2019

Promoting Nursing Leadership in the Transition to Value-Based Care

Fifteenth Report to the Secretary of Health and Human Services and the U.S. Congress

National Advisory Council on Nurse Education and Practice (NACNEP)
Based on the 134th and 135th Meetings of NACNEP

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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

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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Executive Summary

Nurses are a pivotal component in leading change across various sites and organizations that provide health care. As a result, they are paramount in driving the transformation of the nation's health care system to one that is value-based, achieves preferred outcomes, and focuses on improving health and quality of care. To shift from volume to value-based care, the delivery of health care services will need to be redesigned to support team-based care, nurses will need to be able to practice to the full scope of their education and training, and nurses at all levels will need to be able to fully utilize electronic data and health information and communication technologies.

Team-based health care emphasizes alignment and coordination of health care practice with patient priorities. Efficient and effective team-based care improves access to, and the quality of, health care particularly when each member of the health care team is able to accomplish appropriate tasks without unnecessary practice restrictions and with opportunities to continue professional development. Shifting from fee-for-service to value-based care will demand new delivery models. Turning to value-based care also shifts the challenge of meeting quality outcomes from an individual to a team-based approach, where nurses at all levels need to be able to practice to the full scope of their education and training. Nurses can effectively lead change and improve care by utilizing information contained in electronic health records and other sources of health and health care data and by having skills and competencies in informatics and data science. This can be achieved when data are integrated throughout health care and care is connected across clinicians and care sites by using technologies such as telehealth, even in underserved and rural communities.

To develop this report, NACNEP sought guidance from experts in the field, including health care leaders and academicians. The 15th annual NACNEP report and accompanying recommendations emphasize changes in policy, legislation, and research to strengthen nursing's ability to lead and practice in today's value-based care environment. The recommendations below 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 and practice with new and emerging models of health care. These investments promise to advance nursing education and practice, and provide necessary support for educational institutions and partners to address the requirements associated with demonstrating value-based care.

Summary of NACNEP Recommendations

Recommendation 1: The Secretary will promote value-based care through funding of demonstration projects that study cost, access, and quality outcomes of nurse-led interdisciplinary teams.

Recommendation 2: The Secretary will promote value-based care through partnerships between community health centers and academia where Advanced Practice Registered Nurses (APRNs) have and do not have full practice authority, with the intent of collecting data showing the identified benefits and outcomes (patient, cost, access, quality).

Recommendation 3: Congress should fund academic and practice initiatives that advance the development of undergraduate and graduate nurse competencies associated with improved

population health outcomes (e.g., case management, care coordination, utilization management, team-based care, and understanding of health care finance) and how they impact value-based care.

Recommendation 4: HHS should advance value-based care through funding of educational and training initiatives in the areas of population health, data analytics, informatics, and connected care (e.g., telehealth) to address the needs of rural and underserved communities.

Introduction

In 2018, Alex M. Azar II, the Secretary of the U.S. Department of Health and Human Services (HHS), identified one of the HHS priorities as *transforming the health care system to value-based care*. On a national level, health care is a major federal expense. For patients and their families, health care costs can have a devastating, and often unpredictable, impact. According to HHS (2018), "Americans deserve better, cheaper health care. HHS is working to transform our system from one that pays for procedures and sickness to one that pays for outcomes and health."

There are over 4 million registered nurses (RNs) in the United States, making nursing the largest of the health professions (NCSBN, 2019). Nurses work and lead in all areas of health care, from intensive care units in acute care hospitals to school health rooms, community clinics, and home care. In many rural or remote areas, and among other underserved populations, advanced practice registered nurses (APRNs) – those nurses with post-graduate training in many primary and specialty care areas – are often the only providers. Any changes to the operation of the health care system will have far-ranging implications as to how nurses learn, train, and practice; where they work; and how they are reimbursed for their services. Given its size and the many roles the nursing profession plays, it has the opportunity to assume a leadership position in the value-based transformation of health care.

While the term value-based care (VBC) has long been in the discussion on ways to improve health care, there are no clear and accepted definitions of, or measures for, what VBC means. According to Pendleton (2018), there has been little progress in the movement toward VBC because the many stakeholders, such as hospitals, providers, insurers, employers, policymakers, and patients, have no common ground for defining value and do not agree on what elements indicate value. Is value in health care best indicated by costs? By accessibility? By quality? By patient and family satisfaction with services? By outcomes? Value encompasses all of these components.

