



Health Professionals Palliative Care Education for Older Adults: Overcoming Ageism, Racism, and Gender Bias

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Abstract

Purpose of review Most aging Americans lack access to specialist palliative care aimed at those experiencing serious illness and/or high symptom burden at end of life. The curricula used by training programs for all healthcare professions should focus on helping learners develop the primary palliative care skills and competencies necessary to provide compassionate bias-free care for adults with serious illness. We believe there is much opportunity to improve this landscape via the incorporation of palliative care competencies throughout generalist healthcare professional programs.

Recent findings Several recent publications highlight multiple issues with recruitment and retention of diverse students and faculty into healthcare professional training programs. There are also concerns that the curricula are reinforcing age, race, and gender biases. Due to these biases, healthcare professionals graduate from their training programs with socialized stereotypes unquestioned when caring for older adult minority patients and caregivers.

Summary Important lessons must be incorporated to assure that bias against age, race, and gender are discovered and openly addressed in healthcare professional's education programs. This review highlights these three types of bias and their interrelationships with the aim of revealing hidden truths in the education of healthcare professionals. Ultimately, we offer targeted recommendations of focus for programs to address implicit bias within their curricula.

Keywords Health professional education · Health disparities · Palliative care · Geriatrics

The presence of ageism, racism, and gender bias in the healthcare system, both implicit and explicit, has

significantly impacted how Americans seek and receive care. Bias erodes the inherent idea of trust and equity that is

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fundamental to the relationship between providers and the patients/caregivers they treat [1]. Due to these “-isms” and biases, older adults who fall into these socially constructed categories, such as those associated with race, are at higher risk of poorer health outcomes, inadequate access to health care, and decreased satisfaction with care and communication throughout the lifespan [2, 3]. The literature supports the concern that, especially at end-of-life, these biases increase the undue suffering of many Americans.

Barriers related to medical distrust, implicit bias, and healthcare discrimination have been cited in the literature as obstacles to receiving palliative care [3–5]. These barriers present as complex factors that impact palliative care utilization, especially among Black, Indigenous and People of Color (BIPOC). Currently, against the backdrop of highly visible racial injustices, healthcare systems are being called upon to reckon with long-held ageist, racist, and gendered attitudes, stereotypes, and beliefs. These attitudes have long erred on the side of complacency as an answer instead of recognition and prevention [6, 7].

For Americans experiencing serious illness, end of life is already complex and overwhelming. While progress has been made in the care older adults receive during these stressful moments, disparities continue to impact end of life negatively. Specialty palliative care is designed to provide seriously ill older adults with expert symptom management, goals of care discussions, and advance care planning activities [8]. Palliative care also provides support to caregivers as they assist their loved one throughout the illness trajectory. Many patients/caregivers lack access to competent palliative care specialists based on where they live, and BIPOC are known to utilize specialized palliative care services less often than their White counterparts. [3–5] Patients who lack access to palliative specialists experience lower quality of life, higher symptom burden, and greater risk of undergoing treatments that are misaligned with their end-of-life values and wishes.

Because BIPOC Americans may have greater access to primary care clinicians than palliative care specialists, it is important that these clinicians develop culturally responsive primary palliative care skills and abilities (e.g. basic symptom management and communication skills). Primary palliative care as an educational concept should be a part of all healthcare professionals' curricula as a set of culturally responsive skills and competencies that respect beliefs and values of BIPOC older adults with serious illness. Integrating these concepts into the generalist curriculum provides an opportunity to infuse these programs with greater opportunities to practice comprehensive/holistic care to a variety of diverse patients/caregivers. These concepts will also support future clinicians' ability to support and engage with older adults with serious illness in a manner free of bias.

This article describes how modern healthcare professional education programs perpetuate ageist, racist, and gender-biased overtones through student/faculty recruitment and student training. Because of this deficient foundational launch, we see that seriously ill older adult BIPOC are at risk of receiving biased care throughout the illness experience. Our goal is to uncover ageist, racist, and gender-based biases in professional education as a targeted first step to enact change at the foundational level of professional development. We propose how incorporating palliative care concepts and understanding healthcare professional organizations' focus on addressing biases with practicing clinicians can offer these training programs opportunities for reflection. We conclude with suggestions to address how health professional education programs can create change and re-envision care that meets the complex needs of BIPOC older adults.

