase from 65,000 to 381,000 [1]. Older adults have more acute and co-morbid conditions that will require an increase in hospital and community-based health care services [2]. To promote more positive outcomes for this population in their encounters with health care providers, nursing students must be educated about the best practices in geriatric care [3,4]. Indeed, achieving better outcomes for older adults requires professional nurses committed to the care of this population across settings. The interest in this population often starts in nurses' professional education. To this end, the authors developed a geriatric education model building upon an existing accelerated post baccalaureate curriculum with additional learning opportunities for students. This curriculum change focused on including evidence-based theories of practice, integrating selected clinical experiences, and offering geriatric professional and advanced practice nurse preceptors to prepare the next generation of professional nurses committed to the care of older adults.

Graduate Entry Curriculum

Accelerated nursing programs were developed to educate applicants with a baccalaureate degree in another discipline as professional nurses. As of 2011, the United States had 235 such programs, with 63 granting a Master of Science degree in Nursing [5]. These graduate entry programs prepare students as professional and advanced practice nurses through curricula designed to build upon their previous learning experiences [5]. The graduate entry program targeted for the geriatric education model was created at our graduate school of nursing in 2004 to address shortages of professional nurses and advanced practice nurses. Students in this pre-licensure program were prepared as professional nurses and were eligible to take the National Council Licensing Examination for Registered Nurses after completing their first year and receiving a Certificate of Completion [6]. Specialty graduate options for these students included the Dual Track Gerontological Nurse Practitioner Specialty with either the Adult Nurse Practitioner or Adult Acute/Critical Care Nurse Practitioner Specialties [7]. These specialty offerings were started in response to the need for advanced practice nurses prepared as gerontological nurse practitioners in primary and acute care [8]. The students in these specialties also included nurses with a baccalaureate degree in nursing seeking graduate education as geriatric advanced practice nurses. Implementing this curriculum change created several challenges. The first was focusing the geriatric didactic and clinical experiences on evidence-based practice. This change required intensive review of the current literature for scientific outcomes or "best practices" in geriatric care. The second challenge was maintaining students' interest in elder care, as they transitioned through caring for populations across the age spectrum in their graduate entry program education. This challenge was met by the faculty's commitment to educating students at the professional practice level to meet the care needs of this growing older population and their enthusiasm about geriatric care, which motivated students to continue with this area of study in primary or acute care. The third challenge in this program was the requirement for additional courses, clinical hours, and costs to provide the specialty education. To address this issue, faculty at our graduate school of nursing applied for and received grants from federal and foundation sources for scholarships and traineeships for selected students. One grant covered tuition and fees [9], while another helped cover these costs plus attendance at nursing leadership conferences [10]. The fourth challenge during the inception of the graduate entry program was educating nursing and hospital administrators, nurses, other inter-professional providers, and alumnae on the valued added of this educational pathway to nursing. The faculty addressed these concerns on an ongoing basis prior to and during inception of the graduate entry program, whose students have had a positive impact as professional nurses during

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their education in this program. Throughout the program, the faculty addressed each challenge to provide students with evidence-based content and clinical experiences, preceptorships with geriatric professionals and advanced practice nurses, and funding to support their nursing education.

Comprehensive Geriatric Education and Mentoring Across Settings (COGEMS) I

This project was conceived in 2006 with a tripartite mission: to enhance the knowledge of students, nurses, and interprofessional personnel caring for older adults. To achieve this mission, the project is comprised three programs: a Geriatric Internship Program for pre-licensure students, a Geriatric Clinical Program for nursing personnel, and a Geriatric Fellows Program for nurse faculty and nurse administrators. The overall goal was to improve the quality of care and safety of older adults in private and public hospitals, sub-acute care facilities, and long-term care facilities [11]. The aims of the Geriatric Internship Program were: (1) to enhance the knowledge of geriatric care for graduate entry students, and (2) to increase the numbers of students committed to geriatric professional nursing [11]. This program within the Co-GEMS project, was guided by the geriatric education model.

