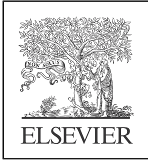

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Nurs Outlook 70 (2022) S20–S31

Nursing Outlook

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Transforming nursing education in response to the Future of Nursing 2020–2030 report

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A R T I C L E I N F O

Article history:
Received 12 October 2021
Received in revised form
20 January 2022
Accepted 15 February 2022

Keywords:
Transform
Nursing education
Future of nursing report
Curriculum
SDOH
Health equity

A B S T R A C T

The Future of Nursing 2020–2030: Charting a Path to Achieve Health Equity report (NASEM, 2021) provides a comprehensive plan to improve the quality of health care and candidly acknowledges historical and contemporary issues that have stalled previous efforts to dismantle health care disparities. This article spotlights the role that nursing education, nurse leaders, and faculty play in enabling all people to achieve their highest level of health. Through the framework of the four pillars of (1) reconciling the shortage of nurses with expertise in public health and health equity, (2) creating policies that include and promote the tenets of diversity, antiracism, and well-being, (3) designing curricular resources and activities that address contemporary issues, and (4) creating and supporting an ethos that invites, retains, and graduates diverse students and facilitates a sense of belonging, our future nursing graduates will be prepared to advance health equity for all.

Cite this article: Sumpter, D., Blodgett, N., Beard, K., & Howard, V. (2022, November/December). Transforming nursing education in response to the Future of Nursing 2020–2030 report. Nurs Outlook, 70(6S1), S20–S31. https://doi.org/10.1016/j.outlook.2022.02.007.

Introduction

Closing the gap in health care outcomes remains an arduous task. Despite Healthy People 2000's national plan to reduce health disparities, and the subsequent 2010 and 2020 goals to eliminate disparities and advance equity, differences in health care outcomes across minority groups and among people living in poverty persist (Agency for Healthcare Research and Quality, 2020). In 2003, the sentinel document *Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare* revealed that high-quality health care is not afforded to all, and minorities tend to receive a lower quality of health care (Smedley, Stith, & Nelson, 2003). The document also provided compelling evidence that "clinician bias, prejudice, stereotyping, clinical uncertainty, and patient mistrust" may contribute to differences in care (p. 126). Subsequent studies have confirmed the continuation of disparate treatments and outcomes (Agency for Healthcare Research and Quality, 2020; Centers for Disease Control, 2021; Department of Health and Human Services, 2011; Department of Veterans Affairs, 2007; Profit et al.,

The authors have no conflict of interest.

This article is published as part of a supplement sponsored by Academy Health, with support from the Robert Wood Johnson Foundation.

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https://doi.org/10.1016/j.outlook.2022.02.007

2017) and that a racially and ethnically diverse health care workforce plays a critical role in mitigating disparities (American Association of Colleges of Nursing, 2019; Institute of Medicine, 2004; National Academies of Sciences, Engineering, and Medicine NASEM, 2021; Sullivan Commission, 2004).

Almost 2 decades ago, the Sullivan Commission's report *Missing Persons: Minorities in the Health Professions* (2004) underscored the need to increase the number of professionals from underrepresented minorities in health care. The report stressed that "the lack of minority health professionals is compounding the nation's persistent racial and ethnic disparities" (p. i), indicted the mainly racially and ethnically homogenous workforce as a root cause of health care disparities, and emphasized that the culture of health professions schools had to change. That same year, the Institute of Medicine (now recognized as the National Academies of Science, Engineering, and Medicine) published *In the Nation's Compelling Interest: Ensuring Diversity in the Health-Care Workforce* (2004), and called upon schools for health professionals to value and create a climate for diversity. It is now widely accepted that a diversity of caregivers is critical to ensuring patient-centered care and integral to addressing health care disparities (National Academies of Sciences, Engineering, and Medicine NASEM, 2021; National Advisory Council on Nursing Education and Practice, 2020).

Although nursing organizations value diversity, inclusion, belonging, accessibility, and equity, and many have reiterated the importance of graduating a diverse workforce, the profession still does not mirror the population it serves (American Association of Colleges of Nursing, 2019; Campaign for Action, 2021; National League for Nursing, 2017). The racial and ethnic diversity of the nursing workforce has grown since the original Future of Nursing report and reflects 0.5% American Indian or Alaska Native, 7.2% Asian, 6.7% Black/African American, 0.4% Native Hawaiian, or other Pacific Islander and 5.3% Hispanic nurses (Smiley et al., 2021). There is yet work to be done especially regarding Hispanic and Black nurses.

