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The National Advisory Council on Nurse Education and Practice

The Secretary of Health and Human Services (HHS) and, by delegation, the Administrator of the Health Resources and Services Administration (HRSA), are charged under Title VIII of the Public Health Service Act, as amended, with responsibility for a wide range of activities in support of nursing education and practice including: enhancement of the composition of the nursing workforce, improvement of the distribution and utilization of nurses to meet the health needs of the nation, expansion of the knowledge, skills, and capabilities of nurses to enhance the quality of nursing practice, development and dissemination of improved models of organization, financing, and delivery of nursing services, and promotion of interdisciplinary approaches to the delivery of health services, particularly in the context of public health and primary care.

Authority

Authority is granted through section 851 of the Public Health Service Act, as amended (42 U.S.C. 297t). The Council is governed by provisions of Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 1-16), which sets forth standards for the formation and use of advisory committees.

Function

The National Advisory Council on Nurse Education and Practice (NACNEP, or the Council) advises and makes recommendations to the Secretary and Congress on policy matters arising in the administration of Title VIII, including the range of issues relating to the nurse workforce, nursing education and nursing practice improvement. The Council may make specific recommendations to the Secretary and Congress regarding programs administered by the Division of Nursing and Public Health, particularly within the context of the enabling legislation and the Division’s mission and strategic directions, as a means of enhancing the health of the public through the development of the nursing workforce.

Additionally, the Council provides advice to the Secretary and Congress in preparation of general regulations and with respect to policy matters arising in the administration of this title including the range of issues relating to nurse supply, education, and practice improvement.
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Introduction

Health does not arise solely from a visit to the doctor’s office, nor does it lie exclusively within the walls of a hospital. Today, we know that health is also dependent on lifestyle choices, such as eating nutritious food, exercising frequently, and smoking. Despite this knowledge, the U.S. expenditure on health care is higher than any other country, but the health of some of its citizens continues to decline while the number of individuals with chronic conditions is rising (RWJF, 2017).

In the 1950s, public health primarily focused on investigating outbreaks and containing infectious diseases (Foege, 2010). This approach changed over the years and in 1990 the Department of Health and Human Services (HHS) released a new national initiative to improve the health of Americans called Healthy People 2000 (CDC, 2015). The initiative included a series of national objectives for the year 2000 related to health promotion and disease prevention. Since then, scientific insights have shown that other factors – such as family, social, economic, and environmental factors – are interrelated determinants of health (HHS, 2010). For instance, poverty significantly contributes to adverse health outcomes, and as poverty becomes more severe, those outcomes worsen (Foege, 2010).

Some studies estimate that medical care only accounts for 10 to 20 percent of the modifiable contributors to healthy outcomes (Magnan, 2017). The other 80 to 90 percent are dependent on health behaviors (e.g., tobacco use, diet/exercise, and alcohol use), social/economic factors (e.g., education, income, and employment), and the individual’s physical environment (e.g., air quality, housing, and transit) (Magnan, 2017). These “social determinants” are so important when it comes to health that they have been called the “causes of causes.”

Defining Social Determinants of Health

The HHS initiative Healthy People 2020 defines social determinants of health as the “conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks” (HHS, 2014).

Some examples of social determinants of health include access to health care, culture, language/literacy, transportation options, crime exposure, and safe housing. For instance, nearly 28 million people in the U.S. do not have insurance (Berchick, 2018). Without insurance, individuals may not be able to access affordable preventive health care services or may choose to wait until they are sicker to visit a doctor.

Other individuals who have insurance may choose not to visit a provider because they lack transportation to get to the provider or may not feel comfortable visiting providers that do not speak their language. Factors such as these explain why some Americans are healthier than others and why social determinants of health are tied to health disparities in certain populations (CDC, 2013).
**Social Determinants of Health and Outcomes**

Various studies have examined the association among determinants of health and specific health conditions. Among economic determinants of health, a study in 14 states found an association between poverty and hospitalizations due to influenza. In the study, increasing hospitalization rates were seen with increasing poverty (Hadler, 2016).

Banerjee (2017) examined individuals with chronic kidney disease (CKD) living with and without food insecurity. Food insecurity was defined as houses where individuals experienced hunger or inadequate nutrient intake, such as nutrient-poor foods and less servings of fruits, vegetables, and dairy products. The study showed that those who were food insecure were more likely to develop end-stage renal disease compared with those with CKD and no food insecurity. Also, food-insecure individuals with CKD were more likely to have diabetes and hypertension when compared with their counterparts.

