

# What a unique nurse identifier means for the future

This fingerprint of nursing enhances the visibility of nurses' contributions.

By Nancy Beale, MSN, RN-BC; Whende Carroll, MSN, RN-BC, FHIMSS; Kelly Aldrich, DNP, MS, RN-BC; Susan Alexander, DNP, CRNP, ADM-BC; Marianne Baernholdt, PhD, MPH, RN, FAAN; Willa Fields, DNSc, RN, FHIMSS

**WITH** the growing prevalence of digital technologies in healthcare and a shift toward value-based reimbursement, a mechanism to identify and quantify nursing contributions to quality patient outcomes is critical. Implementing a unique nurse identifier (UNI) to leverage across systems and technologies will provide evidence of nursing's value to patient care delivery from multiple data sources.

## What is a UNI?

A UNI is a defined code or series of characters that represents an individual nurse within various healthcare technology systems and devices (such as electronic health records [EHRs]). (See *Definitions*.) It connects data across these systems to provide evidence of nursing's value to patient care delivery, making the effects of nursing assessments and interventions (such as fall prevention) more visible. Brennan and Bakken emphasized that data from medical devices and the EHR using a unique identifier will help customize intervention strategies for patients and healthcare operations. When nursing actions are identified, associated data can be mined to help benefit healthcare and the nursing profession. (See *You already have a UNI*.)

## Why do we need UNIs?

Despite the long history of nursing's contributions, nursing-sensitive outcomes have been difficult to quantify. The work of a single nurse frequently is encompassed into the larger cost-reporting aspects of care that are captured by healthcare organizations in adminis-



trative billing and claims data. Without a mechanism to enable selecting data that describe individual nurse roles, we face challenges finding tangible evidence of the care we provide and demonstrating how it affects patient outcomes.

Nurses use many technologies (EHRs,

## Definitions

Knowing these terms will help nurses better understand the benefits of unique nurse identifiers and advocate for their use.

Term	Definition	Example
<b>Audit trail</b>	Records show who accessed a computer system, when it was accessed, and what actions or operations were performed.	Data are found and displayed in a report about barcode medication administration use derived from the technology and documentation within the electronic health record (EHR).
<b>Interoperability</b>	Different systems, devices, applications, and technologies access, exchange, and use health information for seamless portability.	Interoperability between an I.V. smart pump and the EHR creates a seamless and closed loop for medication ordering, dispensing, administration, and documentation.
<b>Master data</b>	Consistent and uniform set of identifiers describes core entities (patients, nurses, doctors, hospitals, units) that comprise a health system.	A list of patients in the health system master patient index can be referenced within all technologies and systems.
<b>Meta data</b>	Technology user footprint is created behind the scenes, showing what changes were made in an EHR, who made them, and when, as well as what parts of a record were reviewed, for how long, how often, and by whom.	When a user marks a new lab value in a system as "reviewed," the system captures who the user was along with the date and time the reviewed button was selected. Similarly, when an order is marked as signed in the EHR, the user who signed the order is captured, along with the date and time the order was placed.
<b>System integration</b>	Design or construction of an application or technology to incorporate with new or existing hardware or software.	Clinical content from a vendor, such as clinical references or patient education material, are integrated into the EHR.

Sources: Gartner 2021, Haugen et al 2013, HIMSS 2021, Nunn 2009

physiologic monitoring, nurse call systems, secure messaging, automated medication dispensing systems, smart beds, smart infusion

pumps) in the clinical care environment. In some organizations, the EHR is connected to an enterprise resource planning (ERP) system. These systems require user identification to provide access and track use. Standardizing the source of master data and user information can help simplify technology integration, workflow, and data collection.

When technologies aren't integrated, nurses frequently become the human interface for information sharing between systems, sometimes manually entering data from one system or technology into another, which takes time away from patient care and can lead to communication errors. Automated data sharing among technologies can streamline workflows and eliminate steps, clicks, and duplicate documentation, helping to reduce errors.

### How can UNIs help us?

UNIs provide opportunities beyond identifying nurses' contributions to healthcare and streamlining workflows. For example, Macieira and colleagues studied the value and secondary use of standardized nursing data and found that UNIs can aid research, quality improvement, education, and performance recognition by connecting data to education level, years of experience, and expertise. A next step in improving the quality of care is to pay attention to the human effort of the individual nurse, in addition to organizational quality, safety structures, and processes.

Lulat and colleagues conducted a scoping review to develop a database of studies exploring RN effectiveness on outcomes (clinical, organizational, nurse, and patient). The aggregated database supported findings that better staffing is associated with decreased mortality, increased quality of care, fewer pressure injuries and infections, reduced length of stay, higher job satisfaction, reduced turnover, and positive financial outcomes for organizations.

However, we don't know how variable staff composition might influence these outcomes. For example, individual nurse performance must be considered when evaluating medical surgical patient discharge acuity scores. Yakusheva and colleagues demonstrated that variation existed in nursing practice and outcomes when both a patient's discharge acuity and the proportion of time a patient received care from an individual nurse were an-

alyzed. We also must evaluate staff composition, performance, and needed organizational interventions to drive improvements.

In addition, UNIs can help facilitate quality improvement (QI) efforts. Frequently, QI and patient safety systems aren't integrated with the EHR or other technologies. The UNI can simplify data evaluation, even when systems aren't integrated, because nursing performance measures and outcomes will be more transparent, allowing for quality scores at aggregate and individual levels. These insights can provide opportunities for positive reinforcement and performance role models.