Some might falsely assume that the increase in racial diversity implies that racial equity has been achieved and that current practices are sufficient. To the contrary, inequities and exclusion persist as evidenced by faculty and students feeling "unwelcome and excluded," "feelings of tokenism," facing a "diversity tax" and associated feelings leading to higher attrition and lack of satisfaction (NASEM, pp. 229-30). The stage is set for diversity initiatives, and opportunities abound for the Future of Nursing to reaffirm the importance of diversity.

Although a racially and ethnically diverse workforce could help mitigate health disparities, it must be understood that diversity is not a panacea. In addition to the underrepresentation of minorities in nursing, numerous factors preclude efforts to improve the quality of health care. The Centers for Disease Control and Prevention (CDC, 2021) recently declared racism a fundamental driver of racial and ethnic disparities in health care and identified the social determinants of health (SDOH) to be major contributors to health inequities. Racism is defined as a system that consists of "structures, policies, practices, and norms that assigns value and determines opportunity based on the way people look or the color of their skin" (CDC, 2021, para. 1). Health equity cannot be achieved without addressing the multiple levels of racism (Jones, 2000) and other SDOH.

Single method approaches are insufficient to address the deeply entrenched practices and beliefs that undermine equity efforts and fuel health care disparities; any plan to uproot historical injustices and seed socially just cultures will require a broad focus with far-reaching effects. *The Future of Nursing 2020–2030: Charting a Path to Achieve Health Equity* report (National Academies of Sciences, Engineering, and Medicine NASEM, 2021) provides a comprehensive plan to improve the quality of health care and candidly acknowledges historical and contemporary issues that have stalled previous efforts to dismantle health care disparities. The Future of Nursing (FON) report details nine recommendations and 54 sub-recommendations that traverse different settings and calls for a range of organizations and key stakeholders to adopt a coordinated approach to change that reflects the magnitude of health care disparities. The purpose of this manuscript is to synthesize the educational recommendations from the FON report and provide strategies for schools of nursing to chart a future path to achieve health equity. This article amplifies the recommendations specific to nursing students, educators, and administrators and spotlights the role that nursing education, nurse leaders, and faculty play in enabling all people to achieve their highest level of health. Kotter's eight step process for promoting transformation is highlighted as a framework for change.

Despite strong recommendations from leading experts in public health care and policy to eliminate health care disparities and achieve health equity, the nursing profession has made little progress toward achieving these goals over the past 20 years. Significant progress in eliminating racism, achieving health equity, and developing a nursing workforce that reflects the diversity of the people it serves is long overdue. Transformational change requires transformational leaders. Nursing faculty must embrace the crucial role of educating nurses who will possess the knowledge, skills, and attitudes to implement the FON recommendations. Simply stated, *accomplishing FON goals requires successful educational preparation of students, and targeted investment in faculty development must be integral to this process.*

This charge, which comes amid a global pandemic, a shift toward new Essentials promoting competency-based education, and an enduring faculty shortage, can feel seemingly impossible and overwhelming. To conceptualize a more manageable path forward, the

authors consolidated the FON recommendations into four themes: (1) reconciling the shortage of nurses with expertise in health equity and different specialties; (2) centering policies around the tenets of diversity, antiracism, and well-being; (3) designing a curriculum that encompasses contemporary issues, and (4) creating and supporting an ethos that invites, retains, and graduates diverse students. These themes became the Four Pillars we believe undergird the types of transformational change the FON Report requires.

The *Four Pillars* we suggest as guidelines to facilitate transformation of nursing education present both challenges and opportunities (The Four Pillars and their correlation with FON recommendations are summarized in Table 1).

Four Pillars

Pillar One: Reconciling Shortages

Institutions engaged in reconciling the shortage of nurses with needed expertise in public health care and health equity must devote intentional time and resources to addressing implicit bias (e.g., awareness training, discussion forums, advocacy, accountability) and supporting faculty development in diversity, equity, inclusion and belonging (DEIB). However, the current nursing faculty shortage and subsequent increased demands upon faculty (NACNEP, 2020) present substantial barriers to such efforts. Furthermore, the Covid-19 pandemic has stretched the capacity of both the nursing and faculty workforce and negatively affected the well-being of the profession. Opportunity may be found in our current circumstances, however. As stated by Roy (2020, paras. 47-48), “Historically, pandemics have forced humans to break with the past and imagine their world anew. . . Nothing could be worse than a return to normality.”

The current context of nursing and nursing education amidst the pandemic allows us to reimagine the future. Impending faculty retirements create opportunities for advancing transformational goals through hiring and onboarding faculty who possess the knowledge and skills required to enhance DEIB in nursing programs. Additionally, although the pandemic has amplified existing health care disparities and inequities, it has elevated the role of nurses in the public eye. The profession can leverage this opportunity to accelerate transformational change to achieve health equity and optimize population health.