Some Definitions of Value-Based Care

Many health professional organizations have offered definitions of VBC. The Center for Value-Based Medicine, formerly at Pennsylvania State University, has defined value-based medicine as "the practice of medicine incorporating the highest level of evidence-based data with the patient-perceived value conferred by health care interventions for the resources expended" (Bai, 2015).

A definition from the *New England Journal of Medicine Catalyst* (2017) states, "Value-based health care is a health care delivery model in which providers…are paid based on patient health outcomes. Under value-based care agreements, providers are rewarded for helping patients improve their health, reduce the effects and incidence of chronic disease, and live healthier lives in an evidence-based way."

The HHS Centers for Medicare & Medicaid Services (CMS) states that the current health care system pays providers based on the number of patients seen and services provided, without regard to patient outcomes. However, "the good work that clinicians do is not limited to conducting tests or writing prescriptions, but also taking the time to have a conversation with a patient about test results, being available to a patient through telehealth or expanded hours, coordinating medicine and treatments to avoid confusion or errors, and developing care

plans…the groundwork has been laid for expansion toward an innovative, patient-centered, health system that is both outcome focused and resource effective. A system that leverages health information technology to support clinicians and patients and builds collaboration across care settings" (CMS, n.d.).

VBC and Nursing

In relating VBC to nursing, the American Association of Colleges of Nursing (AACN, n.d.) states: "Nursing's professional lens has always encompassed a cost-effective approach to health care without sacrificing quality. The national call to reduce redundancy and reward value over volume will be a massive undertaking to amend current procedures. Supporting the shift to value-based health care as it relates to purchasing and reimbursement also means focusing on key concepts that will help successfully usher in this new health care delivery structure. Those include a focus on team-based care where measurements of value are created with the team in mind, and all providers are identified in data collection."

To take the lead in transforming the health care system to emphasize value, nursing will need to enter into a discussion centered on defining VBC as it applies to nursing education, training, practice, and the services that nurses provide. In this report, members of the National Advisory Council on Nurse Education and Practice (NACNEP or the Council) – a federal advisory committee of the Health Resources and Services Administration (HRSA) – explore value in health care as it applies to interprofessional, team-based care; helping nurses work to the full scope of their education, training, and licensure to provide high-quality, cost-effective care; and the use of health technology to provide or enhance care.

Team-Based Care

A common element of the definitions of VBC is the alignment of health care practice with patient priorities. These priorities encompass both patients and care providers as partners to promote effective communication and to enhance care coordination among the health care team members from different professions and educational backgrounds, toward the goal of improved health care outcomes. Thus, many health care organizations are shifting to care delivery models involving team-based care.

According to Reeves, Xyrichis, and Zwarenstein (2018), team-based care requires elements known to impact the effectiveness of teams to provide well-coordinated, high-quality, and safe care, including: a shared identity, clear roles/goals, interdependence of members, integration of work, shared responsibility, team tasks, collaboration, and coordination. The design of any care team needs to match the clinical purpose. Bridges (2011) and Kasperski (2000) indicated further characteristics of professional teams, including those that operate with the common goal of improving patient outcomes such as responsibility, accountability, coordination, communication, cooperation, assertiveness, mutual trust, and respect. Teamwork, a central concept to team-based care, is defined by the Interprofessional Education Collaborative (IPEC) as the ability to "apply relationship-building values and the principles of team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient/population care and population health programs and policies that are safe, timely, efficient, effective and equitable" (IPEC, 2016).

Team-based care has long been the subject of research, education, practice, and policy. Understanding team care and what it contributes to improved patient care, safety, and value-based outcomes is essential for the redesign of health care delivery, organizational quality, and provider and patient satisfaction. Nurses can take the lead in creating, coordinating, executing, and evaluating team-based care, especially in their unique practice of care coordination within VBC.

