



Demonstrating the Value of Nursing Care Through Use of a Unique Nurse Identifier

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Abstract

As healthcare transitions to a value-based reimbursement model, nursing documentation in electronic health record (EHR) and other health IT systems will increasingly be used to demonstrate nursing's contribution to that value. Nursing documentation can also be used to measure the contributions of nurses to improvements in individual and population health outcomes, patient safety, operational efficiency and clinical effectiveness. Today, nursing's contribution to the health and care of individuals and communities is difficult to measure and often invisible. This lack of visibility is due, in part, to the absence of a unique identifier for nurses. Nurse leaders have identified the need for a unique nurse identifier, without which the aggregation and use of data to improve nursing practice is not possible. Nurses and their employers need a mechanism to track nursing licensure across job and location changes throughout a nurse's career. Hospitals and health systems need the ability to uniquely identify nurses in the EHR, enterprise resource planning (ERP) systems, and other health IT systems for documentation, education, research and training purposes. This article describes why a unique nurse identifier is essential and outlines the potential benefits and implications for adoption of an identifier, as well as policy recommendations. The Nursing Knowledge: Big Data Science Conference Health IT Policy Workgroup is collaborating with key stakeholders to achieve an optimal solution such as the use of a unique nurse identifier to demonstrate the value of nursing.

Introduction

As healthcare transitions to a value-based reimbursement model, nursing documentation in electronic health record (EHR) and other health IT systems will increasingly be used to demonstrate nursing's contribution to that value. Nursing documentation can also be used to measure the contributions of nurses to improvements in individual and population health outcomes, patient safety, operational efficiency and clinical effectiveness. Today, unfortunately, nursing's contribution to the health and care of individuals and communities is difficult to measure and often invisible. This lack of visibility is due, in part, to the absence of a unique identifier for nurses. The identification of clinicians who submit healthcare claims is made possible by the national provider identifier (NPI). While available, this capability is used by only a small percentage of the four million nurses in practice today.

Why is a unique nurse identifier necessary? Different identifiers can be used to track and classify nursing services for billing, staffing and resource planning purposes. For several decades, nurse leaders have recognized the need for a unique nurse identifier, without which the aggregation and use of data to improve nursing practice is not possible (Werley and Lang, 1988). Recent proceedings from the Nursing Knowledge: Big Data Science Conference (2018) identify the need for a unique nurse identifier to enhance patient care and outcomes via more integrated documentation in EHR, ERP, and other health IT systems. Nurses and their employers (physicians, hospitals, health systems) need a mechanism to track nursing licensure across job and location changes throughout a nurse's career. Identifiers are also needed by advanced practice nurses for billing and coding purposes. Hospitals and health systems need the ability to uniquely identify nurses in the EHR, enterprise resource planning (ERP) systems, and other health IT systems for documentation, education, research and training purposes. This article describes why a unique nurse identifier is essential and outlines the potential benefits and implications for adoption of an identifier, as well as policy recommendations.

Background

In this fluid and dynamic healthcare environment, the goal of having individual EHR data sufficiently standardized so as to function as the basis for health information exchange is not yet realized. While privacy and consent issues have for the most part been ameliorated, intra- and inter-professional concerns about political, economic and competitive risks to organizations have been identified as key barriers to uniform data sharing and interoperability across populations (Mello, Adler-Milstein, Ding & Savage, 2018). Without implementation of health information exchanges with their processes for sharing consistent information – not only about the recipient of care but also the healthcare professional delivering that care – quality measurement and care coordination remain unattainable within and across organizations. As healthcare's most trusted professionals, nurses can take a leadership role in helping to move past the perceived risks to information sharing through the adoption of a unique nurse identifier to be used when nurses are documenting a specific individual's health and care processes.