Nursing schools can adopt a variety of approaches to develop nursing faculty expertise in social determinants of health, health equity, and population health; however, as a firm initial foundation in the principles of public health is mandatory for success, program policies that guide resource allocation must target public health as a curricular priority, and institutional resources (e.g., funded traineeships) should be dedicated to faculty advancement in public health and promoting faculty fluency in DEIB/SDOH. Financial support and/or academic release time allow nursing faculty to pursue training in public health pedagogy, SDOH, and innovative practices for engaging students in population health and health equity.

Pillar Two: Centering Policies

Pillar 2: School leaders must center policies around the tenets of diversity, antiracism, and well-being. Nursing education is steeped in tradition and processes that have been developed and held sacred for over a century; some should be honored, but any policy that perpetuates structural racism and unexamined implicit bias, technological or organizational inefficiencies that limit faculty productivity, or rigid promotion and tenure processes that limit innovative thinking must be discarded. Nursing faculty require support from their leaders to implement transformational change. Offering rewards for faculty who champion DEIB work is recommended to reinforce program commitment to faculty development and the FON vision.

To redress the historical impacts of structural racism and bias, academic nursing programs can offer incentives that prioritize the enrollment and success of underrepresented groups to attract a diverse applicant pool, including funds to support student scholarships and bolster DEIB efforts. These efforts to enrich the diversity of the profession should include recruitment of men, students from racially and ethnically underrepresented groups (Beard & Julion, 2016), rural areas, and students in the LGBTQ+ community into all levels of nursing education (associate degree, baccalaureate degree, and advanced practice). A diverse nursing faculty can provide students with role models to emulate in practice, scholarship, teaching, and service to the profession (Hassouneh & Lutz, 2013).

Financial support and prioritized enrollment of students from underrepresented groups will be insufficient to transform the current academic nursing system unless programs cultivate resources to help students overcome socioeconomic disadvantages. Academic initiatives to increase progression of disadvantaged students may include providing affinity groups (to address stereotype threat and foster a sense of belonging), mentoring (faculty, peer-to-peer, and professional), communities of learning that foster student engagement, and on-site and virtual resources that support the institutional mission for student success (e.g., student success centers, on-demand counseling, time management coaches, peer-to-peer tutors, and access to social work professionals who can link students with community resources; Kirui & McGee, 2021).

Policies often seem inviolable in organizations, but for transformative change to occur, they must be viewed more as templates, re-examined, and targeted to a newly envisioned future. To create a shared agenda

Table 1 – Alignment of FON Recommendations and Sub-recommendations With Pillars*

FON Recommendation. sub-recommendation #	Recommendation	Pillar # and Description	Significance to the Educator Role
1.1	Within nursing organizations: Assess DEI and eliminate policies that perpetuate racism & discrimination with respect to identity and circumstances.	II Centering policies	Support efforts to eliminate racism and advance DEI.
2.1	Rapidly increase the # of nurses with expertise in health equity and in specialties with shortages.	I Reconciling shortages	Strengthen recruitment and graduation of nurses with interest in areas with shortages.
2.2	Invest in nursing education and traineeships in public health.	I Reconciling shortages	Apply for traineeships and strengthen recruitment and graduation of public health nurses.
2.3	Direct funds to nurses and nursing schools to sustain and increase diversity.	I Reconciling shortages II Centering policies	Strengthen recruitment and graduation of male, rural, minority nurses at the LPN, RN, APRN level of nursing.
2.5	Prioritize community-based learning opportunities that address SDOH, population health, and health equity.	III Designing curriculum	Promote academic-community-based partnerships to promote learning opportunities that address social needs, SDOH, and health equity.
2.6	Academic progression of socioeconomic disadvantaged students through partnerships.	I Reconciling shortages IV Supportive ethos	Support the academic progression of students who are financially disadvantaged.
3.1 A & B	A. Integrate content on nurses' health and well-being into the program. B. Protect students at risk for behavioral health challenges.	III Designing curriculum IV Supportive ethos	Infuse well-being into the curriculum and identify ways to protect students at risk for behavioral health challenges.
3.2 B	Establish culture of safety including dismantling structural racism, bullying and incivility.	IV Supportive ethos	Support efforts to dismantle structural racism and build a culture of physical and psychological safety.
3.2 D	Support DEI, and eliminate and identify policies that perpetuate structural racism & discrimination.	II Centering policies	Support efforts to dismantle structural racism and discrimination. Support efforts to advance DEI.
3.2 G	Reduce stigma associated with mental & behavioral health.	IV Supportive ethos	Infuse content that destigmatizes mental & behavioral health.
6.4	Personalize care using technology & in the evaluation of datasets & AI algorithms.	III Designing curriculum	Ensure an understanding of biases and the subjectivity inherent in datasets and algorithms.
7.1	Integrate SDOH, population health, environmental health, trauma-informed care, & health equity as core concepts & competencies.	III Designing curriculum	Thread SDOH, population health, and health equity throughout the curriculum.
7.2	Assess access to virtual learning & multisector simulation for all students including those in geographically and socioeconomically disadvantaged settings.	IV Supportive ethos	Emphasize the use of virtual learning and simulation to support learning among diverse students.

