ARTICLE IN PRESS



Available online at www.sciencedirect.com



Nurs Outlook 000 (2022) I -I 0



www.nursingoutlook.org

Calling all nurses—Now is the time to take action on improving the quality of care in nursing homes

Christine A. Mueller^{a*}, Gregory L. Alexander^b, Mary Ersek^c, Betty R. Ferrell^d, Marilyn J. Rantz^e, Jasmine L. Travers^f

^aUniversity of Minnesota School of Nursing, Minneapolis, MN ^bColumbia University School of Nursing, New York City, NY

^cVeteran Experience Center, University of Pennsylvania Schools of Nursing and Medicine, Department of Veterans Affairs, Philadelphia, PA

^dCity of Hope National Medical Center, Division of Nursing Research & Education, Duarte, CA

^eUniversity of Missouri, Sinclair School of Nursing, Columbia, MO ^fRory Meyers College of Nursing, New York University, New York, NY

ARTICLE INFO

Article history: Received 17 July 2022 Received in revised form 18 October 2022 Accepted 8 November 2022

Keywords: Quality of care Nursing homes Policy Nursing leadership

ABSTRACT

For a number of decades, nurses have raised concerns about nursing-related issues in nursing homes (NH) such as inadequate registered nurse (RN) staffing, insufficient RN and advanced practice registered nurse (APRN) gerontological expertise, and lack of RN leadership competencies. The NASEM Committee on the Quality of Care in Nursing Homes illuminated the long-standing issues and concerns affecting the quality of care in nursing homes and proposed seven goals and associated recommendations intended to achieve the Committee's vision: Nursing home residents receive care in a safe environment that honors their values and preferences, addresses goals of care, promotes equity, and assesses the benefits and risks of care and treatments. This paper outlines concrete and specific actions nurses and nursing organizations can take to ensure the recommendations are implemented

Cite this article: Mueller, C.A., Alexander, G.L., Ersek, M., Ferrell, B.R., Rantz, M.J., & Travers, J.L. (2022, xxx). Calling all nurses—Now is the time to take action on improving the quality of care in nursing homes. Nurs Outlook, 00(00), 1–10. https://doi.org/10.1016/j.outlook.2022.11.001.

Solutions to the decades old problems of quality care delivered in nursing homes (NH) are once again illuminated in the recently released National Academies of Sciences, Engineering and Medicine (NASEM) report "The National Imperative to Improve Nursing Home Quality: Honoring our Commitment to Residents, Families and Staff" (2022). The Committee on the Quality of Care in Nursing Homes (hereafter referred to as the Committee) began its work on this report in Fall 2020 in the midst of the COVID-19 pandemic, which catapulted NHs into a state of crisis and brought national

attention to struggling facilities through a myriad of media reports of dying residents and staff.

For years, nurses have raised concerns about nursing-related issues in NHs such as inadequate registered nurse (RN) staffing, insufficient RN and advanced practice registered nurse (APRN) gerontological expertise, and lack of RN leadership competencies. While there have been incremental strategies to address the quality of care delivered in NHs, none has addressed these core nursing-related causes. The NASEM report is not shy in addressing these quality issues and it is

DOI of original article: .*Corresponding author: University of Minnesota School of Nursing, 308 Harvard St. SE, Minneapolis, MN 55455.

an opportune time for the nursing profession to step forward to ensure that the report's recommendations move forward with action.

Led by a nurse, the interdisciplinary committee consisted of 17 members (six of whom were nurses). The committee's charge was to address the quality of NH care in the United States with three broad tasks: (a) examine how the nation delivers, regulates, finances, and measures the quality of NH care; (b) delineate a framework and general principles for improving the quality of care delivered in NH; and (c) consider the impact of the COVID pandemic on NH care. Over a period of 18 months, the committee held several meetings including public forums with key stakeholders and conducted an extensive review of the literature (evidence). The final report articulated seven goals with related recommendations. The complete report is available online (www.nationalacademies.org/nurs ing-homes).

The committee recognized the deficiencies in NH care had been long standing but the COVID pandemic brought attention to these deficiencies nationally. It is important to note that deficiencies in nursing home care will continue far beyond the pandemic unless the recommendations of the report are acted upon and accomplished. As a family caregiver stated in her testimony to the committee, "The pandemic has lifted the veil on what has been an invisible social ill for decades" (NASEM, 2022, p. 28). While the pandemic resulted in high rates of mortality for both residents and staff, it also revealed inequities in care, safety concerns and major deficiencies in NH regulation, financing and quality improvement. The committee recognized that reforms are essential for the quality of life of the staff, as well as the residents, and the report includes recommendations related to staff wages, training, and support. While many disciplines are involved in NH care, the extreme deficiencies in NH care should be of particular concern to the nursing profession given that nurses and nursing assistants comprise a significant majority of the NH workforce.

The Committee summarized seven key conclusions based on their extensive review of the evidence and deliberations which include:

- 1. The way in which the United States finances, delivers, and regulates care in NH settings is **ineffective**, inefficient, fragmented, and unsustainable.
- 2. Immediate action to **initiate fundamental change** is necessary.
- Stakeholders need to make clear a shared commitment to the care of NH residents.
- Ensure that quality improvement initiatives are implemented using strategies that do not exacerbate disparities in resource allocation, quality of care, or resident outcomes.
- 5. **High-quality research** is needed to advance the quality of care in NHs.
- 6. The NH sector has suffered for many decades from both underinvestment in ensuring the quality of

- **care** and a **lack of accountability** for how resources are allocated.
- All relevant federal agencies need to be granted the authority and resources from the U.S. Congress to implement the recommendations of this report. (NASEM, 2022, p. 2–3).