Team-Based Care and Nursing

Recent seminal work from federal government and other organizations has identified a need to shift health care delivery from the volume of care (the number of patient visits, tests, procedures, etc.) to the value of the care delivered. To be successful, this shift demands a deep understanding by providers, educators, organizations, and policymakers of barriers and facilitators to VBC. The World Health Organization (WHO, 2010) stated that team-based care in interprofessional practice occurs "when multiple health workers from different professional backgrounds provide comprehensive health services by working with patients, families, care providers, and communities to deliver the highest quality of care."

Over the last decade, many national reports have included a call to action to promote team-based care, education, and practice among all health professions. In a 2015 report on the impact of interprofessional education on performance in practice, the Institute of Medicine (IOM) (now the National Academy of Medicine) identified the need to continue to build evidence for teamwork on patient, populations, and delivery efficiencies and effectiveness. In assessing progress since its 2011 report, *The Future of Nursing Report*, the IOM found gaps in the evidence for improvements based on team-based practices and in work environments that reinforced team-based care delivery.

Two previous NACNEP reports addressed the need to promote interprofessional team capacity in nursing education and practice (HRSA, 2015); and the need to develop nurses who can deliver team-based care for effective population health care and management delivery (HRSA, 2016). In addition, the Josiah Macy Jr. Foundation (2016) recommends that nurses working in primary care be prepared to work in team-based care structures and that health care systems need to be transformed from individual practitioner to team-based care models. Furthermore, nursing curricula need to incorporate opportunities to develop teamwork knowledge and behaviors and to include patients and families in care processes.

Educating Professionals for Team-Based Care

A meta-analysis (McEwan et al., 2017) found that team training could be effective in improving both newly formed teams and intact teams. The pedagogic strategies of workshops, simulation-based teamwork training, and team debriefs/reflections were shown to significantly improve knowledge, attitude, and behaviors of trainees, compared to didactic methods alone. Passive learning alone appears to be neither sufficient nor effective to improve teamwork. Teamwork training that includes experiential activities, active learning, practice, and continued reinforcement and professional development in practice settings improves teamwork performance.

The modified and expanded Kirkpatrick model (Reeves et al., 2016) of learner outcomes has been explained by Brandt (2018) to include the discovery of teamwork education and capacity building, which can provide levels of learning and competencies during both nurses' pre-licensure and continuing professional development. These include:

- Illuminating the learner's reactions to team members and their roles,
- Modifying attitudes/perceptions of disciplines,
- Acquiring new knowledge and skills in team-based skills,
- Changing behavior,
- Changing health care organizational practices, and
- Ensuring benefits to patients and clients to promote population health with team-based practice.

When examining the impact of team education and practice in health care delivery, the effectiveness of team performance is influenced by the individuals or groups constituting the teams, as well as other workplace factors. Braithwaite et al. (2016) found that professional tribalism, stereotyping, and hierarchies (personal characteristics of engagement) operate in clinical environments where structural and organizational cultures reinforce professional silos and hierarchical power *in situ*. However, when taken out of the clinical environment for education and training sessions, these providers did not display the same tribal characteristics for a variety of tasks and team-based conditions. The results suggests that team-based capacity-building interventions should focus on the workplace culture in an organization, which will reinforce the desired team-based delivery and de-incentivize professional tribalism. The findings by Braithwaite et al. may explain why newly graduated team-based and interprofessionally educated providers, including nurses, can become dissatisfied on the job when confronted with employer organizational factors that form barriers to effective team-based practice.

A 2015 IOM report found an alarming prevalence of errors in the U.S. health care industry that impact patient morbidity and mortality, despite widespread improvements in medical and nursing science, electronic health records (EHRs), health information systems and health care technology, and patient information awareness. As a result, the IOM called for more effective teamwork among providers, patients, and families to improve health care effectiveness and patient safety.

Team-Based Care Exemplars: Quality, Safety and Costs

Exemplars abound in value-based health care delivery systems indicating the importance of teamwork in improving care. In these teams, nurses often lead the effort as they connect community and clinical partners to share relevant patient information, make referrals, and improve patient education resulting in better patient self-management of chronic conditions.