(continued)

Table 1 – (*Continued*)

FON Recommendation. sub-recommendation #	Recommendation	Pillar # and Description	Significance to the Educator Role
7.3	Identify and eliminate policies and procedures that perpetuate racism and discrimination.	II Centering policies	Create an anti-racist curriculum that extends beyond the classroom.
7.4	Increase academic partnerships to strengthen academic progression of disadvantaged students.	IV Supportive ethos	Partner with programs to facilitate academic progression.
7.5	Recruit diverse faculty & develop the skills of current faculty to ensure expertise in SDOH, population health, policy, health equity, & online teaching.	I Reconciling shortages	Strengthen the expertise of faculty in SDOH, population health, policy, health equity, and online teaching.
7.6	Ensure student opportunities with interprofessional and multi-sector care coordination and a focus on health in all policies and SDOH.	I Reconciling shortages III Designing curriculum	Provide students with interprofessional and multi-sector opportunities to engage in care coordination and focus on health in all policies and SDOH.
7.7	All doctoral programs include SDOH, population health, environmental health, trauma-informed care, health equity & social justice.	I Reconciling shortages III Designing curriculum	Ensure critical concepts are a part of the doctoral curriculum (SDOH, population health, health equity, trauma informed care, environmental health & social justice, and the application of health equity data).
7.8	Ensure PhD graduates are competent to address issues of social justice and equity & inform policies.	I Reconciling shortages III Designing curriculum	Strengthen opportunities for PhD graduates to address issues of social justice and policy by applying an equity lens to the research process.
7.9	Prepare all nursing students to advocate for health equity through various methods including social media.	I Reconciling shortages III Designing curriculum	Ensure students are prepared to advocate for health equity through civic engagement and multimodal communications including social media.
8.4	Nursing education to address disaster nursing and public health preparedness.	I Reconciling shortages III Designing curriculum	Ensure students are prepared to respond to disasters and public health crisis.
9	Nursing representatives to develop & support a research agenda and evidence base describing the impact of nursing interventions, SDOH, environmental health, health equity, & nurses' well-being.	III Designing curriculum	Engage in efforts that describe the impact of nursing interventions, SDOH, environmental health, health equity & nurses' well-being.

* Aligned with 9 FON report recommendations and 54 sub-recommendations.

for addressing SDOH and achieving health equity, similar concepts and goals that contain a shared language regarding health equity and SDOH must inform all policies of the nursing school. It is imperative that key stakeholders be aligned in their understanding prior to embarking on this important work.

As national nursing organizations convene to create a shared agenda, nursing schools should ensure that students are involved in this process. This time of transformation provides an ideal "teachable moment" that nursing schools can use to their advantage by connecting students with local, state, and national

nursing organizations through virtual internships or other immersive experiences. Students' early involvement in leadership and professional activity may inspire their active participation later in their careers while providing organizations with the invaluable perspective of students.

As state governments, foundations, employers, and HRSA direct funds to recruit and retain a more diverse nursing workforce, nursing schools must be equipped with the proper metrics to evaluate the success of these initiatives. For unrestricted scholarships funded by donors and awarded through schools, thought must be given to how need will be determined, and funding provided to those most in need. Existing policies and metrics should be examined according to outcomes disaggregated by race, ethnicity, gender, and other dimensions of diversity to (a) identify unintended disparate impacts, and (b) ensure that geographically and economically disadvantaged students have access to technology and can engage in virtual learning effectively. The Census Bureau's suite of Racial Equity Data Tools may prove useful in these endeavors (US Census Bureau, 2021). Faculty diversity remains an additional key element of recruitment and retention of a diverse student body, consequently schools must also prioritize recruitment and retention of underrepresented faculty. Mentoring, professional development, and loan repayment programs represent a few options that schools can employ to attract and retain highly qualified and sought-after faculty traditionally underrepresented in nursing.