This paper highlights each of the report's seven goals and associated recommendations and specifies action for nurses and nursing organizations. Table 1 provides a summary of the actions outlined in this paper that nurses can take in relation to the seven goals. It is imperative that the recommendations in the report are viewed as interrelated and cannot be implemented in isolation.

Goal 1: Deliver Comprehensive, Personcentered, Equitable Care That Ensures Residents' Health, Quality of Life, and Safety; Promotes Autonomy; and Manages Risks

The committee's vision for high quality care in NHs underscores the centrality of the first goal as the anchor for the other six goals. The committee's vision is as follows: "Nursing home residents receive care in a safe environment that honors their values and preferences, addresses goals of care, promotes equity, and assesses the benefits and risks of care and treatments" (p. 5). Federal regulations for NHs are framed in the context of person-centered care, yet the committee recognized the widespread failures in implementing person-centered care as a major shortcoming. A central component to this implementation is the interdisciplinary care planning process that is required to be coordinated by a RN. The first recommendation calls for immediate and consistent compliance with existing regulations related to care planning and implementation of care that uses shared decision making with residents and their families and incorporates residents' care preferences. Nurses in NHs can move this recommendation to immediate action by evaluating current care planning systems and practices used in NHs. RNs are critical in ensuring that residents' preferences are in the care plans and hold the care team accountable for ensuring that these preferences are fulfilled. Strengthening care planning structures and processes will ensure the creation, review, implementation, and evaluation of person-centered resident care plans that serve as a guide to all staff who deliver care to the resident.

Current models of NH care delivery are very traditional and support a routine, task-focused approach to care delivery. Models that support person-centered care are far less common, although there are exemplars such as the small household model. By attending to the physical environment through the creation of smaller, home like environments, care delivery factors

Table 1 - Actions for Nurses That Address the NASEM Recommendations

NASEM Goals

Actions for Nurses

- Goal 1: Deliver comprehensive, person-centered, equitable care that ensures residents' health, quality of life, and safety; promotes autonomy; and manages risks.
- RNs employed in nursing homes should lead the evaluation and subsequent implementation of care planning systems and practices to
 ensure that residents' preferences are in the care plans and hold the
 care team accountable for ensuring that these preferences are fulfilled.
- Nurse researchers should lead and contribute to innovative projects that promote person-centered care and the staffing configurations that best support effective care delivery to residents.
- Nurses in local and state public health departments should ensure the inclusion of NHs in emergency and disaster planning management and drills with supporting strategies to ensure NHs have an adequate supply of personal protective equipment at all times.
- Goal 2: Ensure a well-prepared, empowered, and appropriately compensated workforce.
- Nursing education programs should provide robust and meaningful clinical experiences for nursing students in NHs to develop their competence and interest in the care of NH residents.
- Nursing education programs should develop partnerships with NHs to facilitate these practicum experiences and involve nurses working in NHs in curriculum development, and as teachers and preceptors.
- Advance practice nursing organizations should advocate for nationwide expansion of the APRN scope of practice such that Medicare would recognize APRNs as billers which would increase their use in NHs.
- Professional nursing organizations should advocate for immediate increases in pay and benefits for RNs working in NHs to address wage parity.
- Nurse leaders should strategize ways to increase the number of NHs recognized through the Pathways to Excellence Program.
- Nurse researchers should conduct research to identify and rigorously test specific minimum and optimum staffing standards for direct-care staff in nursing homes.
- Nurses and nursing organizations must advocate at the state and federal levels for minimum staffing standards that takes into account the number of residents and their acuity and complexity along with the professional nursing needs.
- GOAL 3: Increase the transparency and accountability of finances, operations, and ownership.
- Nurses should be knowledgeable about the nursing home data and interpretation of the data that is available to the public on Nursing Home Compare to assist older adults and their families in making decisions about seeking nursing home care.
- GOAL 4. Create a more rational and robust financing system
- Nurses should be knowledgeable about and advocate for legislation and policy changes that move the U.S. toward universal long-term care.
- Goal 5: Design a more effective and responsive system of quality assurance.
- Nurses must advocate for changes to the state and federal survey and oversight process and nursing home regulations and conduct studies to inform new and effective survey processes
- Goal 6: Expand and enhance quality measurement and continuous quality improvement.
- Nurses should engage in efforts to inform an overall health equity strategy for NHs to include a Minimum Data Set, a national report card, culturally-tailored interventions and policies, and strategies to identify and address disparities.
- Nurses, in collaboration with other healthcare disciplines, need to develop and lead statewide technical assistance programs to improve the quality of NH care.
- Nurse leaders in NHs must guide development of staff skills to participate in quality improvement activities to continuously implement and assure best evidence-based practices are incorporated into daily routines of care
- Nurse researchers should be intricately involved in analyzing data related to existing and new quality measures for NHs.