The Students and Faculty

Student Representation

Demographics. Current estimates project that by 2050, most of the U.S. population will be comprised of racial and ethnic minorities. Despite this, minorities continue to be underrepresented in many health professional education programs (e.g. Physical therapy, Physician, Registered Nursing) [9]. While efforts to diversify healthcare have been of focus, the 2004 Sullivan Commission on Diversity in the Healthcare Workforce reported that people of color found gaining admission to health professional programs complicated [10]. This heightened focus on recruiting BIPOC students is due, in part, to research demonstrating that patient adherence with medical recommendations is greater when provided by clinicians with similar cultural backgrounds [10, 11]. Despite these positive findings, in 2018 only 5.5% of the total Accreditation Council for Graduate Medical Education (ACGME) resident/fellow population identified as Black and 7.8% as Hispanic [11]. This is much lower than the proportion of Blacks and Hispanics in the U.S. population (13.4% and 18.3%, respectively) [11]. Consistent with other medical subspecialties, only 7.6% of resident physicians training in geriatrics identified as Black and 11.5% identified as Hispanic, compared to 45.4% who identified as White. [12] Similarly, the nursing profession continues to lack diversity. As of 2019, 90% of registered nurses were women and 81% were white. [13]

Perceptions. Students bring their own thoughts and beliefs about aging into their health professional program, and these attitudes sometimes shift during training. A systematic

review of 24 studies with undergraduate nursing students, reported that those students ranked gerontological nursing relatively low as a field of interest [14]. Factors underlying this ranking included attitudes toward geriatrics, clinical practice environment, prior experience working with older adults, lived experience with older family members, and anxiety about aging [14]. Conversely, students from graduate nursing and physical therapy programs reported more positive attitudes toward the older adult population when compared to all other health professional students [15]. These differences were not explained by student's demographic variables, exposure through clinical education, or interest in primary care practice serving older adults [15]. This seems to suggest that physical therapy and graduate nursing programs positively influence their student's attitudes towards aging by displaying an appreciation of the challenges and rewards that accompany caring for the aging population [15].

Faculty Representation

Demographics. The current demographic makeup of medical school faculty is still primarily White (63.9%) and male (58.6%), especially at higher academic ranks [16]. However, trends are changing; among those who comprise the youngest group of practicing physicians, women outnumber men in training and are both racially and ethnically more diverse than their male counterparts [16]. Multiple health professional programs follow this same majority male and White makeup, with nursing skewed as predominantly female but still majority White [13].

Perceptions. Diverse faculty can often be placed in uncomfortable situations when discourse around racist or gendered stereotypes arise. These faculty are left to choose between ignoring the comments or engaging their class in a supportive conversation, risking negative evaluations from learners for choosing to address or not address the comments. Additionally, barriers that influence faculty perceptions regarding incorporating topics of race and gender include lack of time and space and educators' willingness to be educated on the topics of concern. [17] When speaking specifically about gendered concepts, educators report being hesitant to learn about these principles. A study examining the implicit gender bias of educators found that in the emergency room, 60% of medical faculty associated medical/science fields with the male gender [18]. Long held stereotypes and/or implicit biases can also have practice implications as these attitudes, when held by providers, can negatively influence clinical decision-making.

Healthcare Generalist Professional Education

Overview. Medical and nursing education have historically provided an inadequate focus on geriatric principles. For instance, the amount of time dedicated to teaching geriatric medicine is disproportionately low compared with the time spent providing medical care for older adults. For example, the ACGME only recently mandated that generalist physicians have training specifically in geriatrics, whereas Pediatrics was recognized as a specialty many decades ago. In fact, the first formal US medical school course in studying the diseases of children dates back to the early 1800s, the origin of Geriatrics dates back only to the 1950s in England [19]. U.S. Internal Medicine resident training programs only began to require a 4-week course in geriatric medicine within the last decade. [20]. In contrast to medical schools, many schools of nursing have removed geriatrics as a specialty and instead integrate it throughout the curriculum as part of adult health [21]. This integration increases the risk that the subject matter is deemphasized throughout the curriculum and its uniqueness can get lost along the way.