One such exemplar is the Accountable Community of Health team model lead and reported by Allard (2018) in Southwestern Vermont as they readied for valued-based reimbursement. The Accountable Community of Health model demonstrates improved outcomes from reorganizing to value-based health care delivery. By involving multiple sectors and teams in the community, this nurse-led model has been shown to decrease health care redundancy and shift acute care resources across communities as part of an integrated delivery model (AAN, 2018). The model incorporates efforts of transitional care registered nurses (RNs) with clinical pharmacists, social

workers, diabetes educators, support staff, primary care providers, physical therapists, nursing homes, and home health care in a manner that provides close monitoring, reporting, and team collaboration in planning and evaluating care across the care continuum (Allard, 2018). Keys for program success included teamwork, access to real-time information among providers, and timely follow-up during transition and stabilization. The Accountable Community of Health reported that their chronic disease patients had a 59.2 percent reduction in inpatient and observation visits at one year; a 39.8 percent reduction in emergency department visits for patients with substance use and mental health disorders; an 11.9 percent reduction in average HbA1C after integrated interventions by a diabetes educator; and an 85.6 percent reduction in the 30-day readmission rate for pulmonary rehabilitation patients (Southwestern Vermont Health Care Annual Reports, 2017). Successful outcomes like these support the expansion of teams and coordination of care models.

Malt (2015) examined 15 studies on clinical outcomes using interprofessional teams with implications for team-based care. Patient outcomes, adherence to guidelines, patient satisfaction, and clinical processes were improved, although the author cautioned that more rigorous studies are needed to affirm the outcomes.

Health care systems are now reporting on outcomes of bundled payment methods piloted by CMS for joint replacement care over a 5-year period. The core of this delivery is team care and coordination of care in a manner that improves patient care outcomes and lowers costs. One provider in Florida worked with orthopedic surgeons, physical therapists, and case manager teams. Physicians indicated improvements in patient progress at two weeks post-op, a decrease in phone calls about possible concerns, and reports of high satisfaction by patients (Darlin, 2017). This team-based approach improved quality and safety, two vital components of value.

The Geisinger Health System (URAC, 2018) created inpatient interdisciplinary teams around each patient. These teams meet daily to prepare patients for discharge, coordinate resources, communicate with the next level of care, and/or meet with family caregivers. One result was an average patient readmission rate of 10-12 percent, compared with the national average of 25 percent. This same delivery system developed a team-based Proven Health Navigator program that embeds nurses on teams with primary care providers and the patients' family members, which reduced readmissions from skilled nursing and home care down to 15 percent. For medication non-adherence risks and adverse medication events, this approach uses team-based providers, including nurses and community health workers, to connect with patients 24-48 hours post discharge. Care coordination outcomes, such as improved quality and safety, have been demonstrated in these newer models of team care.

The Tallahassee Memorial Care Transition Center at Tallahassee Memorial HealthCare uses EHR data, physician rounding with inpatient staff, physical therapists, and nurse case managers or social workers and conducts outreach to patients within a few days post discharge for intake visits to the clinic. This team-based approach has reduced emergency room (ER) visits by 68 percent and saved more than $1 million annually in unnecessary admissions and ER care.

These exemplars are but a few of the many outcomes of team-based care being created by provider groups and health care systems (URAC, 2018). The National Transitions of Care Coalition identified the need for practitioner/care teams to carefully manage patient care needs

and transition plans as one of the seven "Essential Intervention Categories" for avoidable complications and readmissions. Safety and quality improvements are desirable outcomes for team-based care. However, URAC (2018) reported that, "getting physicians and all other members of the patient's care team to clearly and effectively communicate what they did, why they did it, and what needs to follow is very challenging."

Conclusion

Moving from fee-for-service to value-based health care requires a paradigm shift in provider and organizational behaviors, processes, culture, and infrastructure. The opportunity to amplify the impact of care coordination through the use of teams will clearly reveal the advantage of VBC. All health care providers are on a journey together to improve the health of individuals, communities, and society.

Team-based care, which uses the full extent of licensing authority for practice and appropriate delegation and exchange of tasks to team members, is a key component of success for quality and safety. Team-based care offers expanded access to care as well as more effective and efficient delivery of services essential to high-quality care such as patient education, behavioral health care, self-management support, and care coordination. Team-based care also supports the job satisfaction of team members. Efficiency and effectiveness for improved quality, patient safety, population health, patient satisfaction, provider satisfaction, and appropriate cost containment are essential goals of teams in meeting the requirements of value-based care. A culture of care and ethos of the health professions team start with effective pre-professional education in team-based care using appropriate evidence-based pedagogy. This foundation must be reinforced through repeated clinical care team experiences, an organizational culture that demands a team approach, life-long professional development for all team members, and research that informs science, policy, and practice for sustainability.