(continued)

Table 1 – (Continued)	
NASEM Goals	Actions for Nurses
Goal 7: Adopt health information technology in all NHs.	 Nurses need to advocate for addressing the gaps in use of EHRs between nursing homes and other care settings that make the exchange of clinical information difficult and lobby for financial incentives to NHs for adoption of certified EHRs. Nurses should become involved in developing standardized nursing terminologies that support measurement of nursing practice and associated outcomes which are integrated into EHRs. This is particularly important as new technology emerges into clinical areas where nurses work.

such as staffing and care assignments can be modified to support residents' autonomy, safety, and quality of life. The recommendations call for more translational research and demonstration projects to identify, implement and disseminate the most effective care delivery models in NHs settings. This recommendation provides specific opportunities for nurse researchers to lead and contribute to innovative projects that promote person-centered care and the staffing configurations that best support effective care delivery to residents.

Another recommendation for this goal focused on emergency preparedness and response in NHs. In addition to the lack of preparation for public health emergencies such as the COVID-19 pandemic, in recent years there have been multiple reports of poor responses by NHs affected by natural disasters such as fires, hurricanes and tornados. Nurses in local and state public health departments must advocate for the recommendations in the report, specifically ensuring the inclusion of NHs in emergency and disaster planning management and drills with supporting strategies to ensure NHs have an adequate supply of personal protective equipment at all times.

Goal 2: Ensure a Well-prepared, Empowered, and Appropriately Compensated Workforce

Integral to the NH care delivery models are those providing this care. The NH workforce is made up of 1.2 million individuals, 68% of whom provide direct care to NH residents (Bureau of Labor Statistics, n.d.). This interprofessional workforce includes RNs, APRNs, licensed practical nurses (LPNs), certified nursing assistants (CNAs), physicians, physician assistants (PAs), physical therapists (PT), occupational therapists (OT), speech language pathologists (SLP), and social workers (SW). Many shortfalls within the NH structure prevent direct care workers from providing optimal, high quality care to residents (Bostick, Rantz, Flesner, & Riggs, 2006). For example, direct care workers are not always adequately prepared to meet the needs of residents with complex needs coupled with insufficient staffing. Additional workforce challenges include

high turnover across roles including leadership, extreme staffing shortages, inadequate training, ineffective use of staff, poor working conditions, low pay, insufficient resources, and inadequate support (Antwi & Bowblis, 2018; Center for Medicare Advocacy, 2014; Cooke & Baumbusch, 2021; Drake, 2020; Gandhi, Yu, & Grabowski, 2021; McGilton et al., 2020; Travers, Teitelman, Jenkins, & Castle, 2020). Lack of staff integration across disciplines is common in NHs and subsequently creates fragmentation in care delivery and misalignment of resident goals and preferences (Travers et al., 2021).

The committee's recommendations for the workforce are to (a) increase the education and training of all NH workers, including the establishment of national competencies, (b) remove APRN scope of practice barriers that restrict Medicare billing by APRNs, (c) require NHs to employ a social worker with a bachelor's degree or higher, (d) improve compensation for all NH staff, (e) increase staffing, and (f) implement minimum staffing standards. These recommendations have important implications for nurses and nursing and are described in more detail.

Increased Education and Training

In 2008, the Institute of Medicine (IOM) report recommended efforts to ensure competence of all providers in geriatrics through (a) professional education programs with sufficient geriatric course content integrated into the curriculum and (b) inclusion of adequate clinical experiences in long-term care settings (IOM, 2008). Specific to nursing education, while content focused on geriatrics and long-term care is now included in many nursing programs, this is not the case across all programs. Further, practicum experiences for health care students in NH settings are uncommon.

It is important for nursing programs to provide robust and meaningful clinical experiences for nursing students in NHs with the goal of developing competence and interest in the care of NH residents. This would provide an opportunity for RN students to see working in the NH as a viable and exciting career path. More nursing schools should develop partnerships with NHs to facilitate these types of experiences and

involve nurses working in NHs in curriculum development and as teachers and preceptors.

Scope of Practice

Advanced practice nursing organizations such as the American Association of Nurse Practitioners should advocate for nation-wide expansion of the APRN scope of practice such that Medicare would recognize APRNs as billers which would increase their use in NHs. Currently this is not the case and limits the use of APRNs in NH settings, despite findings reflecting the impact of APRNs on resident care quality.

Compensation and Benefits

Recruiting and retaining RNs is challenging because NHs generally offer nurses lower wages than other health care settings. The annual mean wage for RNs in NHs (\$72,900) is approximately \$10,000 (roughly 12%) less than RNs employed in acute-care hospitals (\$81,680) and approximately \$17,000 (nearly 20%) less than RNs employed in outpatient care settings (\$89,300) (NASEM, 2022). As such, professional nursing organizations such as the American Association of Post-Acute Care Nursing and the American Nurses Association should advocate for immediate increases in pay for RNs working in NHs to reduce the bias in choice of workplace settings rooted in wage parity. Also important for nurses working in NHs is having access to similar benefits as those in acute care settings. Such benefits may include childcare, parental leave, and hazard pay.

Increased Staffing

Staffing shortages in the NH setting have been a long-standing issue. Nursing education needs to creatively and intentionally advocate for efforts to increase the pipeline of RNs available to work in NHs. For example, nursing programs might consider CNA status for enrollment in RN undergraduate programs to encourage those with direct care CNA experience to pursue RN education. Moreover, CNAs bring a wealth of experience already having worked in a clinical setting. Nursing programs might also change the narrative around working in community settings including NHs, where currently there is very much an acute care focus.

Nursing homes must also be seen as a good place to work which constitutes changing the work environment in NHs. The Pathways to Excellence Program is a designation for healthy work environments and recognizes health care organizations, including NHs, for positive practice environments where nurses excel (Doucette & Pabico, 2018). Nurse leaders should strategize ways to increase the number of NHs recognized through this program.