With respect to neighborhood socioeconomic impact, individuals living in neighborhoods with more opportunities for physical activity, safety, and availability of healthy food had a lower prevalence of hypertension and obesity (Diez Roux, 2016). And individuals living in federally designated poverty areas had a 50 percent higher all-cause mortality rate (Diez Roux, 2016).

A national survey of children’s health showed that those living in small rural areas had a higher prevalence of parent-reported mental, behavioral, and developmental disorders (Robinson, 2017). The survey also showed that children in rural areas often lacked amenities such as parks, sidewalks, and recreation centers in their neighborhoods compared with children in urban areas.

Many more studies have focused on health outcomes showing that social determinants of health do matter and can have a significant impact on a population’s health.

**Nurses and Social Determinants of Health**

Social determinants of health (SDOH) can be found nearly everywhere. Nurses are especially suited to address SDOH because they practice in a wide variety of settings including schools, businesses, homes, communities, rural/urban areas, ambulatory clinics, and, of course, hospitals.

In addition to their near ubiquity, nurses are specially poised to address SDOH because they have consistently been named as the most trusted profession (RWJF, 2017). This makes some patients more comfortable with answering questions and addressing concerns about their lives outside the hospital walls that can impact health.

To be clear, nurses alone are not sufficient to tackle all SDOHs. Addressing them requires the collaboration of many health professionals as well as multiple sectors (e.g., education, justice, and employment) in addition to local and federal governments (Andermann, 2016). Nonetheless, nurses are at the front lines of clinical care and are therefore potential catalysts for change. However, in order for these efforts to be truly effective, nurses need to be appropriately educated about SDOH and have the knowledge and tools to effectively address them in order to reduce their impact on health outcomes.
**Education**

One of the strategies that nursing schools have used to address the issue of health disparities is service learning. Service learning is a teaching strategy that balances the student’s learning objectives with meaningful service to the community (Bittle, 2002). Through service learning, health care professionals gain competency in preventive practice, public health, and social service by delivering care to communities in need (Smith, 2013).

Service learning is different than that of simply acquiring biomedical knowledge or mastery of medical technical skills. Instead, it moves toward training that is “more public-minded, adept at prevention, and competent to address the social and physical environment affecting health and disease” (Smith, 2013).

Service learning programs are indeed valuable because they allow students to solve community health problems and can result in enhanced citizenship, critical reasoning, interpersonal development, and application of core knowledge (Ezeonwu, 2013). By being involved in the community and through guided reflection, students can learn firsthand about health disparities that impact vulnerable populations (Ezeonwu, 2013).

While service learning is a valuable experience, it can have some limitations in learning how to incorporate SDOH into clinical care. Some schools have addressed this by threading SDOH into the curriculum in a systematic and thoughtful manner. Researchers believe that for SDOH to be actionable students must be taught “not just what [SDOH] are but also how they came to be; who benefits and who suffers; and what can be done about them, how, and by whom” (Sharma, 2018). Studies show that simply teaching SDOH in the classroom is not always effective in addressing disparities as SDOH can become “facts to be known” rather than “conditions to be challenged and changed” (Sharma, 2018).

**Integrating SDOH into the Curriculum**

Social determinants of health have not generally been threaded throughout most nursing education curricula (Thorton, 2018). At the undergraduate level, content related to SDOH has traditionally been imparted through community and public health courses (Thorton, 2018). Also, even when SDOH is included in the curriculum, it may address only some specific determinants of health – such as poverty, race, or homelessness – and consist of curricular interventions that vary from single lessons to service learning (Sharma, 2018).

In addition, only learning about SDOH in the classroom may not be sufficient. One study found that medical students learning about SDOH purely from a didactic standpoint (i.e., non-experiential) showed increasing negative attitudes to the underserved (Thorton, 2018). Therefore, SDOH education should allow nursing students to connect didactic material with meaningful clinical experiences in various settings.

Limiting SDOH to elective courses, or only to courses that address community and public health, can create an artificial divide as to where SDOH should be applied (Thorton, 2018). Instead, some researchers believe SDOH should be integrated into the curriculum as a foundation (Thorton, 2018).
Some initiatives have used a multipronged approach to teach SDOH that includes didactic learning, mentorships, research career seminars, and advocacy projects with community partners (Sharma, 2018).

