Opportunities to strengthen aging curricula across the health professions

Criss Jasper Ririe, Joshua D. Guggenheim, and Katherine A. Campbell

ABSTRACT
The rapidly aging population of the United States presents an urgent need for healthcare professionals trained in Gerontology, rooted in a holistic framework of health across the lifespan, and sustained by interprofessional collaborative practice. Institutions of higher education can meet this demand by aligning their curriculum and co-curriculum to train health sciences students in the increasingly important field of Gerontology. This IPEP guide will outline lessons learned at one University based on program director insight into aging-related courses, experiential training, and research opportunities. The lessons described here provide insight for other faculty and program directors on the current state of aging-related education and how to move from aging-related to aging-rich education in an interprofessional way.

Introduction
While aging care has consistently accounted for a significant portion of healthcare delivery, the growing older adult population will continue to demand an increase in the training and number of aging-adjacent professionals (U.S. Bureau of Labor Statistics, Monthly Labor Review September 2020, 2020). Now more than ever the next generation of healthcare professionals and researchers will be faced with challenges unique to an aging population. It is projected that the U.S. population of adults aged 65 and older will more than double from 46 million in 2014 to 98 million by 2060 (Colby & Ortman, 2015). Within the healthcare and social assistance sectors, offices of physicians, outpatient care centers, other ambulatory healthcare services, and medical and diagnostic laboratory industries are projected to grow the fastest. As such, the aging population and the continued expected rise in chronic health conditions, such as diabetes, are expected to drive demand for healthcare services overall. Conversely, student interest in the field of Gerontology remains relatively stagnant (Wesley, 2005), and if current trends continue, the size and training of the Gerontology workforce will fail to adequately respond to the changing demographics of an aging population in the United States (Institute of Medicine, 2008, pp. 29–31). While a myriad of factors, including ageist biases and limited awareness of the increasing demands of senior living (Bergman et al., 2013), may prevent students from self-selecting gerontological training, a scaffolded and interprofessional academic approach to embed important touch-points within healthcare programs can support students’ preparation to meet these changing demographic needs.

Specifically, it is critical to incorporate learning objectives and content related to aging and older adults within curricular and co-curricular experiences across associate, baccalaureate, and graduate degree levels. Here, we define the co-curricular elements as experiential learning and research and scholarship related to aging. Promoting student interaction directly with older adults through clinical placements, internships, and/or service-learning projects, offers opportunities to organically expose students to the scope of needs of older adults; this approach is widely recognized for decreasing ageism and increasing the appeal of aging-related careers (Bergman et al., 2013; Gonçalves et al., 2010). Additionally, collaborative research between faculty and students is a highly effective way of engaging and training future healthcare providers to focus on aging. Ideally, these experiences engage students in interprofessional collaborative practice with their colleagues (Institute of Medicine, 2015, Reeves et al., 2016), though there are logistical challenges to coordinating interprofessional coursework and experiences across different programs. Moreover, current barriers exist around the implementation of interprofessional coursework such as strict accreditation requirements and the coordination of students from various cohort models within specific disciplines. Therefore, the purpose of this IPEP guide is to highlight the current aging-related curricula and co-curricula across health sciences programs within a single University and determine faculty perceptions and recommendations for increasing aging-rich education.

Background
Expertise in aging and interprofessional collaborative practice will become increasingly important as the number of older adults continues to grow. In 2008, the Institute of Medicine and Board of Health Care Services outlined a framework for developing a workforce adept to meet these needs, emphasizing that care systems must cohesively and comprehensively address older adults’ care in a patient-centered manner where older adults are active participants in their care team (Institute
of Medicine, Board on Health Care Services & Committee on the Future Health Care Workforce for Older Americans, 2008). In the exemplar models included in this report, comprehensive care included synchronized treatment for acute and chronic conditions, mental health support, and social services support with an eye toward quality of life and patient-engagement; cohesive care included care team members with aligned practices and efficient, coordinated care delivery (Institute of Medicine, 2008). As such, it is critical that future healthcare professionals receive intentional training in interprofessional collaborative practice within the context of aging.