As one of the foundational professions of modern healthcare delivery, nursing has a social contract with resulting responsibility to evaluate the contribution of nursing practice on outcomes in the areas of health promotion, injury and illness prevention, and in the alleviation of suffering. Nurses continuously assess their clinical practice interventions to sustain and deliver safe, high quality individual health, care and outcomes. Evidence supports the conclusion that nurses contribute to the prevention of adverse events in medical and nursing care, but there is insufficient evidence to explain how nurses contribute to the prevention of negative or positive patient outcomes (Englebright & Jackson, 2017). A unique nurse identifier could be one of the keys to understanding the impact of nursing practice; the identifier would enable nurse characteristics to be associated with client characteristics within a larger dataset of health information within or across organizations.

Benefits of a Unique Nurse Identifier

The widespread use of a unique nurse identifier would enable measurement of the impact of nursing practice, including nurses' role in contributing to safe and effective health care practices and enhancing enterprise resource planning. Leveraging a unique nurse identifier will enable scientific inquiry whereby researchers can measure and quantify nursing care and its impact on health outcomes. Mining nurse-specific assessment, intervention and outcomes data with the help of the unique identifier can serve as a source and means to research nursing documentation data points from EHRs and other health IT systems successfully (Welton & Harper, 2016). The appropriate use of nursing resources can also be informed by using a unique nurse identifier to examine the variability of direct nursing care time and costs per patient and the relationships between patient and nurse characteristics and nursing costs (Nelson-Brantley, Jenkins & Chipps, 2019).

A value-based reimbursement model will require a foundational understanding of the impact of nursing practice on patient outcomes in health promotion, illness prevention, and disease management. Quality assessment and outcomes research initiatives are hindered by a lack of data related to nursing processes and patient outcomes. Suboptimal data collection methodologies that yield reliable and valid measures of essential nursing care processes and patient outcomes have resulted in a history of inadequate evidence to demonstrate nursing's contribution to patient care (Lang, 2008). While today we develop measures that better capture nursing processes, the simultaneous widespread use of a unique nurse identifier will make the collection of relevant and comprehensive data more feasible.

Internationally, the initiation and adoption of a unique nurse identifier are viewed positively. A position paper entitled "Nursing Information and Knowledge Management" (Canadian Nurses Association, 2006) called for databases that not only include clinical data elements but also data elements that represent nursing practice and nurses. These Canadian nurses recommended the use of a unique registered nurse identifier as a key data element for health information interoperability and continue to advocate for its use today. In Switzerland, researchers at the Nursing Research Unit of the Inselspital in Berne and the University of Basel used a unique nurse identifier to calculate a detailed skill mix including nurse education and role (direct or indirect care, management, etc.) per 30-minute increments in six nursing units (Simon, 2018). These data were used to calculate individual patient level nurse-to-patient ratios in a sample of 240 patients. When aggregated to the shift level (1,100 shifts), they identified an association between inadequate staffing and increased adverse events (Gratwohl, Musy & Simon, 2018).

In the United States, the advantages of using a unique nurse identifier, while acknowledged, have yet to be achieved. Werley and Lang (1988) recommended a minimum data set for nursing, including a unique nurse identifier. Two potential prospects for a national unique nurse identifier currently exist and dialogue regarding their use in health information systems has been initiated among key stakeholders (Healthcare Information and Management Systems Society (HIMSS), 2018). These two nurse identifiers are the NPI and the National Council of State Boards of Nursing ID (NCSBN ID). Use of a unique numeric identifier for individual nurses within the EHR is instrumental to the aggregation, synthesis and publication of data and research demonstrating the value and contributions of nursing to better health outcomes.

The Centers for Medicare and Medicaid Services (CMS) require an NPI for healthcare workers to obtain Medicaid or Medicare reimbursement as defined by CMS in the HIPAA Administrative Simplification: Standard Unique Health Identifier for Health Care Providers; Final Rule from 2004 (Department of Health and Human Services-Office of the Secretary, 2004). A unique, numeric identifier, such as the NPI, therefore, is of key interest to researchers; APRNs who bill Medicare/Medicaid; and more recently, registered nurses (RNs)/professional nursing organizations who seek to obtain Medicare and Medicaid reimbursement for professional nursing services (e.g., care coordination). The identifier can also help demonstrate that each care team member is practicing quality care to the full extent of her or his license and education; however, adoption of the NPI is limited.