Didactic Core Courses

Race. Health professionals training begins with courses designed to increase medical knowledge, yet students may have ingrained preconceptions that negatively impact patient care. In a study of medical students and residents as recently as 2016, approximately 50% endorsed a false belief that "Blacks' nerve endings are less sensitive than Whites'" and "Blacks' skin is thicker than Whites'" [22]. Unfortunately, those who endorsed more false beliefs about biological differences between blacks and whites showed a racial bias in the accuracy of their pain treatment recommendations [22–24]. These findings have been replicated in other studies showing that Black patients are significantly less likely than White patients to receive analgesics despite having the same report of pain [25].

Age. For many years, studies have highlighted the need for more education about aging and older adulthood across a variety of educational settings [26, 27]. This lack of education and the accompanying dismissiveness of older adults has led to ageism and more negative attitudes toward aging among all age groups [28]. This devaluing of older individuals has had far-reaching effects leading to older adults becoming victims of avoidance, bullying, disrespect, physical abuse [29] and workplace discrimination [30]. In May 2020, US Equal Employment Chair, Janet Dhillon, delivered a message reminding us age bias persists even when

attempts are made to address other forms of discrimination [31]. Dhillon urged that "we have to keep educating and enforcing in every way we can – including litigation as a last resort". [31]

Clinical Education

The disease-specific direction of health professional curricula and textbooks can unwittingly promote aspects of ageism, race, and gender biases. For example, teaching related to acute myocardial infarction has historically been represented by signs and symptoms present predominantly in males, whereas females' presenting symptoms often differ. Recognition of this difference has led to national efforts to raise awareness of women's cardiovascular disease presentations (i.e. American Heart Association Go Red for Women Campaign—<https://www.goredforwomen.org/en/about-heart-disease-in-women/signs-and-symptoms-in-women>).

Ageism bias in disease-specific education is another example where little attention is paid to the fact that older adults rarely present with a single disease, but rather with multimorbidity or with no specific disease. In fact, older adults frequently present with a condition of overall 'frailty' resulting from deconditioning rather than "typical aging." Polypharmacy, which is common for older adults with multiple co-morbidities, is rarely addressed as current best practice focuses on medication management for specific diseases. Hence, the emphasis on older adult wellness is lost when the focus of a typical clinical visit is limited to diagnosable illness in a disease-specific curriculum.

In health education, race, age, and gender are often used as stereotypical markers of risk. Many students are taught to present patients starting with their age, race, and gender, immediately setting off illness scripts based on assumptions about most likely diagnoses and overall prognosis. While this practice has been debated for years. [32, 33], a survey of medical schools in 2006 revealed that nearly 75% were still teaching students to include race in the opening line of presentations, whereas only 9% of schools explicitly discouraged this practice. [34] This does not consider patient self-identification, instead labeling race and gender based on visual cues that may not be accurate or reflective of underlying genetic risk [35, 36]. Race continues to be used as a proxy for certain physiologic characteristics or disease risks, whereas age often becomes a proxy for viability, functional status, or mental capacity.

Despite the diversity of patients cared for by health professionals graduates, many of the didactic and simulation sessions designed to teach clinical reasoning rely on textbook photographs and diagrams, mannequins, and simulated patients with light skin, young age, and male gender [37]. When diversity is incorporated, it is often sporadic and serves to reinforce stereotypes, e.g. bullet wound mannequin

attachments in dark skin for emergency simulations [37]. Similarly, many trainees learn to examine skin findings on light skin only, [38, 39] an issue seen recently in the subtle skin findings of active COVID-19 infection [40] and pressure injury [41]. Some ageism and racial biases can manifest through of the role of family in the geriatric educational curriculum. For example, in many cultures, the focus is on family determination while the typical Western culture values self-determination [42]. Education about the importance of including family in decision-making and care provision is seen as an integral part of the process.