According to the U.S. Department of Health and Human Services, demand for geriatricians is projected to exceed supply, resulting in a national shortage of 26,980 full-time positions in 2025 (U.S. Department of Health and Human Services, 2017). Moreover, over the next decade, 5 out of the 20 fastest growing industries are projected to be in healthcare and social assistance sectors with healthcare support as the fastest growing occupational group, with a projected growth rate of 22.6%. In order to address this projected shortage, there is a need to significantly increase the number of students pursuing aging-related work across all health sciences disciplines. Unfortunately, societal ageism has had a powerful negative impact on college students’ attitudes toward older adults (Heyman et al., 2008). Students’ lack of exposure to older adults can lead, all too often, to ageist tendencies and attitudes, which in turn creates a barrier to students’ self-selection into Gerontology training (Burnes et al., 2019; Goncalves et al., 2010, p. 320). In order to mitigate such ageism, St. Catherine University provides several opportunities for students to engage with older adults in a variety of settings at all degree levels. Similarly, it is critical to expose students to interprofessional education in order to promote positive attitudes toward collaborative practice in future clinicians (Arenson et al., 2015).

With the aim of informing other health sciences faculty and administration who are interested in increasing their own aging-related curricula and co-curricula, this IPEP guide will outline program directors’ feedback on current aging courses and co-curricular opportunities within a single school of health, and discuss faculty suggestions for a more scaffolded and interprofessional approach to Gerontology education across the health disciplines.

Overview of the IPEP Activity

There are several curricular and co-curricular strategies underway in the Henrietta School of Health (HSSH) which use high-impact practices to train students in the field of Gerontology. These strategies include an emphasis on aging-related curricular content that is tied to real-world experiential training outside the classroom and collaborative research projects between faculty and students. In particular, HSSH curricula and co-curricula have been informed by the Association for Gerontology in Higher Education (AGHE) Competencies (Damron-Rodriguez et al., 2014) and the National Institute on Aging (NIA) Framework (National Institute on Aging, 2015) for research in health disparities. This framework aligns well with the ecological approach to health across the lifespan and outlines a broad scope of environmental, sociocultural, behavioral, and biological factors that contribute to both vitality and health disparities among older adults (Hill et al., 2015).

In alignment with the NIA framework for research in health disparities, faculty within HSSH train health sciences students to appreciate the complexity of age-related health changes and as detailed below have suggestions for making this training more interprofessional in nature. Many individual HSSH programs have experiential learning and collaborative research embedded in the co-curricula. However, there is a need for further scaffolding of these opportunities as well as intentionally connecting these experiences across disciplinary silos to strengthen the interprofessional nature of Gerontology education.

Approach to implementing the activity

To gather program-specific insight related to aging curricula and co-curricula, the authors attended an in-person meeting with HSSH program directors (N = 32). During this meeting, the authors invited the program directors to share their programmatic insights via an electronic form, which was also shared with those program directors who were not present during the meeting for their completion. This brief form contained open response options for program directors to share insights into their aging-related curricula and co-curricula. Specifically, program directors were asked for their feedback on the following questions: “Which courses within your program have content specific to aging or older adults?” “What experiential training do your students receive to interact with, care for, or promote health among older adults?” “Does your program involve students in research and scholarship about aging?” and “What opportunities do you see within your program to strengthen aging course content, experiential training, or research and scholarship?”

From this meeting of program directors, responses were gathered from 20 respondents representing the following academic programs: associate-level (Physical Therapy Assistant), baccalaureate-level (Exercise Science, Nutrition and Dietetics, Nursing, Respiratory Care, Public Health, Social Work), graduate-level (Health Informatics, Nursing, Public Health, Physician Assistant, Occupational Therapy), multi-degree level (Clinical Education, Interprofessional Education). Responses were consolidated and cross-referenced with the University’s Course Catalog as well as annual reports of clinical placement, service-learning opportunities, and scholarly activity from the past three years (2017–2019).