Siegel (2018) believes that SDOH should be universalized and integrated into a broader educational program. Universalization “suggests that there are aspects of training related to [SDOH] that are pertinent to all areas of clinical practice and serves to combat the notion that [SDOH] are elective or only to be covered by trainees participating in tracks or pathways dedicated to health equity, advocacy, or the amelioration of health disparities.”

A Framework for Educating Health Professionals to Address the Social Determinants of Health published by the National Academy of Sciences, Engineering, and Medicine supports SDOH education that is lifelong, interprofessional, longitudinal, and transformative. Transformative learning goes beyond purely lecturing and involves the community. A longitudinal SDOH curriculum allows learning objectives to build and increase in complexity as students advance and lifelong learning includes continued professional development throughout the student’s career.

SDOH Curricula and Programs

Examples exist of curricula and programs that have effectively incorporated SDOH. The Neighborhood Health Education Learning Program (NeighborhoodHELP) is an interprofessional service-learning program implemented by Florida International University that targets underserved households in Miami Date County (Greer, 2018). It includes students from various programs including nursing, medicine, and social work, but may also include students from the law school to address a client’s legal issues, education to provide tutoring and career advice, and behavioral staff to provide counseling when necessary. Participation in the program is mandatory for all medical students and SDOH are integrated into preclinical cases and clinical activities throughout the four-year curriculum.

Through the program a specialist conducts an assessment of the household’s needs and strengths in ten SDOH categories (e.g., food availability, income, transportation, literacy). The results of this “household risk profile” are recorded in a portal. Following the assessment, a holistic care plan is created to address both social and medical needs by a student team. Students then provide direct services (e.g. health, helping with food stamp applications, addressing immigration) through home visits and a mobile health center. A minimum of three follow-up visits are conducted per household, with students assessing and reflecting on their efforts. Over the past six years, nearly 1,500 students have conducted close to 7,500 home visits through NeighborhoodHELP and identified nearly 1,400 remediable SDOHs related to healthcare access, immigration, family stability, financial stability, and housing (Greer, 2018).
The University of Alabama at Birmingham has developed The Social Determinants of Health Project to increase knowledge and acceptance of SDOH among family nurse practitioner students (Crawford Buys, 2018). The program also focuses on increasing competency to integrate SDOH into screening and referrals into clinical care. It is held in three phases over three semesters. In the first phase, students are provided an overview of SDOH via a webinar with subsequent participation in a discussion board. Students must also complete a literature review on SDOH with at least five peer-reviewed sources. An SDOH screening tool for use in the clinical setting is then presented. Screening questions include items on food insecurity, housing, transportation, education, income, safety, and other questions. Students are evaluated on their demonstration of a cohesive understanding of SDOH.

In the second phase of the program, students develop referral toolkits and identify resources close to their clinical sites. They obtain detailed information on each resource and develop a referral sheet. Students work with clinical preceptors to make sure the screening questions and resources are appropriate for the population they will be providing care. Students also review the appropriate ICD-10 codes for addressing SDOH. In the third phase, students implement SDOH screening and provide referrals for those screening positive for an SDOH deficiency. Students need to conduct at least 100 SDOH screenings and attempt to make 50 referrals. Reflection via a written paper and a poster are done at the end of the program. A total of 169 students have completed the program. Preliminary findings suggest that students have increased knowledge about SDOH as well as the importance of screening and referrals.

In 2014, the college of nursing at the University of Arkansas for Medical Sciences initiated the Growing Our Own in the Delta (GOOD) program to increase the understanding of SDOH among master-level nursing students (Bryant-Moore, 2018). The one-semester program includes classroom training and a semester service learning project. Each semester begins with an all-day orientation led by program staff and community leaders. Staff provide interactive sessions that provide an introduction to community engagement, SDOH, and health disparities. Participants conduct a written reflection immediately following the orientation.

Academic readings for preparation and reflection are combined with service learning activities. The readings focus on defining and conceptualizing SDOH and how providers can acknowledge them in a health care setting. Participants engage in asynchronous online discussions about the readings and additional readings and/or videos are included midway and at the end of the semester. Through guided questions participants prepare a final written reflection. Although a formal evaluation of the impact of the program has not yet been conducted, a total of 18 students have completed the program.