Nursing Scope of Practice in Value-Based Care

As stated above, VBC encompasses a reimbursement structure that focuses on the outcomes of the health care services provided, as opposed to the fee-for-service model that renders payment regardless of care outcomes. VBC is based on the *quality* of the services provided, rather than the *quantity* of those services, with the intent that all health care providers perform at their highest level (RevCycleIntelligence, 2018).

However, different views on "value in health care" perpetuate the current health care model and impede a new transformative model of care whereby value is based on outcomes rather than output (Pendleton, 2018). Despite these discrepant views, most stakeholders agree that the current U.S. model and costs of health care is unsustainable. Data drawn from the 2014, 2015, and 2016 Commonwealth Fund International Health Policy Surveys show that the United States spent 17.2 percent of its Gross Domestic Product on health care, compared to other countries in the Organization for Economic Co-operation and Development, which spent an average of 9 percent (Schneider, Sarnak, Squires, Shah, & Doty, 2017). In terms of comparable outcomes, the U.S. ranked last on overall health care performance and near last on access, efficiency, equity and health care outcomes (Schneider, et al., 2017). Based on U.S. health care dollars spent relative to health outcomes, there is little doubt that efficiencies could be achieved with a

comparable level of service at less cost. Positive health care outcomes through cost-effective services should be the goal. However, this goal is difficult to achieve when some health care providers have limits and restrictions placed on their practice.

Registered Nurse

The basic RN license is obtained after the student completes a program of study at a school or college of nursing and then successfully passes the National Council Licensure Examination for Registered Nurses (NCLEX-RN). State legislators govern the authority that RNs can have and the services they can provide in any respective state and this authority is often referred to as the Scope of Practice (SOP).

One goal of VBC is to create a culture of health by emphasizing wellness, encouraging healthy lifestyles, and paying more attention to the social determinants of health, which include access to affordable and safe housing, healthy foods, exercise, and transportation. Nurses are vital to this culture change, as they are the largest segment of the health care workforce, spend the most time with patients, support family caregivers, and implement new models of care that can improve prevention, wellness, and population health outcomes.

RNs can take a leading role in the provision of VBC by practicing to the full extent of their licensure and education. Using their knowledge and expertise, the RN can play a pivotal role in value-based health care as the Care Coordinator. The American Nurses Association (ANA) defines care coordination as "a function that helps ensure that the patient's needs and preferences are met over time with respect to health services and information sharing across people, functions, and sites" (ANA, 2012). RNs are key to reducing the fragmentation across multiple providers and entities, and serving as the conduit for communication among all members of the team, which includes the patient, the patient's family, the health care provider(s), and others.

In 2017, the Tri-Council for Nursing (composed of four independent nursing organizations: the AACN, the ANA, the American Organization of Nurse Executives, and the National League for Nursing) published a joint statement addressing the role of the RN as the care coordinator in team-based care. As care coordinator, the RN is positioned to evaluate all aspects of care, including all interventions and services provided, resulting in positive patient outcomes, improved interprofessional practice, and a decrease in costs (Tri-Council for Nursing, 2017).

Advanced Practice Registered Nurse

In addition to the licensure exam for the RN, APRNs take an additional examination for certification at the advanced level in one of four advanced practice roles: nurse practitioner (NP), certified nurse-midwife (CNM), clinical nurse specialist (CNS), or certified registered nurse anesthetist (CRNA). The APRN's SOP varies by state and can range from independent practice to collaborative practice or consultative arrangements with varying degrees of physician collaboration and oversight (Adams & Markowitz, 2018).

The 2011 IOM report, *The Future of Nursing*, funded by the Robert Wood Johnson Foundation, noted that allowing APRNs to practice to the full extent of their education and training (full SOP) could lessen the burden on the current primary care system, which currently lacks provider

capacity to meet the health care needs of the public. Despite the lack of a robust health care provider workforce, APRNs remain restricted in their SOP due to state laws, federal policies, insurance reimbursement models, and institutional cultures and practices (Josiah Macy Jr. Foundation, 2016).