Findings

Aging-related curricular content

The 20 program director responses identified 41 courses representing a variety of different credit loads (ranging from 1–8, implying considerable differences in contact-time with students) and academic programs across all degree levels. The course data was then further stratified by emphasis on aging, either as partially focused on aging or primarily focused on aging. This stratification indicated that 23 courses (68 credits)
were partially focused on aging, and 18 courses (60 credits) were primarily focused on aging. Of these courses, a majority of aging-related content is offered at the graduate level, whereas most of the associate and undergraduate programs had only one or two courses with partial focus on aging. Of note, one exception to this trend was the Nutrition and Dietetics program, which offers six courses related to aging, many of which wholly focus on the nutrition needs of older adults. Additionally, only one aging-related course was explicitly interprofessional in nature, enrolling students from different healthcare disciplines, while the other 40 courses were discipline-specific.

Several recent curricular evolutions are underway, including a new minor in Longevity and Aging, which will provide additional scaffolding for aging content within undergraduate HSSH curriculum. This 19-credit minor, which includes a strong emphasis on aging research and age-related health disparities, has been intentionally built to complement majors from a variety of academic programs in both health sciences and STEM. As a result of the interdisciplinary coursework, this minor includes study in geroscience, humanities, and liberal arts disciplines. This multidisciplinary curriculum ensures that all participating students receive well-rounded training in Gerontology that focuses on ecological approaches to health across the lifespan and emphasizes interprofessional collaborative practice and cultural fluency, all while meeting the undergraduate AGHE competencies. Importantly, this model also makes the minor more financially accessible to interested students since the array of courses included in the minor allows students from several programs to select courses which fulfill requirements of both the minor and their primary program of study. A focus on health equity is embedded in the curriculum, and a practice of institutional equity is built into the model.

### Aging-related co-curriculum: experiential learning

Experiential learning in HSSH takes the form of internships, service-learning, clinical education, and individual faculty-led projects. Aging-related experiential learning often involves direct interaction with older adults, frequently within long-term care facilities. The University’s Center for Community Work and Learning (CWL) coordinates relevant service-learning experiences, collects and maintains related data, and fosters many of these institutional-community partnerships for multi-year engagement. This work often gives students opportunities to interact with older adults and critical exposure to multi-faceted senior living. Through service learning, students build relationships with older adults by facilitating games, group activities, music therapy, and various recreational outings for residents of the long-term care facilities as well as older adults living in more independent settings.

It is notable that HSSH students completed 7877 hours of service-learning in a 12-month academic year (AY) beginning in September 17–18 and 9405 hours of service learning in AY 18–19. Against this backdrop, it is notable that only two aging-related courses as identified by program directors had service-learning components each year in AY 17–18 and 18–19. These two courses accounted for 13% and 11% of service-learning courses each year within HSSH, respectively. The number of aging-related courses with service-learning components increased to five in AY 19–20, accounting for 29% of service-learning courses within HSSH that year. Despite this recent increase in service-learning in aging-related courses, there is great opportunity to further embed this type of experiential learning within the aging-related curricula across programs.

Several care delivery programs in HSSH require experiential learning in the form of clinical education which is coordinated through the University’s Clinical Education Department. According to departmental reports, one clinical education partner site hosts students from multiple disciplines working with older adults in a variety of rehabilitation, residential, and treatment environments, and was identified as a priority site for HSSH placements. Student placements at this site increased from 32 students in AY 17–18 to 51 students in AY 18–19 following HSSH investment in a site placement coordinator.

### Aging-rich co-curriculum: research and scholarship

In addition to co-curricular experiential learning focused on aging and older adults, HSSH has supported research and scholarship in this field. Specific focus has been given to financial support of interprofessional collaborative work that involves both faculty and students. While there are definite exemplars of research in this area, there is still need for improvement as indicated by the fact that nine of 20 program director respondents indicated “no” to the question: Does your program involve students in research and scholarship about aging? Moreover, of the 11 respondents who indicated “yes” to this question, a majority clarified that there is the option for students to focus their research experience on older adults, but that aging research was not a programmatic focus.

Over the past three years, HSSH has supported exemplary research collaborations between faculty and undergraduate students that focus on aging and older adults. For example, research from 2017 in the Exercise and Sport Sciences program has focused on the impact of resistance training on the speed and movement of older adults. Most recently, similar departmental research included a comparative study that assessed the relative benefits of a novel gait training device versus nordic walking for older adults in 2019.