Minimum Staffing Standards

The presence of at least one RN on site 24 hours a day remains critical. The committee reinforced the recommendations on 24 hour RN staffing from four previous IOM reports (1986, 1996, 2001, 2008). The recommendations from the committee call for research to identify and rigorously test specific minimum and optimum staffing standards for direct-care staff. Nurse researchers are well poised to conduct this research and therefore should be at the forefront. Additionally, the Centers for Medicare and Medicaid Services (CMS) recently put out a request for information (RFI) on revising requirements for long-term care facilities to establish mandatory minimum staffing levels. Beyond the closing of this RFI, CMS will continue to be interested in learning more about how best to structure minimum staffing levels. This is an opportunity for nurses of all types along with nursing professional organizations to contribute their knowledge, experiences, and opinions to this endeavor by engaging with CMS through emails, briefing sessions, and commentary. Minimum staffing standards must take into account the number of residents and their acuity and complexity along with their professional nursing needs

Goal 3: Increase the Transparency and Accountability of Finances, Operations, and Ownership

Goal 3 focuses on the business of NH care. Ample evidence exists indicating that ownership has a significant impact on NH quality. Studies have consistently documented that facilities owned by for-profit companies and private equity firms have lower quality of care, poorer resident outcomes, lower staffing levels, and higher staff turnover than not-for-profit NHs (Gandhi et al., 2021; Godby, Saldanha, Valle, Paul, & Coustasse, 2017; Gupta, Howell, Yannelis, & Gupta, 2021; Hawk et al., 2022; You et al., 2016). Further, many studies have documented the positive associations between spending on direct care for residents and overall quality of care (NASEM, 2022). Despite this relationship, there is evidence that excessive percentages of the Medicaid and Medicare payments go towards non-care items, such as corporate administrative costs, interest payments, lease payments, and monitoring fees (LTCCC, 2021). Understanding and auditing the influence of ownership structure and processes on the quality of care is challenging because of a lack of data. For example, the amount that an individual NH facility or chain pays for direct care (mostly in the form of salaries for front line staff) is difficult to determine in the current system. To address these concerns, the NASEM report recommends changes to the U.S. Department of Health & Human Services (DHHS)

NH data collection, auditing, and reporting procedures. Recently, DHHS announced that CMS is releasing public data on mergers, acquisitions, consolidations and changes of ownership for nursing homes enrolled in Medicare (DHHS, 2022). This will ensure real-time facility- and corporate-level financial, operations and ownership data are accurate and publicly accessible. Data should also include staffing patterns, financial arrangements, deficiencies, and quality indicators for a common owner (e.g., NHs chain, private equity firm, or real estate investment trust).

As the nation's most trusted profession, this recommendation has significant implications for nursing. It is important for nurses to understand and communicate accurately about all aspects of care including financing. To that end, nurses should familiarize themselves with the basics of publicly reported NH data, available on Care Compare (Find Healthcare Pro viders: Compare Care Near You | Medicare) which includes information about hospitals, hospices, and other providers including NHs. When lay persons and other healthcare providers seek information to make decisions about NH care, nurses should be able to help them understand and interpret these data including information about ownership. Consumers should also be aware of the factors that influence the quality of care to support patients and families when making decisions and also to advocate for changes to improve

Goal 4. Create a More Rational and Robust Financing System

Goal 4 addresses the challenges of financing NH care, an important issue considering the U.S. spent \$172.7 billion on such care in 2019 (CMS, 2019; Martin, Hartman, Lassman, & Catlin, 2021). The current payment system is fragmented, with Medicare paying for most short-term post-acute care, and Medicaid paying for the larger share of long-term NH care. This situation creates perverse incentives that often run counter to residents' goals and their best interests. For example, Medicaid has little incentive to prevent hospitalizations, which are covered by Medicare, whereas Medicare has little incentive to prevent newly admitted NH patients from becoming long-term care residents covered by Medicaid.

The NASEM report contextualizes this recommendation and discusses the complexities of financing. These recommendations include: (a) moving forward with developing and implementing a federal long-term care benefit to ensure access and equity for all persons needing long-term services and supports including NH care; (b) conducting analyses using current, verifiable data to determine appropriate Medicaid payment rates; (c) requiring that specific percentages of Medicare and Medicaid payments be spent on direct care, in particular, ensuring adequate staffing levels

and compensation; and (d) extending bundled payments to all healthcare conditions and holding hospitals financially accountable for Medicare post-acute spending and outcomes.

Professional activities and roles pertaining to Goal 4 may seem elusive or out-of-scope for many nurses. Nonetheless, nurses should be sources of accurate information about the rationale and general details for these far-reaching proposals. The call for a long-term care benefit will have significant implications for access to all long-term care services and supports, including NH care. Nurses should familiarize themselves with legislation and policy changes that moves the U.S. toward universal long-term care. They should also engage in advocacy by writing and serving as subject matter experts for elected officials who draft and vote on related legislation.

Goal 5: Design a More Effective and Responsive System of Quality Assurance

This goal focuses on NH federal and state regulations and oversight. While federal standards and regulations are uniform across states, there is considerable variation both within and across states in how routine inspections are conducted; penalties and sanctions for violations are imposed; and how complaints are investigated and resolved (OIG, 2019). Historically, the survey process often fails to identify serious care problems; to prevent recurrence of care delivery problems; and to quickly resolve complaints (OIG, 2019; 2020).