Review of the Literature

Schools of nursing have focused on curriculum innovations in undergraduate nursing education through various national initiatives. The Hartford Geriatric Nursing Initiative funded by the John A. Hartford Foundation (JAHF) partnered with the American Academy of Nursing and the Hartford Centers of Geriatric Nursing Excellence to establish the project, Building Academic Geriatric Nursing Capacity Program for pre-doctoral scholars and post-doctoral fellows [12]. The JAHF also funded the AACN to enhance geriatric content in baccalaureate and graduate nursing programs, along with awarding graduate scholarships [9]. The Hartford Centers of Geriatric Nursing Excellence have also developed and implemented curricular activities that integrate new geriatric content and clinical experiences into baccalaureate curriculae, focusing on competency-based geriatric education, expanding opportunities for baccalaureate in nursing to PhD pathways, and developing nursing and inter-professional web-based geriatric courses [13].These innovations have benefited undergraduate curricula by grounding them in evidence-based practice, generating interest in geriatric nursing, enhancing commitment to graduate education in geriatric advanced practice nurses, and fostering interest in research-focused doctoral programs [14].

The United States has made positive strides in improving health outcomes for Americans, starting with Healthy People 2000 [15]. This project followed Healthy People 2010, whose health indicator data demonstrated a trend toward improved life expectancy based on gender and race, whereas women and white populations previously had longer life expectancies than the Black population [16]. Since older adults are the fastest growing population cohort in the country, Healthy People 2020 was updated to include objectives to promote positive outcomes for this population [17]. Older adults have higher morbidity and mortality rates for major health problems than their younger counter parts. They are often at risk for chronic conditions, e.g., arthritis, diabetes, dementia and heart failure. Complicating these issues is that many older adults are living at poverty levels in greater numbers than are younger adults [17].These risks and complications are faced by pre-licensure nursing students in caring for their geriatric patients in both acute care and community-based settings, especially around discharge planning.

Older adults have been estimated to comprise 20.3% of the US population by 2030 [18]. The numbers of older adults with acute and chronic diseases will increase exponentially, resulting in rising mortality rates for this population [19]. Integrating innovative models of geriatric education will increase the cadre of professional nurses prepared to meet the challenges of caring for older adults now and in the future.

Graduate Entry Curriculum

When the graduate entry curriculum was first developed, it included health problems that contributed to increased mortality and morbidity as priority areas for the care of adults and older adults. As a result, the curriculum was developed to also incorporate objectives of Healthy People 2000 [20]. And its subsequently updated versions [21, 22].The framework for the curriculum also included the outline and competencies for professional nurses as reported in The Essentials of Baccalaureate Education for Professional Nursing Practice [23], and Older Adults: Recommended Baccalaureate Competencies and Curricular Guidelines for Geriatric Nursing Care [24]. As these Essentials and Competencies were updated, they were also incorporated in the curriculum [25]. These resources not only served as guides for the faculty teaching geriatric content and supervising clinical learning experiences, but also provided the foundation for developing and subsequently modifying the curriculum.

The graduate entry curriculum continues to be offered over five semesters, with the majority of theory and clinical experiences in the first three semesters. Content on the care of older adults is threaded throughout the curriculum. This integration of geriatric care into the curriculum starts with the foundational courses, continues in the specialty courses, and culminates with the community health courses.

Geriatric Integration

Curriculum changes grounded in evidence-based practice refocused the content of selected graduate entry didactic courses and clinical learning experiences on geriatric care. The geriatric emphasis in each course focuses on health promotion and disease prevention. These courses also integrate the rewards and challenges of working with older adults to maintain or regain their function with acute or chronic illness. Presentations on geriatric nursing care also integrate evidence from research studies and systematic reviews. Traditional teaching strategies for integrating geriatric content included the use of case studies, role-play, and integrating technology. These methods have helped our students to gain a deeper understanding of caring for older adults using the affective domain, along with the traditional cognitive and psychomotor domains. The integration of geriatric content into the curriculum is identified in (Table 1).

Several lectures in pathophysiology and pharmacology are dedicated to the biology of aging at the cellular, organ, and systemic levels. These presentations include a discussion about currently

Table 1: Examples of Geriatric Curricular Innovations.