The University of Pennsylvania School of Nursing has developed a strategic plan to identify and integrate concepts and competencies of global community engagement across the undergraduate and graduate curriculum (Lipman, 2019). A new course was developed entitled Case Study - Addressing the Social Determinants of Health: Community Engagement Immersion.
The course offers experiential learning that enables students to develop an in-depth understanding of SDOH in vulnerable, underserved populations. It also helps students to collaboratively design existing health promotion programs based on the community’s needs. A student pre/post-survey has shown a positive change in self-reported knowledge about SDOH. The School of Nursing has also recognized the need for faculty education and developed a three-part seminar series to educate health professionals about SDOH. More than 600 participants have attended the seminars, indicating a clear need for training in this area.

**Telehealth and Social Determinants of Health**

Telehealth is defined by the Health Resources and Services Administration as “electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health related education, and public health and health administration. Technologies include videoconferencing, the Internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications” (Rambur, 2019). Other definitions of telehealth defines their role in care coordination, reducing hospital readmissions, and managing of chronic conditions (Rambur, 2019).

The marriage of technology and health continues to become exceedingly close. Machines to monitor health can literally fit in our pockets. By using a pocket-sized sensor, patients can now record their own electrocardiograms and see data on their smart phones to detect abnormal heart patterns (NEHI, 2012). This information can be tracked over time and shared with health professionals. Devices that can be attached to smartphones have also been developed to monitor diabetes and other chronic conditions. But telehealth is also moving from mobile devices to full hospitals.

The Mercy health system – which employs 45,000 individuals and serves millions of patients each year – has launched a hospital which has nurses and doctors but no beds (Allen, 2017; Mercy, n.d.). At Mercy Virtual, nurses sit in front of monitors where they can see the patient, their vital signs, and medical history. This virtual technology can help keep chronically ill patients home as long as possible and avoid expensive hospitalizations that may expose them to infections (Allen, 2017). Intermountain Healthcare has also launched a virtual hospital, which combines 35 telehealth programs and 500 caregivers to provide patients care wherever they are (Intermountain Healthcare, 2018). Their services also provide specialized services to rural communities.

A review of 1,300 studies involving interventions for five chronic conditions found that, in 99% of the studies, telehealth interventions were equal or better than face-to-face interventions (Rambur, 2019). A separate review of telehealth used for patients with heart failure, stroke, and chronic obstructive pulmonary disease found reductions in hospital admissions/readmissions, length of stay, and emergency department visits (Dinesen, 2016). Telehealth also helps rural patients to access specialty care without having to travel long distances (RHIhub, 2019). A telehealth program in a single rural Veterans Affairs hospital resulted in a reduction of more than 820,000 travel miles by patients over a period of nine years (Waseh, 2019).
Nearly 59 million Americans live in areas defined as Health Professional Shortage Areas, which have shortages of primary care providers (HHS, 2016). Telehealth can be of help in these areas where access to certain specialties, such as oncologists, can be limited (HHS, 2016). Telehealth also holds promise for chronic disease management. Almost half of all U.S. adults have at least one chronic illness, which accounts for 75 percent of all health care expenditures and 70 percent of all deaths (HHS, 2016).

Telehealth is therefore well poised to address SDOH by improving access, decreasing the need for transportation to providers, and reducing costs.

**Nursing Education and Telehealth**

Despite its importance and positive impact on health, telehealth is not a standard curriculum item in schools across the United States. An annual medical school questionnaire showed that only about a quarter of medical schools had implemented telemedicine training components into their curricula at the preclinical phase (Waseh, 2019).¹

At the University of Alabama School of Nursing, faculty designed a telehealth simulation for the pediatric primary care advance practice registered nurse (APRN) course (Smith, 2018). Through the course students learn telehealth objectives, equipment, benefits/barriers, and reimbursement issues. They are also provided with required reading assignments on telehealth. Students then attended a telehealth simulation experience that includes a student case scenario, patient history, and chief complaint.

Using video conferencing, nursing students connect remotely with a provider (a volunteer), transmit images, carry out an assessment, and develop a plan of care. Students said the simulation provided them with opportunity to practice a skill that they had limited exposure to in the clinical setting.

A study by Waseh (2019) states that telemedicine training should “move beyond the simple exposure of medical students to telemedicine technology and seek to augment such exposure with at least basic understanding of the complex governmental, socioeconomic, and cultural principles involved.”