There also is state-to-state variation and inadequate funding of state agencies that conduct most NH inspections (GAO, 2009). The committee recommends that state survey agencies have adequate resources to conduct surveys and provide federal oversight to ensure effective and consistent survey processes across states. Better transparency can increase public confidence in the regulatory oversight to assure a minimum standard of care across all NHs.

Oversight and regulation of NHs has been the cornerstone of assuring the public of a minimum standard of quality. However, there is little evidence of effectiveness that oversight and regulation actually accomplish what is intended. There is consensus that the regulatory model needs significant improvement, but there is little evidence to suggest which approaches would ultimately lead to improvement in the quality of care. The committee recommended developing and evaluating strategies to improve state and federal quality assurance activities.

The committee provided several other recommendations related to quality assurance; (a) increased funding of the Long-Term Care Ombudsman Program; (b) denying or revoking licensure of consistently poorperforming facilities; (c) imposing enforcement actions on owners with a pattern of poor-quality care across

facilities, including NHs of the same owner across states; and (d) elimination of certificate-of-need regulations and construction moratoria to encourage innovation and competition to improve quality of care and consumer choice.

All of these recommendations challenge nurses to actively engage in efforts to improve the state and federal survey and oversight process. Nursing roles include serving as surveyors and oversight managers to implement solutions for improving oversight, and participating in research to develop new and effective survey processes.

Goal 6: Expand and Enhance Quality Measurement and Continuous Quality Improvement

It is essential that we solicit, directly from residents and family, their perspectives and experiences as they receive care in a NH. The committee recommended that the Consumer Assessment of Healthcare Providers and Systems (CAHPS) measure be systematically collected and reported for all NHs nationwide. The CAHPS measure for NHs was developed by the Agency for Healthcare Research and Quality (AHRQ) for CMS along with measures for other health care services, including measures related to the patient's experience (e.g., satisfaction) (CAHPS, n.d.). Measures for other healthcare settings have been implemented and publicly reported for years, but the experience measure for NHs has not.

Care Compare offers facility-level information about several evidence-based measures to help consumers, regulators, and NH staff to benchmark quality of care of their home as compared to other NHs (CMS, 2003). In addition to measuring and reporting the resident and family experiences of care, the committee called for the development and testing of quality measures to assess other care domains of quality, such as palliative and end-of-life care, staff satisfaction, psychosocial and behavioral health, health information technology adoption, and emergency preparedness and to be included on Care Compare. Further recommended changes include increasing the ability of the Care Compare website users to evaluate that the performance of facilities with common ownership or management, which is key to providing transparency. Another recommendation is improve the precision of the five-star composite rating in differentiating performance at all levels; at this time, only the extremes (i.e., 1 and 5) provide reliable distinction between ratings, and little guidance for interpreting quality of care.

There is evidence that some high-risk NH populations experience significant disparities in care (Gorges & Konetzka, 2021; Mor, Zinn, Angelelli, Teno, & Miller, 2004; Travers et al., 2021). The tragic disproportionate numbers of people of color dying in NHs during the

COVID pandemic cannot be allowed to ever reoccur. It is essential that there be nationwide valid and reliable data to more fully document the impact of disparities and determine effective strategies to address them. Therefore, the committee recommended the development of an overall health equity strategy for NHs to include a Minimum Data Set, a national report card, culturally-tailored interventions and policies, and strategies to identify and address disparities. Nurses are uniquely poised to influence and lead this work.

The committee recognized that sufficient expertise and resources are lacking in most NHs to implement effective continuous quality improvement and to integrate evidence-based practices. The committee recommended the development of technical assistance programs at the state or local level by organizations with dedicated expertise, experience, and familiarity with facilities' specific challenges. Missouri has a state-based program providing technical assistance to nursing homes that is led by nurses and with demonstrated evidence of effectiveness (GAO, 2010; Popejoy et al., 2020; Rantz et al., 2003; 2009).

Quality improvement is an area in which nursing knowledge and leadership is well established. Nurses, in collaboration with other healthcare disciplines, need to develop statewide technical assistance programs to improve the quality of NH care. Within NHs, well-educated nurse leaders are needed to guide development of staff skills to participate in quality improvement activities to continuously implement and assure best evidence-based practices are incorporated into daily routines of care. Nurses with doctor of nursing practice degrees hold expertise in quality improvement and can lead quality improvement initiatives in NHs. Nurse researchers are needed to conduct ongoing analyses to examine nation-wide quality of care, quality of same ownership of facilities across state lines, staffing, problems with care, costs, disparities, on-going testing for existing quality measures, and development of new measures, such as for disparities. From an educational point of view, nurses and nursing students all need to be educated about NH quality measures and ways to improve the quality of NH care.

Goal 7: Adopt Health Information Technology in All NHs

Closely linked to all the goals is the committee's seventh goal—to adopt health information technology (HIT) in all NHs. HIT potentially provides a significant contribution to a range of outcomes in health care, including increasing efficiency in care delivery, enhancing care coordination, improving staff productivity, promoting patient safety, and improving quality of care (Alexander et al., 2020; Rantz et al., 2010). While previous federal programs provided incentives to certain health care professionals and hospitals to support EHR adoption, NHs were not eligible for such

incentives. As a result, gaps in use of EHRs are present across healthcare settings that make the exchange of clinical information difficult, which creates additional strain on healthcare workers who need timely information for decision-making. To address these gaps, the committee recommends identifying pathways to provide financial incentives to NHs for adoption of certified EHRs.