As of 2018, APRNs had full practice authority under the exclusive licensing authority of the state board of nursing in 22 states plus D.C.; 16 states required a collaborative agreement with at least one healthcare provider outside of the discipline (usually a physician) for the APRN to provide care; and 12 states had restricted practice and management by a healthcare provider outside of nursing (AANP, 2018).

In terms of the SOP, much of the cost of health care could be reduced if the anti-competitive barriers for APRNs were removed. SOP restrictions not only increase cost, but also limit access to services (Adams & Markowitz, 2018). Many question the legitimacy of the barriers and advocate that issues of access to cost-effective and quality health care are critical (Oliver, Pennington, Revelle, & Rantz, 2014). This is substantiated by a plethora of data providing evidence that APRNs provide safe, quality, and cost effective care (Buerhaus, 2018). Operational and productivity efficiencies could be realized with less costly health care providers to produce, at a minimum, comparable outcomes.

APRN students should be encouraged to obtain a National Provider Identifier (NPI) number (CMS, 2018), which is part of a national registry. This 10-digit number is used by all covered health providers, including nurses, and is placed on claim forms submitted to payors who meet the Health Insurance Portability and Accountability Act (HIPAA) definition of "covered entity." This database could aid in the tracking of APRNs working to their full SOP.

Conclusion

Nursing needs to make the case that having nurses work to their full scope of practice improves access to care for those most in need and provides services that people value. For example, hospitals recognized for nursing excellence by the American Nurses Credentialing Center (often referred to as Magnet hospitals) have been found to perform better on value-based measures than their non-Magnet counterparts (Lasater, Germack, Small & McHugh, 2016). Also, hospitals with Magnet status achieved higher patient satisfaction rates and greater performance on value-based measurements linking to the Medicare reimbursement plan (Lasater et al, 2016). One common characteristic of Magnet hospitals is that nurses, both RNs and APRNs, are encouraged and engaged to practice to the full extent of their scope.

Nurses at all levels need to work to the top of their training and scope of practice to improve access to health care and promote efficiency. Evidence has shown that health care costs are decreased when RNs and APRNs coordinate and provide care in both hospital and community settings (Atherly & Thorpe, 2011; Robles, et al., 2011). The Josiah Macy Jr. Foundation (2016) has recommended that RNs fully engage in interprofessional practice, leadership, and autonomy in primary care sites.

Information Technology, Nursing, and Valued-based Health Care Delivery

As the nation continues to define what VBC will represent, there are several key components that can enable the potential transformation of our health care system, particularly involving nurses – the largest group of health professionals in the nation.

In a 2018 presentation, Dr. Patricia Brennan, the director of the National Library of Medicine, noted that the information substrate for health care delivery and decision-making is increasingly data focused. However, there is a wide range of data sources.

Improvements to the Electronic Health Record to Facilitate Nursing Practice

Electronic health records (EHRs) are a key component of health care information systems used by health care clinicians and systems. Following passage of the Health Information Technology for Economic and Clinical Health (HITECH) Act, enacted as part of the American Recovery and Reinvestment Act of 2009 (HITECH Act, 2009), and Meaningful Use requirements, the majority of hospitals have replaced paper-based documentation records with EHRs.

Through these initiatives, the federal government made a huge investment in the deployment of EHRs throughout the country. However, nursing documentation was often left only as a free-text section, and thus cannot be incorporated in a meaningful way in the patient record. As a result, nursing documentation cannot be extracted, and most EHRs neglect a very rich source of information that could enhance patient care. In addition, nurses at the bedside lack anything that defines their care in the EHR as separate and distinct. Thus, the outcomes of nursing care are difficult to track for hospitals and health organizations, as well as for health insurers. While the implementation of EHRs has made improvements in addressing concerns regarding the time needed to document and improve communication (Holyroyd-Leduc, Lorenzetti, Straus, Sykes, & Quan, 2011; Silow-Carroll, Edwards, & Rodin, 2012), several additional improvements are needed before the potential of EHRs can be fully realized.