Another factor to consider when developing curricula are the technology skills of today’s students. Individuals applying for nursing programs today are part of a generation known as “digital natives” (Van Houwelingen, 2017). Born between 1992 and 2000 and known as “Generation Z” this group does not know a world without the Internet. They have been immersed in a world of technology by using smartphones, tablets, and social media both privately and at school and thus may feel that the use of health care technology is normal (Van Houwelingen, 2017). Training faculty to educate students is therefore a necessary part of the process.

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¹ Telemedicine is distinct, but overlaps with telehealth, electronic health, and mobile health (Waseh, 2019).
An example of faculty training can be seen at the University of Wisconsin System. Five nursing schools within the system have developed a model to educate nursing faculty on how to infuse telehealth content into the curriculum (Gallagher-Lepak, 2009). Each of the nursing schools was assigned a year to develop a faculty development topic related to informatics during a five-year grant.

Participating faculty were informed of new trends in informatics, articles related to telehealth, and participated in brown-bag conferences. A web site was designed for faculty that included content, discussion threads, articles, and meeting minutes. Three-day conferences were also held on specific topics including how nursing informatics supports telehealth, telehealth in nursing practice, secondary use of data, privacy, commercial and experimental telehealth applications, and ethical, legal, and social issues. Building on the telehealth/telenurse competencies developed by the American Nurses Association, faculty developed educational content for the curriculum.

The resulting content developed by faculty for nursing courses at University of Wisconsin was varied and included reviewing telehealth articles, understanding the advantages/disadvantages of telehealth, and use of a “telehealth room” developed by faculty to demonstrate telehealth monitoring. The room emulates a living room with a couch, computer, side table, pill containers, walker, scale, pressure cuff, oximeter, and other materials.

Using telehealth, a student can remotely teach a patient to use devices to monitor their health. They review the patient’s history and use clinical decision making to determine any next steps that need to be taken. The study found an increase in informatics skills in students on a pre/posttest. The study also emphasized the need for nursing faculty “to be on the cutting edge of this technology in order to educate the next generation of nurses” (Gallagher-Lepak, 2009).

**Practice**

A solid grasp of SDOH can also be critical in the area of clinical practice. Without fully addressing SDOH, clinicians may develop care plans that are clinically appropriate but not practical or feasible for individuals to follow, despite the patient’s willingness to follow a care regimen (Morone, 2017). For instance, a treatment plan may not be fully effective if a patient has difficulty paying for medications or getting to medical appointments. If SDOHs play an important role in health outcomes it only makes sense that all clinicians screen for SDOH during a patient visit, yet this is not traditionally done.

Morone (2017) has identified several barriers to screening for SDOH in practice. Some clinicians believe that SDOH falls outside of medical care and could be better addressed by other professionals, such as trained social workers who may be better suited to address a patient’s concerns. There is also the perception by some clinicians that SDOH cannot be changed, thus making their assessment irrelevant.
Those clinicians that do believe in the importance of SDOH may not screen for them because they feel they lack adequate training to do so or may not have sufficient knowledge of resources where they could refer patients to alleviate any identified SDOHs. Still others may feel uncomfortable asking their patients about sensitive topics such as income or domestic violence. Some clinicians might also believe there is not enough time in a short visit to address both clinical concerns and SDOH.

**Nursing and SDOH**

Nurses are well positioned to address SDOH in practice. Their large workforce (nearly 4 million) and availability in a wide variety of settings makes them ideal candidates for this task (Hassmiller, 2019). Nurses also spend more time with patients than nearly any other health professional, which can allow for a deeper look into a patient’s life.

The report *Registered Nurses: Partners in Transforming Primary Care* by the Josiah Macy Jr. Foundation provides recommendations on how nurses can transform the practice environment (Bodenheimer, 2017). It recommends that “nursing, primary care, and health services researchers as well as primary care administrators and chief financial officers should develop the business case for enhanced registered nurse roles in primary care, with an emphasis on their impact on quality; costs; patient, family, and team member and staff satisfaction; and their contributions to addressing social determinants of health in primary care settings.”

The National Academy of Medicine is currently carrying out a consensus study titled *The Future of Nursing 2020-2030* to determine how nurses can be catalysts for change to achieve healthier communities. The study’s results are expected to be released by the end of 2020 and will examine how nurses can improve health by addressing SDOH and “providing effective, efficient, equitable, and accessible care for all across the care continuum, as well as identifying the system facilitators and barriers to achieving this goal” (Hassmiller, 2019; NAM, n.d.).