HIT can contribute to personalizing and tracking the care interventions of resident needs and desires efficiently and accurately. Nurses can specify individualized plans of direct care to allow the entire interdisciplinary team to meet the needs and preferences of residents. Residents often have complex conditions that require care coordination across multiple care settings, further underscoring the need for NHs to have electronic health records (EHRs) that communicate with other systems to ensure smooth, accurate transfer of clinical information, and safe care transitions (Cross, McCullough, Banaszak-Holl, & Adler-Milstein, 2019;, Alexander et al., 2015).

During the COVID-19 pandemic, NHs with robust HIT had access to critical means of communication when lockdowns led to limited in-person clinical visits and increased residents' isolation from friends and family members. To aid facilities in their uptake of HIT solutions and to address the significant social isolation that was occurring, the federal government reduced restrictions on HIT use (e.g., telehealth) and created opportunities for NH staff to use HIT to communicate about residents in their facilities (CMS, 2020). In these situations, the availability of real-time information about health events allowed direct care staff to resolve issues quicker and oftentimes resulted in better health outcomes and quality of life for residents (Cormi et al., 2021; Plunger et al., 2022). To guide leaders in adopting and using HIT, the committee recommended that the Office of the National Coordinator (ONC) and CMS should create a program to promote increased interoperability by developing certified EHR criteria for HIT adoption. Finally, these same entities should collect NH HIT adoption data annually nationally for public reporting (similar to other settings) in Care Compare.

As NHs continue to adopt and expand HIT, it is vital to understand the various barriers and facilitators to HIT use in order to improve the efficiency, effectiveness of, and satisfaction with HIT—for staff, residents, and their families. As NHs adopt HIT, training of NH leadership and staff in core HIT competencies (e.g., use of clinical decision support, telehealth, integration of clinical processes, interoperability, and knowledge management in patient care) is needed. Finally, ongoing evaluation studies are needed to assess the impact of HIT on resident outcomes to examine innovative uses of HIT, and to understand disparities in HIT adoption and use across NHs. If these barriers are addressed, there are implications for staff and residents in NHs including: (a) a broader and possibly more in-depth range of knowledge necessary to provide and receive appropriate care; (b) understanding the impacts of HIT on quality and use of systems that could augment how quality is measured in resident care; and (c) use of shared networks that allow for greater interoperability or use of common data.

Finally, there are opportunities for research that could be led by the ONC, AHRQ, and CMS that include evaluations of HIT use to improve resident outcomes, reduce disparities in HIT adoption, adopt innovative HIT applications for resident care, and assess clinician, resident, and family perceptions of HIT usability.

Conclusion

The seven goals address areas in which nurses have tremendous expertise and leadership including delivery of whole person care, workforce development, transparency and accountability, health care financing, and quality assurance. Concurrent with the release of the NASEM report, the White House announced a set of reforms to be enacted through the U.S Department of Health and Human Services, intended to improve the quality and safety of nursing homes residents. Recent funding initiatives in some states have been announced that are targeted to address the nursing home workforce shortage providing opportunities for nurses to engage through advocacy, research, and demonstration projects. A more recent development is the creation of Moving Forward Nursing Home Quality Coalition (https://movingfor wardcoalition.org/) to develop action plans to ensure the recommendations in the NASEM report move forward. Nurses are serving as leads or members on the seven Coalition committees. All nurses can become engaged in the Coalition as subject matter experts and engage in testing and promoting the action plans.

The preface to the report captured the moral imperative of nursing's commitment to this critical public health emergency:

As with the evaluation of most areas of significant importance to our society, adopting and implementing the recommendations of this report will require more than funding, organizational commitment, education and changing health policy - it will require moral courage. Improving the quality of care in NHs for the decades ahead will be a continuing process requiring research to strengthen our knowledge of best care, test models to deliver that care and investment in the education and training of all of those who work in NHs. The recommended approach is bold, but it is possible. But most importantly, it is right. Indeed, improving NH care is a moral imperative because it is clearly the right thing to do. It is also a national imperative because it represents society's commitment to caring for those who cannot care for themselves. (NASEM, 2022, Preface, p. xviii-xix).

Credit Author Statement

Please note: the manuscript is not reporting on a research study

Christine A. Mueller: conceptualization, writing original draft, writing review and editing.

Gregory L. Alexander: conceptualization, writing original draft, writing review and editing

Mary Ersek: conceptualization, writing original draft, writing review and editing

Betty R. Ferrell: conceptualization, writing original draft, writing review and editing

Marilyn J. Rantz: conceptualization, writing original draft, writing review and editing

Jasmine L. Travers: conceptualization, writing original draft, writing review and editing

Acknowledgments

The authors would like to acknowledge Ann Kolanowski, Professor Emeriti, Pennsylvania State University School of Nursing and Melissa Murphy Batchelor, Associate Professor, George Washington University School of Nursing for their review of this manuscript.