Both the NPI and the NCSBN ID are free, publicly available, unique identifiers that are available to all RNs. One advantage of the NPI is that its database is interprofessional and physicians and nurses are recognized as potential recipients of federal payments for provided services. There is no fee for application, nor is there any maintenance required, such as annual renewal (Office of the National Coordinator for Health Information Technology, 2018). The

potential challenges to obtaining an NPI, however, include the lack of clarity for nurses as to how they should apply since most nurses do not provide care as sole proprietors in the most commonly understood sense of the term. The complexity of the application process and the lack of a perceived need for individual nurses to act to obtain an NPI are also considerations.

In contrast, the NCSBN ID is automatically generated for each registered nurse and licensed practical/vocational nurse at the time of the NCLEX Examination (National Council of State Boards of Nursing (NCSBN), 2018). Each NCSBN ID is available in the Nursys database. Nursys comprises a suite of systems and databases containing nurse license and license discipline information that is provided by state licensure boards of nursing in the U.S. and its territories. Nursys receives regular updates of personal (name, address, etc.) and license information for nurses from participating state licensure boards. Nurses who received licensure prior to the implementation of NCLEX have been assigned an ID through a matching process with state licensure boards and were added to the Nursys database, where their data are also updated regularly.

The advantages of the Nursys system include an e-Notify[®] function that allows institutions to receive license status and, further, to track nurses electronically across multiple state licensures. In addition, the system allows for nurses to track their own licenses via the ID and be provided with the latest information on license status and notification when licenses are to be renewed. All licensure boards of nursing have access to the Nursys to edit information including disciplinary information and updates. Both the organization and the individual RN can access current status when there are changes. Because Nursys grants public access, there is also opportunity for academics and quality experts to identify characteristics of populations of nurses, such as medical-surgical or critical care nurses, and the relationship of those characteristics to patient outcomes. NCSBN maintains proper data security policies, procedures and requirements, and performs assessments, audits, penetration tests and vulnerability scans to assure data security.

Nursing Knowledge: Big Data Science Health IT Policy Workgroup

A national action plan to make nursing data sharable, comparable, timely and more relevant to improving health was developed at the Nursing Knowledge: 2013 Big Data Science Initiative hosted by the University of Minnesota, School of Nursing (Delaney, Pruinelli, Alexander & Westra, 2016). As one component of this action plan, the Big Data Science Health IT Policy Workgroup was formed to equip nurses with education, tools and resources and to engage them as knowledgeable advocates for health IT policy efforts important to nursing (Nursing Knowledge: 2015 Big Data Science Conference Proceedings, 2015). The workgroup identified the need for a unique nurse identifier to demonstrate the value and contributions of nursing care to improved patient outcomes.

Given the twin goals of health information exchange data standardization and better understanding and integration of nursing practice data, use of a unique nurse identifier for all RNs holds much promise (Institute of Medicine, 2011). While the Health IT Policy Workgroup supports the use of the NPI for RNs who submit claims for reimbursement, the challenges presented – including the need for each RN to act to apply for an NPI – prohibit ease of use (Nursing Knowledge Big Data Science Conference, Health IT Policy Workgroup, 2018). The NCSBN ID provides ease of use, as well as the public availability of the current status of the RN, resulting in a unique nurse identifier that is meaningful to achieving the twin goals. Given these advantages, the Health IT Policy Workgroup is advocating for use of the unique nurse identifier, the NCSBN ID, maintained and supported by NCSBN.

Policy Recommendations and Implications

The American Nurses Association (ANA) published an Issue Brief, “APRNs with NPIs: Distribution by Role and State in 2010” that supports the NPI as the unique clinician identifier for advanced practice registered nurses (APRNs) (ANA, 2010). The ANA advocates for all RNs to have an NPI, as this supports a policy priority that payment should expand for consistency across all qualified health professionals delivering high-value care coordination activities. As discussed, one of the barriers to all RNs obtaining an NPI is the manual intervention required for registration. However, CMS has confirmed the technical feasibility for a “bulk enumeration” process to occur as defined in the final rule (Centers for Medicare & Medicaid Services, 2004). Bulk enumeration would eliminate the need for those healthcare providers to apply for an NPI individually.