How Palliative Care Education is Different

While palliative care specialists receive these same foundational components in their generalist education programs, their specialty education works to combat and challenge many of these issues/concerns. For the hospice and palliative medicine (HPM) physician, there is explicit mention of age in the Entrustable Professional Activities (EPAs), which define the essential tasks of an HPM clinician (the goal of fellowship training). For example, the first EPA on comprehensive pain assessment and management one of the knowledge component is to "Explain the pathophysiology of pain across the age spectrum, from pediatrics to geriatric [43].

Similarly, the entire EPA #5 is based on the idea that "HPM physicians elicit patient and/or family values, delineate goals of care based on patient and/or family values in the context of the patient's medical condition, and make recommendations for an appropriate care plan [43]." This includes assessing decision-making capacity across the age spectrum and how best to engage patients and caregivers in discussions and conflict resolution. In the HPM Reporting Milestones (tracked twice a year for fellowship program accreditation) for Patient- and Family-Centered Communication, there is clear mention of assessing the fellow trainee's ability to "consistently recognize personal biases while attempting to minimize communication barriers proactively."

Addressing Diversity with Practicing Healthcare Professionals

Like subspecialty palliative care trainees, health professional student graduates are expected to care for patients and families holistically, with a growing emphasis on understanding and appreciating their cultural journey. Thankfully, once in practice, the novice health professional student will have a growing landscape of opportunities to expand their knowledge, skills, and attitudes toward diversity in health care. One way this is being addressed is through the inclusion of content on structural racism, bias, and gender equity in national professional society meetings. The American Geriatrics Society (AGS), the Annual Assembly of Hospice and

Palliative Medicine (AAHPM), and the American College of Physicians (ACP) all included keynote plenary speakers on diversity, microaggression, and related topics for their virtual 2021 annual meetings. AAHPM offers an annual advanced leadership course entitled "ASCEND" which offers content on actionable leadership amidst social injustice. These are just a few examples; there are a myriad of other opportunities provided at the regional and state levels including state medical societies, many of which award the learner continuing education credits toward maintaining licensure in their specialties.

Medical organizations are not alone in these efforts; multiple professional organizations (e.g. American Nurses Association) have also taken a stance on addressing social injustice and lack of attention toward diversity to tackle stereotypes often propagated in standards and evidence-based guidelines. AGS has embarked on a multi-pronged approach, spanning publications to webinars, realigning society mission statements, and collaborating with other professional societies to address these previously under-recognized issues. Publications such as the "Doorway Thoughts" series explores issues and concerns regarding the beliefs, traditions, and customs that would apply to clinical encounters with an older adult from 15 different groups of diverse ethnic backgrounds. This series is presently being translated into other languages and into multiple formats for specific cultural groups including Hispanic and African American/Black older adults. The series focuses on topics relevant to intercultural care, including health literacy, approaches to clinician education, and the interface between spirituality and health decision-making. The AGS also introduced 2 separate webinars in late 2020, hosting a multidisciplinary panel to raise awareness and position action toward racial bias in health care. AGS leadership recently integrated a statement into its revised mission and goals articulating its vision that health care will be free of discrimination and bias along with strategic priorities for meeting that vision. Aligned with that vision is a paper series targeted for publication in 2021 in the *Journal of the American Geriatric Society (JAGS)*, aimed to define the current intersection of structural racism and aging led by members of the AGS Ethics and Public Policy Committees along with several others. The series will also include a comprehensive plan to ensure diversity in research, such that by 2031, 100% of original research published in JAGS or presented at the AGS Annual Scientific Meeting will take full account of ethnicity, gender, disability, age, and sexual orientation in its design, undertaking, and reporting.