REFERENCES

- Alexander, G. L., Georgiou, A., Doughty, K., Hornblow, A., Livingstone, A., Doughtery, M., ..., Fisk, M. (2020). Advancing health information technology roadmaps in long term care. International Journal of Medical Informatics, 136, doi:10.1016/j.ijmedinf.2020.104088.
- Alexander, G. L., Rantz, M., Galambos, C., Vogelsmeier, A., Flesner, M., Popejoy, L., . . ., Elvin, M. (2015). Preparing nursing homes for the future of health information exchange. Applied Clinical Informatics, 6, 248–266, doi:10.4338/ACI-2014-12-RA-0113.
- Antwi, Y. A., & Bowblis, J. R. (2018). The impact of nurse turnover on quality of care and mortality in nursing homes: Evidence from the great recession. *American Journal of Health Economics*, 4, 131–163.
- Bostick, J. E., Rantz, M. J., Flesner, M. K., & Riggs, C. J. (2006). Systematic review of studies of staffing and quality in nursing homes. *Journal of the American Medical Directors Association*, 7, 366–376.
- Bureau of Labor Statistics. (n.d.). May 2020 national industry-specific occupational employment andwageestimates: NAICS 623100—Nursing care facilities (skilled nursing facilities). Accessed April 25, 2022. https://www.bls.gov/oes/current/naics4_623100.htm
- Bureau of Labor Statistics. (n.d.). 2018 SOC definitions. Accessed April 25,2022. https://www.bls.gov/soc/2018/soc_2018_definitions.pdf
- CAHPS, (n.d.). Retrieved june 18, 2022 from https://www.ahrq.gov/cahps/index.html
- Center for Medicare Advocacy. 2014. Staffing deficiencies in nursing facilities: Rarely cited, seldom sanctioned. Retrieved June 19, 2022 from https://medicareadvo-

- cacy.org/staffing-deficiencies- in-nursing-facilities-rarely-cited-seldom-sanctioned/
- Centers for Medicare and Medicaid Services. 2019.
 National health expenditures 2019: Highlights.
 Retrieved from https://www.cms.gov/files/document/highlights.pdf
- CMS (Centers for Medicare and Medicaid Services). 2003. Nursing home quality initiative overview. https:// www.medicare.gov/care-compare/?providerType=Nur singHome&redirect=true (accessed July 29, 2021).
- CMS. (2020). Centers for Medicare and Medicaid releases telehealth toolkit for general practitioners and end-stage renal disease (ESRD) providers. Baltimore, MD: CMS. Retrieved April 16, 2020 from https://www.cms.gov/files/docu ment/general-telemedicine-toolkit.pdf.
- Cooke, H. A., & Baumbusch, J. (2021). Not just how many but who is on shift: The impact of workplace incivility and bullying on care delivery in nursing homes. *The Gerontologist*, 61, 563–572.
- Cormi, C., Chrusciel, J., Fayol, A., Rechem, M., Aboa-Amsha, K., Tixier, M., Lewkowicz, M., Laplanche, M., & Sanchez, S. (2021). The use of telemedicine in nursing homes: A mixed-method study to identify critical factors when connecting with a general hospital. *International Journal of Environmental Research in Public Health*, 18 (21), 11148, doi:10.3390/ijerph182111148.
- Cross, D. A., McCullough, J. S., Banaszak-Holl, J., & Adler-Milstein, J. (2019). Health information exchange between hospital and skilled nursing facilities not associated with lower readmissions. Health Services Research, 54(6), 1335–1345, doi:10.1111/1475-6773.13210.
- DHHS. (April 20, 2022. HHS releases new data and report on hospital and nursing home ownership. DHSS press release. https://www.cms.gov/newsroom/press-releases/hhs-releases-new-data-and-report-hospital-and-nursing-home-ownership
- Doucette, J. N., & Pabico, C. (2018). Nursing management partners with ANCC's pathway to excellence® program. Nursing Management, 49(4), 13–15.
- Drake, A. 2020. Direct care work is real work: Elevating the role of the direct care worker. PHI. Retrieved June 18, 2022 from http://www.phinational.org/resource/direct-care-work-is-real-work-elevating-the-role-of-the-direct-care-worker/
- Gandhi, A., Yu, H., & Grabowski, D. C. (2021). High nursing staff turnover in nursing homes offers important quality information. *Health Affairs*, 40(3), 384–391, doi:10.1377/hlthaff.2020.00957.
- GAO (U.S. Government Accountability Office). (2010). Poorly performing nursing homes: Special focus facilities are often improving, but CMS's program could be strengthened. Washington, DC: U.S. Government Accountability Office. Retrieved June 28, 2022 from https://www.gao.gov/products/gao-10-197.
- GAO. (2009). Medicare and medicaid participating facilities: CMS needs to reexamine its approach for funding state oversight of health care facilities. Washington, DC: U.S: Government Accountability Office.
- Godby, T., Saldanha, S., Valle, J., Paul, D. P. 3rd, & Coustasse, A. (2017). Is there a trade-off between quality and profitability in United States nursing homes? The Health Care Manager, 36(2), 140–146, doi:10.1097/HCM.0000000000000151.
- Gorges, R. J., & Konetzka, R. T. (2021). Factors associated with racial differences in deaths among nursing home residents with COVID-19 infection in the U.S. JAMA Network Open, 4(2) e2037431, doi:10.1001/jamanetworkopen.2020.37431.

- Gupta, A., Howell, S. T., Yannelis, C., & Gupta, A. 2021.