Not only admission and progression policies but all policies within nursing schools should be examined and re-visioned to support a shared understanding of equity measures to address the effects of systemic racism and other types of oppression. This process must include a thoughtful and skillful understanding of how categories of data are created and of their effects on findings. For example, clustering all Asian students into one ethnic group often skews results and perpetuates the myth of a monolithic Asian culture. Similar skewed findings have resulted from clustering all LatinX students together or when students who identify as African-American are clustered with children of African parents. Top leadership must support efforts to interrupt systemic racism and discrimination by codifying them into policies that recognize, reward, and incentivize anti-racism and DEIB work.

Pillar Three: Designing Curriculum

Pillar 3: Designing a curriculum that encompasses contemporary issues will require changes within schools of nursing that will need to be validated by regulatory and certifying bodies. Currently, curricula are mapped to such requirements as essentials, competencies, and test blueprints that guide faculty in preparing students for success on licensure and certification exams. Changes typically involve adding information to the curriculum without conducting a thorough systematic curricular review on an ongoing basis to detect curricular drift and irrelevance to contemporary issues. Nursing faculty have an obligation to prepare graduates to be successful on standardized exams, which requires nursing faculty to use the exam blueprints to guide curricular programming. To achieve true curricular transformation that incorporates all recommendations in the FON report, regulatory bodies must acknowledge the importance of the recommendations by including related concepts in their test blueprints, thus sparking curricular change at the programmatic level.

Transformation of the traditional nursing curricula needs to be multifaceted. To facilitate radical change, nursing programs must prioritize faculty development that is relevant to curriculum redesign (Beard, 2016). Ongoing faculty education is crucial to the accomplishment of detailed, expert, labor-intensive curricular work. Efforts should include (a) a thorough examination of course materials for evidence of bias (including didactic materials, books, assignments, images; Dillard-Wright & Gazaway, 2021), (b) mapping of concepts and competencies across the curriculum, and (c) purposeful peer evaluation of teaching methods to enhance teaching expertise. Academic nursing leaders must dedicate resources to support ongoing faculty development, program evaluation, and curricular progress. Encouraging faculty to pursue lifelong learning in DEIB should be prioritized and incentivized. Creating space and allowing time for faculty to attend courses, conferences, book clubs, and other training programs, and to engage in respectful and meaningful dialogue with peers, will be vital to the development of competent educators who value DEIB.

Distance-Based Learning

Throughout the pandemic, nursing programs have leaned on technology to deliver content. Given the relentless and worsening nurse faculty shortage, an opportunity exists to capitalize on the familiarity with distance-based learning. Partnerships between academic nursing programs could become a viable option for the distance-based delivery of content that requires considerable, yet infrequent, faculty expertise. Although nursing faculty are increasingly aware of concepts related to health equity, SDOH, and population health, the lack of widespread understanding of these areas among faculty makes them appropriate topics that can be delivered using a modular, distance-based approach. Doctoral-level nursing students are in an ideal position to advance the pool of expertise related to SDOH, population health, environmental health, trauma-informed care, health equity, and social justice in the nursing profession (Beard, 2016). Graduates from doctoral programs in nursing should be prepared not only to understand but to teach and affect health policy related to health equity and social justice. They can advocate for a national research agenda that prioritizes the generation of knowledge

related to nursing interventions that address SDOH and nurses' well-being. Content experts in these areas will be ideally suited to design standardized faculty development programs and curricular modules that can be delivered *en masse* to learners using a distance-based format. Massive open-source courses (https://www.mooc.org/, https://www.coursera.org/) have been a reliable method to deliver professional development in simulation-based education (https://www.coursera.org/learn/clinicalsimulations) and can be used to train educators in DEIB/SDOH. To maximize efficiency, nursing programs must consider the benefits of high-quality, distance-based education that adheres to online standards for education.

Curricular Content

Once faculty are trained in SDOH/DEIB, they will need to design nursing curricula that include core concepts and competencies related to social determinants of health, population health, environmental health, trauma-informed care, and health equity; these concepts should be threaded throughout the curriculum (Garland & Batty, 2021). Simply addressing these content areas in a single stand-alone lecture or course will not suffice. Curricular transformation must occur at all levels of nursing education, from the associate degree to the doctoral degree. Rapidly increasing the number of nurses with expertise in health equity and other specialties is critical to sustainability. Creating a shared language of health equity is essential for students, faculty and practicing nurses. Nursing students should be able to engage with their preceptors during clinical experiences if they witness health inequity and bias, and faculty must be prepared to facilitate conversations and act to interrupt inequity and bias. Nursing schools need to reconsider the common practice of only offering a single time-limited (e.g., one semester) public health nursing course, and instead offer additional meaningful public health experiences threaded throughout the curriculum. This currently happens in some child health courses that spend clinical time in acute care settings as well as in school systems. Moreover, nursing faculty must examine the effectiveness and efficiency of current clinical experiences in public health and develop strategies to enrich these experiences utilizing a health equity lens.

