Understanding the Vital Role of a Unique Nurse Identifier

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Nursing Knowledge: Big Data Science
Policy and Advocacy Workgroup

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Meet Our Speakers

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Director of Innovation, VUSN
Understanding the Vital Role of a Unique Nurse Identifier

Kelly Aldrich  **DNP, MS, RN-BC, FHIMSS**  
Informatics Nurse Specialist

Senior Clinical Informatics Advisor C4MI &  
Director of Innovation at Vanderbilt School of Nursing

Dr. Aldrich is a board-certified Informatics Nurse Specialist and has served for over 35 years in clinical, academic and leadership roles. Recently joining Vanderbilt University as the Director of Innovation she is recognized as a senior informatics leader, strategic thinker, innovator and advocate for useful, safe and effective healthcare transformation. Her work focuses on ensuring that technical solutions are designed and equipped to address the goals and impact on patient safety, health care processes and outcomes, care coordination, informed decision making, and caregiver burden.

Dr. Aldrich is an Associate Professor of Nursing Informatics at Vanderbilt University School of Nursing and the Senior Clinical Informatics Advisor at The Center for Medical Interoperability.

She has published extensively on topics including Informatics for Nursing documentation standards, interoperability and The Blending Education Leadership and Technology (BELT) model for highly reliable technology innovation. Currently, Dr. Aldrich is actively researching digitally secure platforms and applying systems design thinking and gamification for the Digital RN Citizen.
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Nancy Beale, PhD (c), MS, RN-BC

Chief Nursing Informatics Officer
Telemetrix RPM

As the chief nursing informatics officer for Telemetrix Remote Patient Monitoring, Nancy is a healthcare professional with more than 36 years experience. Her experience spans clinical operations, vendor perspective, consulting, and IT operations. As a clinical leader at Epic, Nancy worked across the country with many large healthcare organizations. As VP of Clinical Systems and Integration at NYU Langone Health, she supported all facets of clinical IT operations for the health system. She has served in executive consulting roles for health systems and technology vendors.

Recognized as the 2019 HIMSS-ANI Nursing Informatics Leader of the year, Nancy holds a Master’s in Health Systems and Informatics, is board certified in nursing informatics, and currently a Ph.D. candidate at the University of Wisconsin-Madison focused on clinical technology adoption with a minor in human factors and design thinking.

She is the co-chair of the Alliance of Nursing Informatics and co-chair for the Midwest Nursing Research Society-Health Systems, Policy & Informatics research interest group. Nancy has served in policy roles for both the Alliance of Nursing Informatics and the Nursing Knowledge Big Data workgroup. She serves on the DaVinci Clinical Advisory Committee and the Nuance Clinical Advisory Board. Nancy holds additional membership in AONL, ACHE, AMIA, ANA, ANIA, AWHONN, HIMSS, MNRS, Sigma Theta Tau, and Phi Kappa Phi.
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Conflict of Interest

Nancy Beale, PhD (c), MSN, RN-BC
Has no real or apparent conflicts of interest to report.

Kelly Aldrich DNP, MS, RN-BC, FHIMSS
Has no real or apparent conflicts of interest to report.
Agenda

• Introduction and Background
• Importance of Defining a Unique Nurse Identifier
• Benefits of a Unique Nurse Identifier
• Dispelling the Data Myth
• Digital RN Citizen, Use Case Review
• Conclusion
Learning Objectives

• Identify the use and benefits of a national nurse identifier
• Discuss the potential source data for a national nurse identifier
• Identify the potential impact on the interoperability standards and outcomes data
Introduction and Background

- Nursing Knowledge: Big Data Conference and workgroups initially convened in 2013
- A national action plan was created to make nursing data sharable, comparable, timely and relevant to improving health
- The Policy and Advocacy Workgroup identified the need for a unique nurse identifier to demonstrate the value and contributions of nursing care to improved patient outcomes
Defining a Unique Identifier

- A Unique identifier (UID) is a distinct and defined code or series of characters that classify an entity in computer systems, repositories, registries, databases and knowledgebases.
- In nursing, the UID is a code that represents the individual nurse.
- Using this unique identifier to identify the individual nurse across systems can enable the identification and capture of nursing activity across disparate systems and organizations.
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**Importance of a Unique Nurse Identifier**

- Nursing sensitive outcomes and contributions to care are difficult to measure and often invisible, in part due to the lack of a unique nurse identifier in health IT systems and technologies.
- Without a unique identifier, data aggregation to improve practice is not possible.
- A unique nurse identifier has been identified as a critical element, essential to the underlying infrastructure of sharable and comparable nursing data.
- A unique nurse identifier facilitates aggregation, synthesis and publication of data and research demonstrating the value and contributions of nursing to health outcomes.
Recommended Unique Nurse Identifier

- The NCSBN ID is a free, publicly available identifier matched exclusively to a nurse and not a state or organization.
- The Big Data Policy and Advocacy Workgroup recommends using the National Council of State Boards of Nursing (NCSBN) ID as a unique nurse identifier.
- Leveraging this unique identifier is easy and convenient for nurses, and for healthcare organizations to connect siloed systems including the Electronic Health Record (EHR), Enterprise Resource Planning (ERP) and other systems such as nurse call, physiologic monitoring, and many other technologies.
Benefits of a Unique Nurse Identifier

- The NCSBN identifier is automatically generated and freely available for each LPN, RN, and APRN via the Nursys database.
- Nursys comprises a suite of systems and databases containing nurse license and license discipline information.
- All nurses can track their own licenses.
- Comprehensive information in one place about license status and notification for renewals.
- An application programming interface (API) is available from NCSBN to automate the inclusion of the NCSBN ID into health IT systems and technologies.
- NCSBN also maintains proper data security policies, procedures and requirements, addressing data security.
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**NCSBN Nursys Database**  [https://www.nursys.com](https://www.nursys.com)

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**Nursys e-Notify** is a free notification service that provides automated license status updates.