Over the same timeframe, HSSH supported clinical scholarship and evidence-based practice teams that involved graduate students, faculty, and clinical partners in long-term care and acute care facilities. To increase undergraduates’ exposure to and concurrent opportunities for aging-related research, faculty have launched the “Katies for Aging Research and Equity (KARE)” program, funded through a research education grant from the National Institute on Aging (R25AG060892). Students who join KARE are supported within a small community of scholars and faculty mentors throughout their entire undergraduate experience. KARE students also receive wrap-around social and academic support, interdisciplinary education within the Longevity and Aging minor, and two mentored research experiences related to aging. Programs such as KARE, where students are continuously exposed to aging coursework and research through purposeful scaffolding are well-positioned to facilitate sustained interest in the topic of aging. With the addition of
early exposure to experiential opportunities involving older adults, it is likely that similar programs will promote ongoing awareness of the value of pursuing careers aligned with the aging population.

**Lessons learned**

Considering the program director observations, it appears that a focus on aging is more prevalent in the curriculum than in experiential learning and research opportunities. Indeed, a large pool of aging-related curricular content exists, but these courses are primarily offered within individual disciplines and not intentionally interprofessional in nature. Moreover, the current body of literature suggests that this lack of continuity across programs is prevalent in a variety of institutions across the country (Bergman et al., 2013; Heyman et al., 2008). The recent development of a minor in Longevity and Aging provides greater scaffolding and continuity for aging-related curriculum at the baccalaureate level. Below are lessons learned from the program director feedback and author observations on existing and emerging aging curricula and co-curricula across HSSH, the goal of which is to provide recommendations for programs on how to best mitigate the continued siloing of aging-related content moving forward.

**Lesson 1 - Curriculum: Scaffold aging curricula across degree levels.** Disciplinary curriculum around aging should be scaffolded to have meaningful progression in breadth and depth across all degree levels. Assessing the content offered at each degree level may inform priority levels for new, purposeful program additions. Through internal assessment, authors noted substantially more gerontological curricular training at the graduate level in HSSH, with opportunities to increase interprofessional training at all degree levels.

**Lesson 2 - Curriculum: Create interprofessional aging courses.** Gerontology programs of study should have an intentional focus on interprofessional education in order to train future healthcare professionals to work with the complex care needs of older adults. As team collaboration is almost always required for the care of older adults, the field of Gerontology is ideally situated to provide students with the opportunity to apply their programmatic learning as part of an interprofessional team. This process is well under-way in HSSH in courses primarily focused on aging, however, the degree to which interprofessional training is included in courses which include only a partial focus on aging remains unclear and merits further consideration.

**Lesson 3 - Curriculum: Keep an eye on student tuition.** Existing courses can be leveraged to create a cost-effective program of study in Gerontology that does not overly burden students with additional tuition costs. This has been noted by HSSH students as an effective strategy in making the new Longevity and Aging minor appealing and effective for students. Courses across the University will continue to create an increased focus on aging and interprofessional perspectives, effectively reaching more students while minimizing financial burden.

**Lesson 4 - Curriculum: Create a flexible minor in Gerontology.** Disconnected programs of study can represent significant additional time commitments which may compound students' likelihood of self-selecting gerontology training. Gerontology minors should be flexible and aim to encompass existing program requirements and student interests so that students can easily achieve transcript-level recognition without undue additional time and workload barriers. In HSSH, this has also been strategic to increasing interprofessional aging training; courses modified to increase aging-rich curriculum have spanned many disciplines in HSSH, in some cases successfully recruiting aging-interested students from outside of the course discipline. Other courses modified to increase aging content may not be discipline specific and give students from many disciplines opportunities to engage in aging-specific content in already internationally crafted interprofessional contexts.

**Lesson 5 - Curriculum: Focus on lifelong health equity.** In alignment with the NIA Framework for Research in Health Disparities (National Institute on Aging, 2015), Gerontological curriculum should focus on equity and cumulative health experiences as ecological determinants of health among older adults in order to train healthcare professionals who will serve the simultaneously aging and diversifying population of the United States. Training students to understand and act on ecological approaches to health remains a central HSSH priority. This has been central in the creation of aging-content in existing and new courses, recognizing that aged health is an accumulation of lifelong health experiences, including the effects of health disparities.