Learning how to design, implement, and evaluate a curriculum is a complex process, thus it should be introduced during the preparation of all nurses who are pursuing a graduate education. Educational pedagogy is often missing from advanced nursing plans of study; therefore, new graduates may not have a theoretical foundation for teaching. Most new graduates, now novice educators, learn how to teach via on-the-job training while they balance other academic duties. As these new graduates are filling academic roles on curriculum committees, they are in an undesirable position of having to quickly gain expertise in curricular evaluation and design while simultaneously learning how to navigate the nuts and bolts of teaching. Preparing them for teaching during their graduate programs will help ensure that they are ready to participate in the future transformation of nursing education.

Student Health and Well-being

Student health and well-being must be considered vital to success in any nursing program. The Nurses' Health study (https://nurseshealthstudy.org/about-nhs/history) identified several concerns related to nurses' well-being. The recent pandemic highlighted additional concerns about burnout, compassion fatigue, and the risk for suicide. Academic nursing programs of the future must ensure that nursing students are aware of their own well-being and are equipped to access care when faced with mental and physical health challenges. This might involve coursework or co-curricular experiences that focus on wellness and self-care. Faculty should identify strategies to incorporate time for self-care into each course. For example, faculty should consider the length of time spent in class, the amount of time required outside of class for homework and studying, and a schedule for clinical experiences that allows sufficient time for restorative sleep as well as a healthy diet and school-life integration (Doyle & Zakrajsek, 2019). Joint efforts with faculty, students, and administration will help nursing students strengthen their emotional and cognitive stamina while remaining mindful of overload.

Simulation-Based Learning

One method to improve the student experience is to focus on efficient and effective learning experiences. Learning SDOH and DEIB can occur in a variety of settings: simulation, clinical, and didactic. With a limited number of faculties, nursing schools must focus on meeting student learning outcomes in the most efficient manner through scaffold student experiences (Herrington & Schneidereith, 2012). It is known that the achievement of learning outcomes is not always directly correlated with the number of clinical hours due to the variability and lack of standardization in the clinical environment. As hospitals increasingly limit the roles of students in the clinical environment, a growing number of clinical hours are spent in observation rather than in hands-on learning (Blodgett et al., 2018). There is a lack of evidence to support the effectiveness of the clinical experience (Leighton et al., 2021), yet evidence of the effectiveness of simulation-based nursing education cannot be ignored (Hayden et al., 2014) and can be utilized to teach about health equity (Vora et al., 2021). Standardized simulated experiences can allow all students to experience issues about health equity, bias, and social determinants of health in a safe learning environment

(McDermott et al., 2021). Nurses of the future need increased training in managing complex social, economic, and mental health issues. In fact, simulation has been used to prepare student nurses to assist in public health emergencies. Students have been some of the first to assist in recent disasters (i.e., 9/11, Hurricane Katrina, COVID-19). Game-based virtual learning activities (https://etvlabs.com/TurbulentSky/) are one option to ensure a standardized disaster-preparedness at a reasonably low cost. Well designed, effective student learning can occur in a safe learning simulation environment and may replace up to 50% of clinical hours (Hayden et al., 2014). An effectively designed simulation-based learning experience requires a dedicated simulation faculty, space, and financial resources to be sustainable (Franklin & Blodgett, 2020) and presents tremendous opportunities for standardized, effective education about SDOH (Vora, 2020). Simulation, alternative clinical experiences (e.g., food banks, libraries, shelters), and didactic experiences must be considered concomitantly when designing a curriculum emphasizing the SDOH and health equity.

Emerging Technologies and Social Media

Health care providers use data to inform clinical decision-making. Emerging technology can be used to personalize care through evaluation of datasets and artificial intelligence (AI) algorithms. Wearable smart devices (e.g., smart phones, watches, glasses) can be adapted to enhance student learning. Nursing faculty must become familiar with evolving technologies to maximize their potential as educational tools. Any new technological advancement that is used for clinical care or education must be designed to capture and share data about the patient's SDOH securely. Nurses should be involved in the research, design, use, and evaluation of innovative health technologies, thus educating students about their use is critical in preparation for these roles.