Course Content	Geriatric Content	
	Evidence-Based Didactic	**Clinical**
Professional Nursing	Clinical decision making across the life continuum Health promotion and prevention actions in caring for geriatric populations Person-centered teaching plan; Considerations across the life continuum	This course has no associated clinical component, but all clinical settings address issues related to the didactic geriatric content
Pathophysiology	Biology of aging Theories of aging Physiologic changes with normal aging Pathophysiologic changes with disease	This course has no associated clinical component, but every clinical course addresses the concepts of aging with each geriatric patient cared for in acute and community-based settings.
Pharmacology	Pharmacodynamics and older adults Polypharmacy in older adults Adverse drug events Medication dosing in older adults Special geriatric considerations in medication administration	This course has no associated clinical component, but every clinical course considers the clinical and physiologic implications of medication administration and metabolism for each geriatric client cared for in both acute and community-based settings.
Health Assessment I & II	Physical, cognitive, and cultural assessment of older adults Special considerations for older adults requiring oxygen, transfers, restraints, mobility devices, enteral and parenteral nutrition, wound care, urinary devices, enemas, and medication administration.	Evaluation of health assessment skills and nursing procedures for adults/older adults in a laboratory setting.
Adult Health I & II	Nursing care of geriatric clients with co-morbid conditions Introduction of Chronic Care model Geriatric syndromes End of life issues Elder abuse Caregiver burden	Care of geriatric clients on oncology, neurologic, trauma, and orthopedic acute care units. Care of geriatric clients receiving home nursing care services
Internship	Leadership in the care of older adults Presentation by geriatric nursing leader on best practices in geriatric care Transition into the role of a professional nurse with a geriatric specialty	Care of geriatric clients on a variety of acute care clinical units in a precepted experience Geriatric nursing leader as resource for students
Community Health Nursing: Promoting the Health of Populations	Population health Health disparities Environmental health Policy	Geriatric Community Health Clerkship with School of Medicine students; focus on assessment of geriatric population, advocacy, policy, and resource availability Other opportunities include the Oral Health Clerkship

accepted mechanisms of aging and descriptions of physiological changes in various organ systems that alter their efficiency with advancing age. Students are introduced to possible ways to slow down age-related physiological decline and prevent associated diseases, e.g., the concept of caloric restriction with adequate nutrition for healthy aging [26]. Students learn about drug interactions and dosage adjustments that are needed for efficacy and safety during various stages of the life cycle. Also discussed are drugs specifically used in treating diseases of older adults such as Alzheimer's and Parkinson's. The issue of polypharmacy is discussed, along with new medications approved by the Federal Food and Drug Administration for use with adults and older adults.

The health assessment courses include geriatric intensive modules focused on vision, hearing, self-care deficits, and immobility and/or ambulatory challenges that increase with older age, resulting in greater risk for morbidity and mortality. In the laboratory module focusing on feeding, students role-play as either visually impaired older adults or their nurses. Such scenarios provide affective domain imprints on students as aging clients and as "nurse." In these scenarios, the student/client is uncertain of the temperature, texture, and/or timing of the next bite of food without the explicit communication from the nursing student. Students leave this experience with a deeper appreciation of how their communication skills create an atmosphere that either supports or creates a barrier to positive nutritional intake. The medical-surgical courses present information on caring for older adults with a variety of health problems, geriatric syndromes, and end-of-life concerns. In the first course, students are introduced to the care of adult and geriatric clients with acute health problems. Students are presented with multiple disease processes, with a focus on adult and older adult nursing care. Utilizing the nursing process, students create concept maps within the class discussion. These maps focus on [27] health function patterns, including variations in nursing assessments typically found in caring for older adults. An example of the integration of content on older adults is a cardiac case study. In the class discussion of this case, students learn how the elasticity of the heart changes with aging. This presentation prompts a student discussion about nursing diagnoses particularly important for older adults related to baseline cardiac output. Each class utilizes a case study and concept map approach to focus on nursing assessment and care of older adults.