**Exemplars of Screening for SDOH in Practice**

U.S. Census data show that nearly 39 percent of children lived in households in or around the poverty level in 2017 (Higginbotham, 2018). Poverty restricts the ability of families to meet basic needs such as food or housing, which can impact physical, cognitive, and behavioral outcomes in children (Higginbotham, 2018).

A study by Higginbotham (2018) examined the feasibility of screening patients for food and housing insecurity during a three-week period in a rural health clinic that primarily serves White, English-speaking, and low socioeconomic status families. The project was led by a pediatric nurse practitioner and included a registered nurse, a medical assistant, and two pediatricians.
A five-question screening tool for well-child appointments was developed by using the USDA 18-item Household Food Security Survey and the definition of housing insecurity developed by the U.S. Department of Housing and Urban Development. The team was taught how to use and score the screening tool and a one-page community resource guide was developed. A total of 53 patients and families were screened. Almost 17 screened positive for food insecurity and nearly 19 percent for house insecurity. Eighty-five percent of the families that screened positive were provided with a resource guide. This project demonstrates the feasibility of incorporating a simplified SDOH screening tool and referral resources into clinical appointments.

The Community Aging in Place – Advancing Better Living for Elders (CAPABLE) program was initially funded by the Innovation Center at the Centers for Medicare and Medical Services (CMS) to help low-income older adults with functional challenges (Smith, 2016). Studies have found that older adults who have difficulties with daily actives such as eating, bathing, and grooming use a higher percentage of health care resources (JHBSPH, 2015). CAPABLE is a team-based intervention that includes a registered nurse, an occupational therapist, and a handyman (Szanton, 2015). It is composed of ten in-home visits over a period of four months and includes up to $1,200 in home modifications and repairs (Smith, 2016).

An occupational therapist initially meets with the participant to identify and prioritize functional areas that might be problematic (Szanton, 2015). Nurses then work with the elderly to improve functional ability and self-efficacy and address factors that contribute to functional limitation including pain, strength, balance, depression, and medication management (Szanton, 2015). Handymen carry out common repairs such as installing railings and grab bars, repairing broken flooring, installing non-skid safety treads in tubs/showers, and installing raised toilet seats (Szanton, 2015).

Results show that CAPABLE tripled the number of individuals who reported not having difficulties in walking and decreased by half the functional limitations experience. In addition, CAPABLE costs were $2,825 per participant and resulted in more than $10,000 in Medicare savings for each participant per year (JHBSPH, 2015).

Another effort for screening for SDOHs involves Electronic Health Records (EHRs). EHRs are digital versions of a patient’s paper chart which can contain their medical history, diagnosis, medications, treatment plans, laboratory test results, and other information. Several organizations recommend that SDOH be incorporated into EHRs including the Institute of Medicine (IOM), the National Coordinator on Health Information Technology, and CMS (LaForge, 2018).

In 2013, a pilot study called Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences (PRAPARE) was developed to help community health centers document SDOH-related risks, better integrate social service interventions, and identify gaps in community resources (LaForge, 2018).
The study’s first step was to review 50 existing SDOH screening tools, national SDOH initiatives, IOM recommendations, and other relevant information. The tools developed were pilot tested in seven community health centers. In 2016, a toolkit was released for implementation that included four EHR SDOH tools, technical resources, best practices, and other resources. Following this pilot, a more robust version of the EHR tools began to be developed for use in 30 community health clinics (Gold, 2019). This project is an ongoing effort.

Research

Nursing is shaped by an ever-growing body of evidence as well as a constantly changing health care system. Practice is also shaped by new educational approaches, emerging policies, novel technologies, and changes in reimbursement.

Education Research

The importance of education research is emphasized by both experts in the field and leading organizations. For example, the IOM’s report The Future of Nursing: Leading Change and Advancing Health, has listed one of the research priorities as the “identification and testing of new and existing models of education to support nurses’ engagement in team-based, patient-centered care to diverse populations, across the lifespan, in a range of settings” (IOM, 2011).

Similarly, the Position Statement on Nursing Research by the American Association of Colleges of Nursing (AACN) states that rigorous research strategies in the teaching learning-processes and outcomes are needed in nursing education (AACN, 2006). The AACN also states that “the continuous supply of well-educated nurses is critical to maintain and enhance our nation’s health, especially in light of the changes in the demographics of the population” (AACN, 2006).