In addition, the AAHPM has released similar content in a recent editorial in the *Journal of Pain and Symptom Management* calling for racial equity in all future manuscript submissions. Finally, the John A. Hartford Foundation, a visionary leader in the field of aging, has partnered with the AGS to address the U.S health care system at large, which

is ill-prepared to provide optimal care for the dramatic growth of aging Americans and facing a growing shortage of geriatrics trained professionals. This endeavor, titled the Geriatrics-for-Specialists Initiative, is an eleven-specialty collaboration with surgical and various medical specialties designed to improve older adult care through heightened focus on addressing structural racism and ageism within all programs, along with assuring that all will have basic knowledge and skills in geriatric care as geriatricians cannot and should not meet this need alone.

In 2014, the Board of Directors of AAHPM approved the formation of a Diversity, Equity, and Inclusion (DEI) Advisory Group. Membership surveys at that time revealed the need for more education on caring for patients and caregivers from diverse backgrounds. As a professional society, AAHPM [44] pledged to embrace the diverse backgrounds and perspectives of patients and caregivers with a commitment to building a diverse field in terms of age, gender identity, ethnicity, and race. New membership communities were formed for providers who identify and/or care for patients identifying as South/East Asian, Latinx, African American/Black, LGBT, and over 65 years of age. This advisory group recently published a curated list of DEI resources [45], including perspective pieces and practical resources around unconscious bias and addressing microaggressions for all professionals in the field.

Recommendations

Recommendations for Overcoming Ageism, Racism, and Gender Bias

Integrating Palliative Concepts within the Curriculum. Integrating palliative care into healthcare professional training improves education by emphasizing the diversity of patient and caregiver experience with serious illness. These fundamental concepts are about treating patients as whole persons—addressing physical, emotional, social, and spiritual concerns—within the context of care provided by family, friends, and communities. It is about meeting patients and caregivers where they are, clarifying what is most important to them, and then tailoring medical care to align with those values and preferences. Patients become persons, not just diagnoses or stereotyped illness scripts. This is a shift from provider- to patient/caregiver-centered care with shared decision-making that is informed by patient goals and concerns. Improving quality of life requires exploring all areas of suffering, not just the physical symptoms brought on by a particular illness but also the suffering that comes from years of discrimination and distrust of healthcare providers.

Student and Faculty Representation. Since the Sullivan report [46], many strategies were implemented with the intention of increasing the recruitment and retention of BIPOC students and faculty. Despite these efforts, substantial increases in diversity have not happened [10]. Bonini & Matias argue that the "pervasiveness of whiteness" in health profession education is the larger issue that must be addressed first. For example, in nursing education whiteness is normalized as the culture to which others are compared. Further, nurse educators often lack anti-racist competencies

[10, 11]. This manifests itself when programs seek to recruit diverse students yet lack the systems in place to support them in predominantly White spaces [47, 48].

To begin to shift this view of normalized superiority, health professionals' programs must develop targeted efforts to recruit and retain a diverse group of students and faculty. With this commitment the classroom/clinical/lab environments become places where ideas and thoughts can flourish that are ripe to challenge long held stereotypes. A

Table 1 Literature Based Recommendations to impact/influence workforce, curriculum, and practice diversity