In a recent study, more than half of the nurses working in informatics (also known as nurse informaticians) reported that EHRs have low usability for nursing practice (Topaz et al., 2016). These concerns are associated with data entry burden, how EHRs are designed, and a lack of EHR-enabled capabilities tailored for nursing, including decision support tools. Both regulatory and accreditation requirements have increased the documentation burden for nurses. The American Medical Informatics Association recommended that by 2020, EHRs should be simplified and modified to decrease the time required for documentation (Payne et al., 2015).

While EHR vendors market standardized software, health care organizations typically make and implement modifications to the initial design to customize certain features according to the perceived needs within the organization. When additional changes are needed, prioritization has not been inherently assigned to nursing, resulting in situations where paper-based records are considered more flexible and not at risk of technical glitches that impede workflow (Ward, Vartak, Schwichtenberg, & Wakefield, 2011). Future efforts are needed that focus on improving EHRs to enable and facilitate nursing practice, especially for nurses providing hospital-based care at the bedside, and to facilitate nursing documentation into workflow (Bakken et al., 2008).

If EHR capabilities for nursing are minimal or at the basic level, the practice of nurses is constrained. In a report by the Office of the National Coordinator for Health Information Technology (ONC), only one-third of EHRs implemented in non-federal acute care hospitals provided a comprehensive EHR functionality, including nursing orders and clinical decision support (CDS) (Charles, Gabriel & Searcy, 2015). It is important to increase access to enhanced capabilities, such as CDS, and more effective visual structuring of patient information (Topaz et al., 2016). With a base of over 4 million registered nurses (NCSBN, 2019), nursing needs greater representation within the ONC, which at the time of writing did not have a nurse at its executive table, in order to promote the usability of the EHR for all providers

Interprofessional Team-Based Care

Health information technologies, including EHRs and telehealth, and valued-based models of care can be successfully utilized to better prevent and manage chronic conditions by focusing on the strengths that each member of the care team can bring to patients. Focusing on wellness and higher value care means a greater emphasis on prevention-based patient services, with less need for expensive chronic disease management.

The proliferation of VBC models is changing the way that providers and organizations provide health care services. Emerging health care delivery models emphasize a team-oriented approach to patient care and sharing of patient data so that care is coordinated and outcomes can be measured easily. Two models, patient-centered medical homes and accountable care organizations, are leading this trend.

In value-based health care models, primary, specialty, and acute care services are integrated, often in a delivery model called a patient-centered medical home (PCMH). A medical home is a coordinated approach to patient care, led by a patient's primary provider (physician or nurse practitioner) who directs a patient's total clinical care team (Schottenfeld et al., 2016). To best meet a patient's needs, PCMHs rely on the sharing of electronic health data among all providers on the coordinated care team. When important patient information is readily available for providers, such as results of tests and procedures performed by other clinicians, redundant care and associated costs can be reduced (Porter, Pabo, & Lee, 2013).

Accountable care organizations (ACOs) were originally designed by CMS and provide high-quality medical care to Medicare patients. Providers, hospitals, and other health care professionals work as a networked team to deliver, in a coordinated manner, the best possible care at the lowest possible cost. Each member of the team shares both risk and reward, with incentives to improve access to care, quality of care, and patient health outcomes while reducing costs. This approach differs from traditional fee-for-service health care, where individual providers are incentivized to order more tests and procedures and manage higher volumes of patients in order to get paid more, regardless of patient outcomes (McClellan, McKethan, Lewis, Roski, & Fisher, 2010).

In both PCMHs and ACOs, health information technology can: 1) enable the patient and providers to make care decisions together, 2) improve coordination and data sharing among team members and systems to help achieve patient population goals, and 3) assist the sharing of clinical and financial data with payers to demonstrate improvements in outcomes such as

hospital readmissions, adverse events, and patient engagement and satisfaction. As these models evolve, it is important that health information technology enable both physician and nurse practitioner practice, as well as other members of the health care team.

CMS will continue to refine its value-based practice measurements, making it important for hospitals to continuously improve their clinical outcomes while simultaneously improving reimbursement and their reputation among health care consumers (Burwell, 2015). Improvements in analytics and automation that better engage providers and assess overall effectiveness will necessitate continued investment in the technologies and services that demonstrate value.