While some nurses may learn about SDOHs through school courses and service learning, students should ideally know about SDOH and also understand how they came to be and what can be done about them (Sharma, 2018). Significant efforts should be made to integrate SDOH as a foundation to the curriculum, threading them throughout, and incorporating them into core courses rather than only electives.

Similarly, SDOH should be incorporated in tandem into service learning in a matter that allows students to identify SDOH, screen for them, and address them through community resources and a team-based approach. This can only be accomplished by having faculty appropriately trained in SDOH so that they may, in turn, impart SDOH concepts and tools to their students.

Practice Research

Nursing pioneer Florence Nightingale was ahead of her time. In her book, Notes on Nursing: What It Is and What It Is Not she identified the impact of the environment on health. She cites five essential points in securing the health of houses “cleanliness, efficient drainage, pure air, pure water, and light” (Nightingale, 1860). While nurses today may have the best intentions to identify and address SDOHs, their high-demand and high-tech practice environments tend to be too task oriented and not allow not enough time to develop a holistic assessment (RWJF, 2017).
SDOHs are not always unfamiliar to nurses. They may have studied them in school or in the context of a practice model, but many still do not routinely incorporate them into clinical care by using an assessment tool and providing referrals to community resources. As a result, there is a growing need for demonstration projects on the use of SDOH in various settings.

**NACNEP Recommendations**

In developing the 16th report to the Secretary of HHS and Congress, NACNEP sought guidance from resources and experts in the field of social determinants of health with a focus on education, practice, and research. NACNEP also consulted with professionals currently working within the nursing community.

The 16th NACNEP report and recommendations emphasize changes in nursing education, faculty development, nursing practice, and research. The recommendations underscore the potential benefits to the nation of targeting Title VIII funding to support the essential development of the nursing profession and align nursing education, practice, and research with social determinants of health.

**Recommendations**

**Recommendation 1:** The Secretary/Congress should fund/support academic-community organization partnerships to establish clinical placements and service learning opportunities for nursing students that provide a range of practice experiences with an emphasis on addressing the SDOH with interprofessional teams lead by nurses, including: care coordination, telehealth (or utilizing the underpinnings of telehealth), and health promotion/health opportunities for individuals, families, and the community.

**Recommendation 2:** Congress should fund demonstration projects related to residency programs that emphasize strategies to effectively increase knowledge to address the SDOH, for APRN students commit to practice in rural communities and underserved communities with vulnerable populations.

**Recommendation 3:** Congress should provide funding for research/demonstration projects that implement innovative strategies for the integration of the SDOH in curricula for nursing students that include faculty development, effective models, and identification of best practices.
### List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>APRN</td>
<td>Advance Practice Registered Nurse</td>
</tr>
<tr>
<td>CAPABLE</td>
<td>The Community Aging in Place – Advancing Better Living for Elders</td>
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<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<tr>
<td>CKD</td>
<td>Chronic kidney disease</td>
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<td>CMS</td>
<td>Centers for Medicare and Medicaid Services</td>
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<tr>
<td>EHR</td>
<td>Electronic Health Record</td>
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<tr>
<td>GOOD</td>
<td>Growing Our Own in the Delta</td>
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<tr>
<td>HHS</td>
<td>Department of Health and Human Services</td>
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<tr>
<td>HRSA</td>
<td>Health Resources and Services Administration</td>
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<tr>
<td>IOM</td>
<td>Institute of Medicine (now the National Academy of Medicine (NAM))</td>
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<tr>
<td>NACNEP</td>
<td>National Advisory Council on Nurse Education and Practice</td>
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<tr>
<td>NASEM</td>
<td>National Academies of Sciences, Engineering, and Medicine</td>
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<tr>
<td>NEHI</td>
<td>Network for Excellence in Health Information</td>
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<tr>
<td>NeighborhoodHELP</td>
<td>Neighborhood Health Education Learning Program</td>
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<tr>
<td>JHBSPH</td>
<td>Johns Hopkins Bloomberg School of Public Health</td>
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<tr>
<td>PRAPARE</td>
<td>Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences</td>
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<tr>
<td>RHIhub</td>
<td>Rural Health Information Hub</td>
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<td>RWJF</td>
<td>Robert Wood Johnson Foundation</td>
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<tr>
<td>SDOH</td>
<td>Social determinants of health</td>
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References