CATEGORY	TITLE	RECOMMENDATIONS TO ENCOURAGE EDUCATIONAL CHANGE
Recruiting diverse students and faculty		
Bell [49]	White dominance in nursing education: A target for anti-racist efforts	<ol style="list-style-type: none"> 1. Calls for white nurse educators to be held accountable for their complicity in upholding white supremacy and continuing to actively dominate academic nursing spaces 2. Reimagine nursing curricula in a decolonized, critical, emancipatory paradigm 3. Competent white educators are needed to deliver consistent anti-oppressive pedagogies and model positive white identities for white students
Dai et al. [14]	Nursing student's willingness to work in geriatric care: An integrative review	<ol style="list-style-type: none"> 1. More activities throughout the curriculum to interact with older people 2. Acknowledge that living with an older family member impacts students' comfort and understanding of interacting with older people
Doll and Thomas Jr. [47]	Structural solutions for the rarest of the rare – Underrepresented-minority faculty in medical subspecialties	<ol style="list-style-type: none"> 1. Institutions need to provide continuing education to help leaders prepare for under-represented minority faculty and to advocate on their behalf 2. Provide supported time for mentorship and training for under-represented minority faculty members for navigating isolation, hypervisibility, stereotype threat and institutional racism 3. Provide support for under-represented minority faculty to find local and national funding opportunities
Fontenot and McMurray [50]	Decolonizing entry to practice: Reconceptualizing methods to facilitate diversity in nursing programs	<ol style="list-style-type: none"> 1. Implement a framework for academic application review processes that addresses structural barriers that affect access, including those unique to students from diverse backgrounds 2. Evaluate and build pipeline programs to support expansion of diversity prior to point-of-entry to practice nursing 3. Work to retain diverse faculty by having intentional steps to improve work culture and environment surrounding their educational practice
Shappell and Schnapp [48]	The F word: how "fit" threatens the validity of resident recruitment	<ol style="list-style-type: none"> 1. Establish a clear brand identity for your educational program to guide discussion regarding culture 2. Take a holistic approach toward fit, diversity, and program culture 3. Learn biases 4. Follow up on gestalt impressions
Yang [17]	What should be taught and what is taught: Integrating gender into medical and health professions education for medical and nursing students	<ol style="list-style-type: none"> 1. Allow educators to develop a gender education learning map for students by determining the core gender knowledge needed and identifying the gender-related concepts to be integrated 2. Universities should pay attention to professional development of educators in gender education
Educating workforce for diversity		
Nong et al. [52]	Patient-reported experiences of discrimination in the U.S. healthcare system	<ol style="list-style-type: none"> 1. Organizations should explore reports of discrimination by engaging patient stories most likely to be present in the healthcare setting – use this data to inform organizational policy
Vyas et al. [53]	Challenging the use of race in the vaginal birth after cesarean section calculator	<ol style="list-style-type: none"> 1. Remove race-based consideration to calculation of risk for vaginal delivery after cesarean section and educate future clinicians to base recommendation on patient specific presentation

Table 2 Resources for Maintaining Clinician Awareness of Diverse Practice Expectations

ORGANIZATION	RESOURCE	WEBSITE
American Geriatrics Society	Doorway Thoughts	https://geriatricscareonline.org/ProductAbstract/doorway-thoughts-cross-cultural-health-care-for-older-adults/B016
	New Initiative Addressing Intersection of Structural Racism and Ageism in Health Care	https://www.americangeriatrics.org/media-center/news/ags-launches-new-initiative-addressing-intersection-structural-racism-and-ageism
American Academy of Hospice and Palliative Medicine	Diversity, Equity, and Inclusion Resources	http://aahpm.org/membership/dei-resources

crucial step in challenging stereotypes involves empowering faculty with the freedom and support to counter/correct biased or stereotypical language and attitudes from the classroom to the practice environment. This act will help future health professional students develop more complex portraits of patients/caregivers from backgrounds that differ, because it will highlight respectful allyship. This type of proactive education will also give all students the tools to respond thoughtfully when they hear feedback about their handling of sensitive race related situations that challenge their self-perception in a way that is triggering. By not triggering strong negative reactions, the goal is to move the student away from short-term skill acquisition initiatives towards the deconstruction of socialized white supremacy and enactments of white privilege [49, 50].

Curriculum. Health professions education should focus on creating opportunities focused on geriatric concepts as the older adult population is slated to double by the year 2060, and minority adults will be a large proportion of this demographic shift [51]. This curricular focus should integrate concepts related to race and gender, as these categorical associations can negatively impact the aging experience. One novel way to increase representation of older adults who are thriving within a community is to utilize retired clinicians as faculty within the curriculum. Creating innovative roles for these older adult faculty in labs, simulations, and clinical spaces provides students the opportunity to challenge their misperceptions about the aging population and their potential to contribute to society and medical education. Additionally, during formative training and beyond, interprofessional education provides individuals the opportunity to engage with diverse people within a professional role.