Technology has changed the way we communicate with one another and has significant implications for the future of nursing. Social media is a powerful tool and can be an effective way to influence awareness and drive changes in health policy (Charalambous, 2019; Jackson et al., 2014). All nursing students should be prepared to advocate for health equity through social media by creating content that inspires change, raises awareness, and influences others.

Community Partnerships

Schools of nursing should have community partnerships that address SDOH, population health, and health equity. Activities can be developed (similar to the https://www.povertysimulation.net/about/) to help students examine their own biases, assumptions, and stereotypes about marginalized communities as well as their role as a nurse. Students need to understand their institution's historical relationship with people of color, people living in poverty, and other marginalized groups within their community. Academic nursing programs must identify and cultivate *mutually* beneficial relationships within the community. Through these partnerships, students, and community partners will have opportunities to co-create learning about SDOH to advance policy initiatives and improve health equity.

Pillar 4: To prepare a future nursing workforce that reflects the diversity of the patients and communities that nurses serve, nursing schools must *create and support an ethos that invites, retains, and graduates diverse students*. The ethos of a school of nursing is palpable and unmistakable as the "distinguishing character…or guiding beliefs…of a…group or institution" (Merriam-Webster, n.d.) Quantitative measures of previous success in academic programs cannot be relied upon to predict future success in nursing. Recognition must be given to the experiences and accomplishments of prospective students above and beyond test scores. Once admitted, schools will need to foster a culture of equity, inclusion and belonging to support students in their academic programs. Although DEIB development is key for faculty, DEIB education and training must extend to students as well, so they can embrace the importance of creating an inclusive environment for their peers. Schools must dedicate financial and human resources to supporting academic and non-academic factors that contribute to success. Collaboration between nursing education programs will be invaluable for sharing resources and promising practices to support students who represent the future of nursing.

The four pillars outlined herein should be considered indispensable corners of an edifice to uphold FON efforts. It will be crucial for schools of the future to ensure alignment of their mission, vision, values, and policies. Undertaking the challenges of transformation may initially require an uncomfortable level of vulnerability and transparency, but nursing schools and their leaders should be assured that their efforts will reap broad benefits.

Nursing schools must understand that the challenges facing them in 2022 are not what Peter Heifetz refers to as "technical problems" or issues that can be easily identified and solved with quick solutions within the traditional boundaries of the organization. To the contrary, they are what he calls "adaptive challenges" which are, by contrast, not easy to identify and may require changes in values and beliefs that cross multiple organizational boundaries (Heifetz & Linksy, 2002). Identifying these challenges will involve asking questions and soliciting innovative perspectives from many key stakeholders, including members of the community and from different disciplines and work sectors.

To create and support an ethos to invite, retain, and graduate diverse students, nursing schools must recruit and retain diverse faculty and staff (Beard & Julion, 2016; Hamilton & Haozous, 2017; Hassouneh &

Table 2 – Kotter's Change Principles Applied to FON Recommendations for Nursing Education

Accelerant	Application to Nursing Education and FON Recommendations
Create a sense of urgency around a single big opportunity.	The big opportunity is to fully implement the FON recommendations for nursing education by 2030. Additional forces creating the sense of urgency include the current pandemic, which is highlighting the disparities in health care and the important role of nurses; changes in the AACN Essentials; National Task Force criteria; and national racial and social injustices. Key stakeholders are communities, faculty, staff, students, and patients who are demanding change.
Build and maintain a guiding coalition (GC).	Choose a core network of passionate and inspirational volunteers within the nursing education institution to guide the efforts related to the Four Pillars: (1) reconciling the shortage of nurses with expertise in health equity and different specialties, (2) centering policies around the tenets of diversity, anti-racism, and well-being, (3) designing a curriculum that encompasses contemporary issues, and (4) creating and supporting an ethos that invites, retains, and graduates diverse students.
Formulate a strategic vision and develop change initiatives designed to capitalize on the big opportunity.	The vision is to prepare nursing graduates to Chart a Path to Achieve Health Equity by 2030. This vision must include the goals of the Four Pillars to collaborate on transformative policies, revise curricula, dismantle policies that perpetuate the status quo of structural racism and bias, and embrace holistic admissions and retention efforts.
Communicate the vision and the strategy to create buy-in and attract a growing volunteer army.	The transformational vision, including the strategic goals related to the Four Pillars, must be led by the GC as above and include volunteers from all sectors of the organization and all levels within its hierarchy (e.g., administrators, faculty, staff, students, alumni, practice partners, and patients). The FON recommends engaging cross-sector stakeholders, collaborations, and partnerships to achieve the overarching goal by 2030. The use of consultants, advisory boards, and partnerships with Historically Black Colleges and Universities and Hispanic-Serving Institutions will strengthen these efforts.
Accelerate movement toward the vision and the opportunity by ensuring that the network removes barriers.	Removing barriers to change is vitally important in this step. Often, internal processes to change curriculum or policies impede progress. Think of ways to streamline changes. One method is the Appreciative Inquiry approach, whereby an organization capitalizes upon its strengths and acknowledges the importance of cooperative capacity and relationships to systems (Cooperrider & Fry, 2020). Encourage the team to envision what they could accomplish if there were no barriers, then dismantle the structural processes that inhibit strategic agility.
Celebrate visible, significant short-term wins.	As small accomplishments are realized, send visible and bold communications to the entire community. These communications could be videos, emails, public announcements, or representations in visual project timeline charts.
Never let up. Keep learning from experience. Don't declare victory too soon.	Continue to evaluate achievement toward the goal of actualizing the activities in the Four Pillars. Project plans may need to be updated and timelines adjusted as progress continues. Be persistent with support and motivation for the team.
Institutionalize strategic changes in the culture.	True transformational change is achieved when the new ways of educating future nurses are engendered in organizational cultures. At this point, the ***Four Pillars** to Chart a Path to Achieve Health Equity in Nursing Education* will become a part of the organizational DNA.