In the second course, the Chronic Care Model (CCM) is integrated as the overarching framework used to introduce concepts of chronic care and population health for improving care at the individual and population levels [28]. The CCM has six components: organizational support,; clinical information systems; delivery systems design; decision support; self-management support; and community resources. When providing care, nurses assess the multi-factorial nature of chronic health problems requiring comprehensive care interventions involving patients, their providers, and their health systems. Interventions based on the CCM have been shown to generally reduce health care costs or lower the use of health care services for heart failure, diabetes and asthma [29]. As well as improve patient care and health outcomes [30]. The geriatric component of the graduate entry pathway also includes a required module focused

on geriatric population trends, issues managing chronic disease, interviewing older adults, and evaluating and managing these clients through functional, cognitive, medication, nutrition, pain, fall, immunization, substance abuse, and physical assessments.

These concepts are portrayed in the movie, Young at Heart, a contemporary documentary focusing on a local geriatric musical group [31]. The students critique this film and identify various geriatric issues in this healthy, community-dwelling population, including disability, sensory impairment, chronic disease management, interpersonal relationships, and death. This teaching methodology highlights how quickly health can change in a community-dwelling geriatric population and its impact on family and friends. Students have reported understanding more deeply the potential of community-dwelling geriatric populations and the multitude of losses they experience on a regular basis.

Pre-licensure Clinical Internship

Our pre-licensure clinical internship highlights synthesizing nursing care. Each student is paired with a registered nurse preceptor at hospitals across the state. Students learn to independently care for assigned patients with the guidance of the preceptor. Post-conference topics and required case studies have highlighted complex care considerations for the hospitalized geriatric population. Students repeatedly report the impact of dementia, delirium, incontinence, and poly pharmacy on these patients' increased risk for falls and health literacy gaps for discharge planning. Students become more critically aware of how each hospitalization can create a higher level of vulnerability for their geriatric patients. This awareness has proven to be especially important since the students are required to practice in a registered nurse position while they continue their graduate nursing studies. Acute care hospitals in Massachusetts and the US currently have a very low vacancy rate for nurses because they are not leaving the workforce [32]. This workforce situation is forcing many students to obtain their first professional nursing position in sub-acute and long-term care facilities, where the percentage of patients over the age of 65 years is historically much greater than in hospitals.

Commitment of Students

New students view careers in geriatric nursing as less attractive than other nursing specialties. This trend can be attributed to negative attitudes toward older adults, lack of insight into opportunities to make professional contributions to patient outcomes in long-term care facilities, and both student and faculty lack of awareness of geriatric opportunities in nursing [33-35]. Exposing students and faculty to a variety of experiences with older adults and to geriatric nursing specialists improves their attitudes and interest in working with older adults [34].

In order to reinforce geriatric nursing content and to motivate students to consider a career in geriatric nursing, the faculty of the graduate entry program met throughout the pre-licensure coursework with students for academic advising and support. Periodic presentations were scheduled with geriatric nursing leaders during the internship program. These advanced practice nurses spoke about new trends in geriatric nursing and served as expert resources for the students. Faculty also met periodically with the students to advise them on didactic and clinical questions in the care of older adults.

Transition to Professional Nursing

Nearly all RN graduates obtained initial positions in settings where a majority of their patient population was 65 years or older, many in sub-acute and long-term care facilities. Their subsequent graduate study included gerontological content in adult primary care with approximately one-third of the students selecting additional didactic and clinical offerings in gerontological advanced practice.

Implications for Nursing

The nursing workforce faces shortages of professional nurses committed to geriatric care and advanced practice nurses certified as adult gerontological nurse practitioners. These trends come at a time when health systems are appealing for health care providers to meet the needs of an older patient population across hospital and community-based settings. Nursing curricula are currently in a state of flux as master's and Doctor of Nursing Practice programs change to meet the recommendations of the Consensus Model for Advanced Nursing Practice to merge adult and gerontology content within one specialty for acute and primary care [36]. To adhere to this recommendation, certification bodies such as the American Nurses Credentialing Center and the American Association of Nurse Practitioners are currently changing the test format by developing adult gerontology nurse practitioner certification examinations in acute and primary care.

Conclusion

This model of geriatric education offers students an opportunity to develop a deep commitment to the care of older adults and to identify care of older adults as a specialty within nursing. By incorporating conditions unique to aging and other geriatric content throughout the program, students enter nursing practice with an understanding of this complex and challenging area of healthcare. These students are more likely to choose a career in aging, finding it a stimulating and fulfilling area of practice.

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