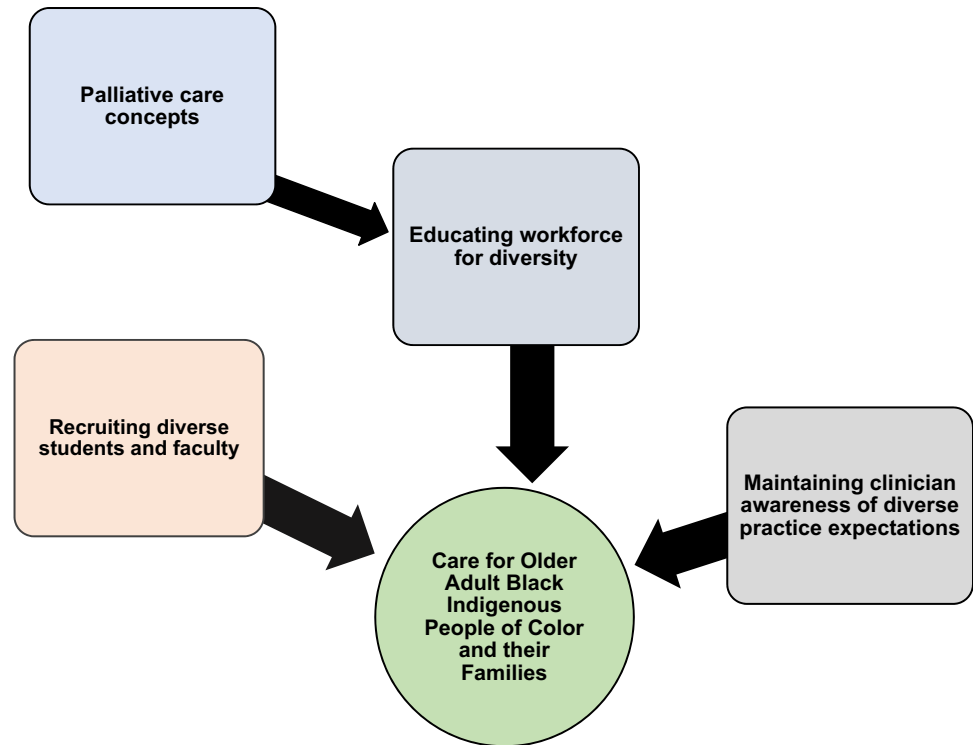
Exemplars

The University of Alabama at Birmingham has introduced an online toolkit to its entire health professions campus entitled "The Common Thread" to help explore inclusivity within schools, offering a series of four modules (Building Belonging, Understanding Bias, Cultural Competency

and Conflict resolution) designed to challenge, engage and stimulate self-inquiry. These are made available for faculty, staff, trainees, and students. The University of California at San Francisco has created an "Anti-racism and Race Literacy Primer and Tool Kit for Medical Educators" that is available free of charge and provides historical context, theoretical frameworks, and shared definitions for talking about race and racism in medicine so that all faculty have a basic shared understanding and have tools that support them in evaluating their own educational materials in order to identify bias. To address issues within education, we recommend healthcare professions program administrators begin by reading the articles highlighted in Table 1, which references the most current recommendations for programmatic change. Then through reflection and engagement, we believe invested stakeholders will be enabled to begin addressing the recommendations outlined in this article. For clinicians, Table 2 provides resources by organization to start both an internal conversation and engage with colleagues about ways to change personal, professional practice habits.

Conclusion

We believe that healthcare professionals' education programs should begin incorporating primary palliative care concepts throughout their generalist program curriculum and explore the recommendations made here. This reflective work will provide the necessary first steps to build a responsive and active curriculum designed to challenge ageist, racist, and sexist attitudes (see Fig. 1). Health professional programs should be supportive environments with diverse faculty and students working diligently to assess and mitigate the biases they hold. We trust that when healthcare professionals' education programs embrace these steps to engage in change, care will improve as BIPOC will be better understood and ultimately, as older adults, will receive care that is responsive and respectful of their beliefs and values.

Fig. 1 Developing a Diverse Clinical Workforce

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