Health care providers in underserved and rural communities continue to be challenged to meet the health needs of those they serve. To meet the growing health care demands in these communities, information technologies to facilitate communication, such as meaningful documentation and telehealth, can be used. The role of nursing can be expanded in rural and underserved communities through the use of telehealth.

Conclusion: Nursing and Data Science

Nurses need to have opportunities to contribute to VBC through enhanced data science and informatics skills as part of undergraduate and graduate curriculums, in order to improve access and the health of the community.

To educate the nursing workforce in data science, given the multiple different educational levels, entry into practice needs to be stronger and practicing RNs need to be offered ongoing opportunities to learn and advance their knowledge. Nursing has tended to treat informatics as a technical component, rather than a foundation to nursing education and practice. The profession needs nurses who have advanced expertise in informatics to design and deploy health information systems as vital tools for practice. Nurses need to be able to access information for patient care while understanding the individual patient in context.

To improve nursing education in informatics and the use of data, more undergraduate courses are needed to provide experience with electronic tools that analyze data. Learning to use these basic tools will help more nurses understand and engage with data science. In addition, nurses with doctoral training in data science will be able to use their expertise to develop methods that illuminate nursing practice and illustrate the value of nursing care. Clinical nurse researchers are the largest group of nursing scholars and need to work with data scientists to answer both `nursing and science questions. Data science approaches can offer new insights into interpretive empirical methods and provide information that is more categorical, classification-oriented, and exploratory than a clinical trial.

NACNEP Recommendations

In developing its 15th report to Congress, NACNEP sought guidance from experts in the field of value-based care with a focus on the topics of team-based care, nursing scope of practice, and health information technology. NACNEP also consulted with professionals currently working with the nursing community to determine the educational needs of practicing nurses. The 15th

NACNEP report and recommendations emphasize changes in policy and the allocation of resources to strengthen nursing's ability to lead the transformation of the health care system to value-based care. 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 and practice with new and emerging models of effective health care. These investments promise to advance nursing education and practice, and provide the necessary support for educational institutions and partners to devise new models of care to move the nation's populace toward better health.

Recommendations

Recommendation 1: The Secretary will promote value-based care through funding of demonstration projects that study cost, access, and quality outcomes of nurse-led interdisciplinary teams.

Recommendation 2: The Secretary will promote value-based care through partnerships between community health centers and academia where APRNs have and do not have full practice authority, with the intent of collecting data showing the identified benefits and outcomes (patient, cost, access, quality).

Recommendation 3: Congress should fund academic and practice initiatives that advance the development of undergraduate & graduate nurse competencies associated with improved population health outcomes (e.g., case management, care coordination, utilization management, team-based care, and understanding of health care finance) and how they impact value-based care.

Recommendation 4: HHS should advance value-based care through funding of educational and training initiatives in the areas of population health, data analytics, informatics, and connected care (e.g., telehealth) to address the needs of rural and underserved communities.

List of Abbreviations

AACN	American Association of Colleges of Nursing
ACO	Accountable Care Organization
ANA	American Nurses Association
APRN	Advanced Practice Registered Nurse
CDS	Clinical Decision Support
CNM	Certified Nurse-Midwife
CRNA	Certified Registered Nurse Anesthetist
CNS	Clinical Nurse Specialist
CMS	Centers for Medicare & Medicaid Services
EHR	Electronic Health Record
ER	Emergency Room
HHS	Department of Health and Human Services
HIPAA	Health Insurance Portability and Accountability Act
HITECH	Health Information Technology for Economic and Clinical Health
HRSA	Health Resources and Services Administration
IPEC	Interprofessional Education Collaborative
IOM	Institute of Medicine (now the National Academy of Medicine (NAM))
NACNEP	National Advisory Council on Nurse Education and Practice
NCLEX-RN	National Council Licensure Examination for Registered Nurses
NP	Nurse Practitioner
NPI	National Provider Identifier
ONC	Office of the National Coordinator for Health Information Technology
PCMH	Patient-Centered Medical Home
RN	Registered Nurse
SOP	Scope of Practice
VBC	Value-Based Care
WHO	World Health Organization

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