Other implications for UNIs in nurse staffing include the ability to easily measure, track, and quantify nursing work, transforming the traditional approach to staff mix from intuitive to quantifiable and measurable. (Read a case study at [myamericannurse.com/?p=292969](http://myamericannurse.com/?p=292969).)

### What are the challenges?

Some nurses are concerned about how UNIs will be used, especially as a data point for measuring and tracking behavior. Will the information gathered with UNIs be used by organization leaders, operational stakeholders (such as nurse managers), and litigators to take disciplinary action? The focus of UNIs should be on addressing how nursing assessments, interventions, and documentation impact patient care, not as a tool to punish behavior.

Keep in mind that computer coding models used to monitor behaviors and clinical effectiveness aren't new. Health data analysis to track and trend individual provider impact on care quality, clinical performance, and patient outcomes for public reporting already exists. Similarly, nursing data are captured and used to provide evidence of meeting nursing standards of care and measuring interventions associated with patient outcomes via nurse-sensitive quality and safety measures.

The Health Insurance and Portability Accountability Act (HIPAA) requires health system administrators to maintain records of all access to personal health information in the EHR and review the records intermittently to determine user conduct. Using HIPAA, healthcare organizations also closely examine who views the EHR to maintain data integrity for detecting changes. Strategies to fulfill this national mandate include audit functionality and metadata. For example, EHR *audit trails* assess

## You already have a UNI

The National Council of State Boards of Nursing (NCSBN) has responded to the need for identifying nurses across educational programs, care settings, and individual state licensures by developing and maintaining the NCSBN unique identifier (NCSBN ID), which is matched exclusively to a nurse and not a state or organization. An ID is assigned to each nursing student when they register for the National Council Licensure Examination (NCLEX). Nurses licensed before NCLEX was implemented in 1994 also have been assigned IDs.

NCSBN maintains the identifiers in its Nursys database. Each day, state boards of nursing update licensure data in Nursys via secure file transfer. This data transfer makes Nursys the primary source for current information on existing and new nursing licensure records. The result is a report that the public can view immediately and is sent to healthcare organizations (hospitals, clinics, health systems) registered to receive the report.

### The NPI

Nurses may choose to pursue additional identification numbers, such as National Provider Identification (NPI). The NPI, implemented in 2004, is a unique 10-digit number required for providers and organizations that transmit financial transactions electronically to federal and private health programs. In contrast to the NCSBN ID, which is automatically assigned, the NPI is granted through an online process using the National Plan and Provider Enumeration System (NPPES). Typically, the number is assigned in about 10 days.

Many nurses don't apply for an NPI unless they provide a service for direct billing to payers. Similar to NCSBN IDs, individual NPIs are retained across care settings; however, holding an NPI does not confer licensure. Healthcare disciplines with NPIs provided by NPPES must select their taxonomy codes (which designate their classification and specialization), including primary care. NPPES doesn't verify the accuracy of taxonomy codes selected by individuals.

compliance for timely documentation, messaging, and medication administration. *Metadata* (computer-generated data about other data) can be used to monitor safety alert acknowledgments and dismissals. These reporting strategies validate system integrity, mine quality improvement data, and detect insufficient workflows and opportunities for process improvements. Although these required audit capabilities may raise fears about tracking individual data, they actually identify opportunities for improvement and connect nursing contributions to patient outcomes.

### How do we advance the use of UNIs?

Sensmeier and colleagues highlighted the importance of active collaboration with healthcare organizations and health information technology (IT) vendors as a focal point for advancing the UNI. Advocacy requires outreach, education, promotion strategies, and reducing barriers to

adopting the National Council of State Boards of Nursing (NCSBN) ID. For example, the Alliance for Nursing Informatics has approved a policy statement recommending use of the NCSBN ID. Other advocacy strategies include partnerships with national associations and organizations such as HIMSS, American Academy of Nursing, American Medical Informatics Association, American Nurses Association, American Organization for Nursing Leadership, and the Office of the National Coordinator for Health Information Technology.

Implementing UNIs as a standard will require some vendors to revamp their products, while others may have an existing field where the UNI can be implemented. In either scenario, healthcare organizations will need to dedicate resources to implement the standard, and the work required may compete with an organization's other clinical IT budget priorities and projects. However, implementing UNI is foundational to enabling organizational, nursing, and patient outcome insights, so organizations must evaluate both existing and new technology implementations to prioritize UNI.

## Transforming practice

The road to transforming nursing practice will include UNIs, which will increase the evidence of our contributions to care delivery and healthcare outcomes through more nursing research, initiatives, and proof-of-concept pilot opportunities. UNI adoption is gaining traction with policymakers and advocates from national nursing and medical associations, societies, organizations, government agencies, and technology vendors. Individual nurses can aid the effort by supporting organizations in their implementation efforts and learning more about how the UNI can promote the profession and improve outcomes. **AN**

Access references at [myamericannurse.com/?p=292969](http://myamericannurse.com/?p=292969).

Nancy Beale is the president of Beale & Assoc. LLC, in Cottage Grove, Wisconsin. Whende Carroll is the founder of Nurse Evolution in University Place, Washington. Kelly Aldrich is senior advisor at the Center for Medical Interoperability in Nashville, Tennessee. Susan Alexander is an associate professor at the University of Alabama in Huntsville. Marianne Baernholdt is associate dean of global initiatives and professor at the University of North Carolina in Chapel Hill. Willa Fields is a professor at San Diego State University in San Diego, California.