The NPI is also defined in the 2018 Office of the National Coordinator for Health Information Technology (ONC) as a standard to meet the interoperability need for representing the healthcare provider. According to the Interoperability Standards Advisory (ISA), “For the purpose of recording a care team member, it should be noted that National Plan and Provider Enumeration System (NPPES) permits, but does not require, non-billable care team members to apply for an NPI number to capture the concept of ‘person’” (HealthIT.gov, 2017, p. 1). The ISA does note the limitation that the NPI taxonomy may not have sufficient detail to describe all roles associated with an individual’s care team.

Considering input from the ANA and ONC, the Nursing Knowledge: Big Data Science Health IT Policy Workgroup recommends the following policy statement advocating for adoption of a unique nurse identifier:

“The NCSBN ID should be used by key stakeholders as a nurse identifier to help demonstrate the value of nursing through research and enhance individual care and health outcomes via more comprehensive documentation in the EHR, ERP, and other health IT systems.” (Nursing Knowledge: Big Data Science Conference Proceedings, 2018a pp. 11).

This policy statement asserts the need for national nursing and medical associations, societies, organizations, and government agencies to advocate for use of the NCSBN ID to reveal the impact of nurses’ evidence-based practice through scientific inquiry in the current value-based care model landscape. By extracting nursing-specific data, such as those from comprehensive documentation and nursing administrative records in EHRs, ERPs, and health IT vendor information systems, the unique nurse identifier vision and mission can be achieved.

Advocacy Efforts

Advancement of the unique nurse identifier policy recommendations relies on the recognition and understanding of its benefits by multiple participants committed to leveraging interoperability standards of comprehensive nursing documentation data to influence value-based care, research, quality care delivery and health outcomes. To that end, the Nursing Knowledge: Big Data Science Health IT Policy Workgroup regularly evaluates the unique nurse identifier position statement and disseminates relevant health IT policy-related educational tools and resources to key decision-making groups in agreement with the ID's strategy and purpose.

To date, accomplishments to influence the health IT policy ecosystem for further use of a national nurse identifier include position statement development and leveraging key advocacy/leadership opportunities relevant to nursing. Policy efforts are advanced by partnering with like-minded groups including AMIA, ANA, the Alliance for Nursing Informatics, the American Academy of Nursing, HIMSS, NCSBN, and ONC (Nursing Knowledge: Big Data Science Conference Proceedings, 2018b).

Unique nurse identifier advocacy continues to evolve through outreach, education and promotion strategies. Active collaboration with the ANA, NCSBN, healthcare organizations and health IT vendors will continue as a focal point in the advancement of the unique nurse identifier. Collaborative work with the ANA will continue by leveraging implementation of the NCSBN ID as a glide path to evaluate potential adoption of the NPI as the unique nurse identifier in the future. Partnership with NCSBN, who maintains the NCSBN ID in the Nursys database, solidifies the policy statement and enhances the collaboration (HIMSS, 2018). The Health IT Policy Workgroup will also explore funding opportunities to support a proof-of-concept pilot and analysis to determine the technical feasibility of use of the unique nurse identifier; the proof-of-concept pilot and analysis will encompass at minimum one healthcare organization in collaboration with an EHR vendor (Nursing Knowledge: Big Data Science Conference Proceedings, 2018c).

Conclusion

A unified voice is vital for advancing advocacy efforts related to adoption of a unique nurse identifier in the EHR, ERP systems, and other health IT systems for documentation, education, research and training purposes in the U.S. similar to what is currently being advanced globally. This identifier can then be used to measure nursing's impact on individual and population outcomes, patient safety, operational efficiency, resource allocation and clinical effectiveness. The Nursing Knowledge: Big Data Science Conference Health IT Policy Workgroup will continue to collaborate with ANA, NCSBN and other interested stakeholders to achieve an optimal solution such as the use of a unique nurse identifier to demonstrate the value of nursing.

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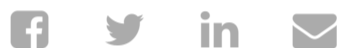
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