Aging-specific experiential learning opportunities represent one place to increase students’ exposure to older adults and careers in aging. Several program directors reported that their students partner with community nonprofits that serve older adults, though the format and extent to which such experiential learning took place appears to vary significantly across programs. While some programs offer credit-bearing capstone or fieldwork experiences that include options to focus on older adults, others may not have formal curricular structures in place to support this aging-related focus. Moreover, the data around HSSH service-learning experiences indicate high institutional capacity for organization, coordination, and relationship building within the community.

**Lesson 6 - Experiential Learning: Leverage University infrastructure to scale and track experiential learning.** Greater alignment of experiential learning within the health sciences co-curriculum should leverage University-wide offices that coordinate student time at community sites to scale and sustain community-engaged service learning with older adults. Moreover, as student hours toward experiential learning are currently not tracked comprehensively across programs, more fully utilizing a University-wide infrastructure will inform future research studies of the impact of experiential learning on student motivation to work with older adults.

**Lesson 7 - Experiential Learning: Engage interprofessional teams of students in order to address complex community partner needs.** Experiential learning with older adults should involve interprofessional teams of students who learn to work collaboratively in preparation for clinical practice. Moreover, the diverse expertise of an interprofessional team may better address complex problems faced by community partner sites. For example, a team of Nursing, Public Health, Data Science and Public Policy students might collaborate to assist a partner site in addressing Medicaid policies and/or analysis of population-based datasets.

Few research opportunities pertaining to the aging population appear to be pursued, despite robust funding mechanisms that prioritize this field of scholarship. The data seem to indicate that students across all degree levels infrequently participate in research specifically related to the aging process, with some notable exceptions in individual departments. The limited nature of recent aging-related research in HSSH may be due in part to clinically trained faculty who have been given few opportunities to conduct research in their own training.
paths. The new KARE research training program focuses on aging research and supports students and faculty to pursue aging research opportunities.

**Lesson 8 - Research and Scholarship: Actively recruit University-wide interest.** When opportunities pertaining to aging research arise, use the momentum to have conversations with students, faculty, and staff around the importance and interprofessionality of aging research.

**Lesson 9 - Research and Scholarship: Train the trainer for aging research.** Health Sciences faculty may benefit from additional professional development around aging research so as to facilitate greater student engagement with and access to aging research opportunities.

While exemplars were identified within HSSH aging-related curricula and co-curricula, there are also many opportunities to strengthen these same areas. In particular, program directors were asked, “what opportunities do you see within your program to strengthen aging course content, experiential training, or research and scholarship?” In response to this prompt, program directors indicated that there was an opportunity to focus on aging through a lens of health, rather than disease. For example, program directors called for an increased focus on healthy aging in communities outside of long-term care facilities or even a focus on aging athletes. These suggestions demonstrate a desire to uplift perspectives that reframe aging in the context of health.

**Conclusion**

As noted above, the findings from this IPEP guide indicate that curricular content specific to aging is prevalent across the institution, but is not consistently administered and appears to be housed primarily in graduate programs. Similarly, experiential opportunities related to aging appear abundant across the School, but are not regularly embedded in curricular content and appear to be program specific. Moreover, nearly half of the program respondents noted that research and scholarship related to aging was not present in their program. Considering these findings there appears to be many opportunities to strengthen aging curricula and co-curricula across institutions of Higher Education. Through increased, scaffolded, and interprofessional content specific to aging, health sciences students will be better prepared to care for the aging demographic within the United States. Moreover, aging curricula and co-curricula should have a strong focus on health equity and vitality among older adults in order to prepare students from different health sciences programs to advance health equity across the lifespan. A holistic approach to aging will also be critical as faculty work to reframe the discussion around healthy aging, in order to support the training of anti-ageist health-care professionals who are equipped to elevate vitality among older adults as opposed to aging presented solely in the context of chronic disease and decline. And finally, increased collaboration between academic programs and community partners will enable interprofessional team-based innovative approaches to solving care delivery problems in our community. In summary, the lessons described here provide insight from health sciences program directors of the current state of aging-related education and offer guidance on how to move from aging-related to aging-rich education in an interprofessional way.

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