Lutz, 2013; Iheduru-Anderson, 2020; Iheduru-Anderson et al, 2021). To foster inclusion and belonging, a culture of psychological safety must be cultivated with zero tolerance for bullying and incivility. Conversations about power and privilege should be normalized in teaching and learning as well as in leadership and administrative spaces. Mechanisms to report climate concerns can provide voice to members of the school community disempowered to speak up. Evidence-based bystander interventions such as the Microaggressions Triangle Model (Ackerman-Berger & Jacobs, 2020) can be introduced early and reinforced

often through simulated learning experiences for students, faculty, and staff. These simulations can provide rehearsal of a scripted language to help interrupt microaggressions.

Help-seeking must be normalized within nursing schools to foster the growth and learning mindsets of students, faculty, and staff. To help all members of the school community feel a sense of inclusion and belonging, the stigma surrounding mental and behavioral health treatment must be reduced. Like visits with a primary care provider, consultations with a mental health provider should be normalized. All members of the school community should examine language and messaging for stereotypes that reinforce stigma and be intentional about acknowledging and repairing harm. Intentionally advocating collaboration and community over competition can help quell the need for perfection. In addition to being mindful of the mental health needs of the school community, physical well-being should be integrated into the ethos of the school, not just as content to be covered but as a way of functioning as an organization.

A Framework for Transformation

True transformational change in nursing education cannot be envisioned without supporting stakeholders (faculty, staff, leaders, students) with development opportunities. Transformational change of this magnitude can be guided by evidence surrounding successful change efforts (Kotter, 2014). One model developed by Kotter (1996) and updated in 2014 describes a framework to guide and accelerate change. Kotter's work suggests that organizational hierarchy and managerial systems may limit the strategic agility of organizations, a suggestion with direct application to the current state of nursing education and the FON recommendations. When directing complex and rapid change, inspirational leaders can apply Kotter's change principles, such as (a) including select leaders while engaging as many members as possible within the organization's effort, (b) ensuring the organization is emotionally compelled to *want* change, (c) demonstrating inspirational and motivational leadership, and (d) ensuring the network for change and organizational hierarchies work together with a seamless transfer of information during the process (Kotter, 2021). These principles, applied to the eight accelerants described in Table 2, will facilitate successful transformation.

The Future of Nursing Report provides a broad roadmap to a collective goal of eliminating health care disparities and achieving health equity for all citizens by 2030. This journey starts the moment future nurses pursue entry into nursing programs and continues throughout their nursing career. Nursing faculty possess an immense responsibility and an even greater opportunity to have exponential impact as the ripples of our efforts and influence will manifest through our students for generations to come. Hence it is incumbent on us to be prepared to come alongside our learners along this trajectory. Through the actualization of the four pillars, guided by successful change effort methodologies, nursing education systems, leaders, and stakeholders can assume key roles in transforming the nursing profession to ensure that all members of our richly diverse society receive fair and equitable health care to achieve optimal health outcomes and maximize their human potential.

Authors' Contributions

Danica Sumpter: conceptualization, methodology, resources, writing original draft, writing-review & editing, supervision. Kenya Beard: conceptualization, methodology, resources, writing original draft, writing-review & editing. Nikki Blodgett: conceptualization, methodology, resources, writing original draft, writing-review & editing. Valerie Howard: conceptualization, methodology, resources, writing original draft, writing-review & editing, supervision.

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