 Does private equity investment in healthcare benefit patients? Evidence from nursing homes. (Working Paper 28474). Retrieved from https://www.nber.org/system/files/working_papers/w28474/w28474.pdf
- Hawk, T., White, E. M., Bishnoi, C., Schwartz, L. B., Baier, R. R., & Gifford, D. R. (2022). Facility characteristics and costs associated with meeting proposed minimum staffing levels in skilled nursing facilities. *Journal of the American Geriatrics Society*, 70(4), 1198–1207, doi:10.1111/jgs.17678.
- IOM (Institute of Medicine). (1986). Improving the quality of care in nursing homes. Washington, D.C.: National Academy Press.
- IOM. (1996). Nurse staffing in hospitals and nursing homes: Is it adequate? Washington, D.C.: National Academy Press.IOM. (2001). Improving the quality of long-term care. Wash-

ington, D.C.: National Academy Press.

- IOM. (2008). Retooling for an aging America: Building the health care workforce. Washington, DC: The National Academies Press, doi:10.17226/12089.
- LTCCC. 2021. Nursing home Medicaid funding: Separating fact from fiction. Retrieved from https://nursing home411.org/wp-content/uploads/2021/01/LTCCC-Pol icy-Brief-Medicaid-Funding-Facts-vs-Fiction.pdf
- Martin, A. B., Hartman, M., Lassman, D., & Catlin, A. (2021). National health care spending in 2019: Steady growth for the fourth consecutive year. Health Affairs (Project Hope), 40(1), 14–24, doi:10.1377/hlthaff.2020.02022.
- McGilton, K. S., Escrig-Pinol, A., Gordon, A., Chu, C., Zuniga, F., Sanchez, M., ..., Bowers, B. (2020). Uncovering the devaluation of nursing home staff during COVID-19: Are we fuelling the next health care crisis? *Journal of the American Medical Directors Association*, 21(7), 962–965, doi:10.1016/j.jamda.2020.06.010.
- Mor, V., Zinn, J., Angelelli, J., Teno, J. M., & Miller, S. C. (2004). Driven to tiers: Socioeconomic and racial disparities in the quality of nursing home care. The Milbank Quarterly, 82(2), 227–256, doi:10.1111/j.0887-378X.2004.00309.x.
- National Academies of Sciences. (2022). Engineering, and Medicine (NASEM). (2022). The national imperative to improve nursing home quality: honoring our commitment to residents, families, and staff. Washington, DC: The National Academies Press, doi:10.17226/26526.
- Office of Inspector General (OIG). 2019. Trends in nursing home complaints: Text-based data. Retrieved February 1, 2022 from https://oig.hhs.gov/oei/maps/2019-nurs ing-home/text-map.asp
- Office of Inspector General (OIG). 2020. States continued to fall short in meeting required timeframes for investi-

- gating nursing home complaints: 2016–2018. Washington, DC: Office of the Inspector General, U.S. Department of Health and Human Services.
- Plunger, P., Eitenberger, M., Kletecka-Pulker, M., Wochele-Thoma, T., Klager, E., Ruf, A. K., & Eibensteiner, F. (2022). Using telemedicine in nursing homes during the COVID-19 pandemic: A multi-perspective view on the implementation process. Nursing open, 9(2), 1155–1163, doi:10.1002/nop2.1155.
- Popejoy, L., Vogelsmeier, A., Boren, W., Martin, N., Kist, S., Canada, K., ..., Rantz, M. (2020). A coordinated response to the COVID-19 pandemic in Missouri nursing homes. *Journal of Nursing Care Quality*, 35(4), 287–292, doi:10.1097/NCQ.000000000000504.
- Rantz, M. J., Cheshire, D., Flesner, M., Petroski, G. F., Hicks, L., Alexander, G., . . ., Thomas, S. (2009). Helping nursing homes "at risk" for quality problems: A statewide evaluation. *Geriatric Nursing*, 30(4), 238–249, doi:10.1016/j.gerinurse.2008.09.003.
- Rantz, M. J., Skubic, M., Alexander, G. L., Popescu, M., Aud, M. A., Wakefield, B., . . ., Miller, S. (2010). Developing a comprehensive electronic health record to enhance nursing care coordination, use of technology, and research. *Journal of Gerontological Nursing*, 36(1), 13–17, doi:10.3928/00989134-20091204-02.
- Rantz, M. J., Vogelsmeier, A., Manion, P., Minner, D., Markway, B., Conn, V., ..., Mehr, D. R. (2003). Statewide strategy to improve quality of care in nursing facilities. *The Gerontologist*, 43(2), 248–258, doi:10.1093/geront/43.2.248.
- Travers, J. L., Agarwal, M., Estrada, L. V., Dick, A. W., Gracner, T., Wu, B., & Stone, P. W. (2021). Assessment of coronavirus disease 2019 infection and mortality rates among nursing homes with different proportions of Black residents. *Journal of the American Medical Directors Association*, 22(4), 893–898.
- Travers, J. L., Caceres, B. A., Vlahov, D., Zaidi, H., Dill, J., Stone, R., & Stone, P. (2021). Federalrequirements for nursing homes to include certified nursing assistants in resident care planning and interdisciplinary teams: A policy analysis. Nursing Outlook, 69(4), 617–625, doi:10.1016/j.outlook.2021.01.004.
- Travers, J. L., Teitelman, A. M., Jenkins, K. A., & Castle, N. G. (2020). Exploring social-based discrimination among nursing home certified nursing assistants. Nursing Inquiry, 27(1), e12315, doi:10.1111/nin.12315.
- You, K., Li, Y., Intrator, O., Stevenson, D., Hirth, R., Grabowski, D., & Banaszak-Holl, J. (2016). Do nursing home chain size and proprietary status affect experiences with care? *Medical Care*, 54(3), 229–234, doi:10.1097/MLR.0000000000000479.