Want license expiration and status updates for your nurses? For yourself?

**Institutions:** Enroll your entire nurse list and e-Notify will send regular updates of changes to licenses from e-Notify participating boards of nursing.

**Nurses:** Sign up to receive license expiration reminders and status updates via email or SMS for all your licenses from e-Notify participating boards of nursing.

[Watch overview video](#)

Learn more ➔

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**QuickConfirm License Verification** is a free service to look up and verify nurse licensure information.

Need to verify a nurse’s licensure status?

Look up a license from any QuickConfirm participating board of nursing and print/download a report with the licensure and discipline status information for that nurse.

[Watch overview video](#)

Look up License ➔

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**Nurse License Verification for Endorsement** is an online service for requesting secure electronic verification of licensure between boards of nursing.

Need to request verification as a requirement for applying in a new state?

Just tell us which license type, RN and/or LPN/VN, and which state you are applying to. In one simple step Nursys will send that board of nursing all of the verifications from all participating states where you have a record of licensure.

[Watch overview video](#)

Request Verification ➔
# Dispelling the Data Myths around a Unique Nurse Identifier

<table>
<thead>
<tr>
<th>Myth: A Unique Identifier will implicate nurses more specifically than now in lawsuits and other litigation, root cause analyses and other disciplinary action</th>
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<td><strong>Reality:</strong> Computer coding models to monitor nurse behavior is not new</td>
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<td><strong>Reality:</strong> HIPAA requires healthcare organizations to monitor and control access to electronic systems and data integrity</td>
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<td><strong>Reality:</strong> Audit trails are able to capture date and time stamps along with user information and actions, a unique nurse identifier doesn’t change this</td>
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Use Case leveraging the Unique Nurse Identifier – NCSBN ID

Pediatric Code Blue Resuscitation and the RN digital citizen at C4MI
The Center for Medical Interoperability (C4MI)

Mission

To achieve plug-and-play interoperability by unifying healthcare organizations to compel change, building a lab to solve shared technical challenges, and pioneering innovative research and development

Vision

Accelerating the seamless exchange of information to improve healthcare for all

- 501 (c)(3) non-profit cooperative research & development lab
- Founded by health systems CEOs to simplify and advance data sharing among medical technologies and systems of care coordination
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Transformation Learning Center (TLC) at C4MI

1. Dedicated to diverse clinical collaboration, advancing person-centered care, and ensuring that technically interoperable solutions are safe, useful and satisfying for patients and their care teams.

2. Clinicians explore how technology impacts their ability to manage the growing complexities throughout the continuum of care.

3. Develop high-value use cases and capture clinical requirements to inform the next generation platform architecture.
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Interoperability Maturity Model: IMM
Addressing all levels of Interoperability

**INTERFACETRUCTURE**
How connected, secure and resilient is your health system’s infrastructure?

**CONTEXTUAL /DYNAMIC**
Do your information exchanges enable safety and optimal decisions?

**ORCHESTRATION**
Is the information exchange sequenced to meet your needs?

**SINTACTIC**
Is information your system needs to exchange properly formatted to meet your needs?

**TERMINOLOGY /SEMANTIC**
Do the places that send and receive your data speak the same language?

Procuring Interoperability: Achieving High-Quality, Connected, and Person-Centered Care:
NAM 2019
Use Case: Interoperability within the episode of care
Making the right information available, to the right person, at the right time can impact patient outcomes

- **Scenario**: Inpatient, pediatric Cardiopulmonary resuscitation

- **Hypothesis**: By creating a real-time situational awareness measurable event and illuminating all data, will allow for real-time and post event analysis & action

- **Measurement of data**: "known" actors within this episode of care
  - **People** – Unique Nurse Identifier
  - **Process** – Complex adaptive systems approach with situational awareness
  - **Technologies** - all medical devices and elements supportive within code blue event
    - When the outputs of medical devices and systems such as defibrillator, cardiac monitors, etc... are time synchronized alongside human activities and interventions, like CPR compression depth and rate, it is possible to generate real time analysis used in event management and clinician performance impact and outcomes scoring
Use Case:

1. what are we trying to measure
2. can we do IT

Inpatient, pediatric cardiopulmonary resuscitation
Use Case:

1. what are we trying to measure
2. can we do IT
3. how will we do IT
4. what if...

Inpatient, pediatric cardiopulmonary resuscitation

Use Case example data model

C4MI Spencer Crosswy
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TLC

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Challenges with Current Identification and Compliance Tracking Approaches:

- **Lack of portable Identify:** Identities known only to the employers; do not translate across institutions; could be duplicated as nurses change jobs.

- **Weak or no protection against identify theft:** relatively easy to forge/steal a license without an easy mechanism to prove license ownership by private practices(?)/patients.

- **Difficult to track records:** nurses currently do not have one record of their professional history (work locations, credentials, yearly demonstrated competencies, cpr ETC...).

- **Potential delays in communications:** regarding expiry of certifications/license and at-risk identities.

Solution identified in demonstrating the value of nursing care: leverage the Unique Nurse Identifier.

Evaluating a potential solution: Nurses as Digital Citizens leveraging the NCSBN ID

Does it address limitations with current approaches

- Portability across different institutions
- Security against cybercrime
- Ability to integrate with other institutions and track immunization records and other compliance requirements
- Ability to leverage digital communications to provide real time notifications/feedback regarding potential vulnerabilities of identities or issues with licensure
Does it possess key aspects of identification:

- National/global uniqueness and unambiguity
- Privacy - mechanisms to protect sensitive personal data
- Security - minimize risk associated with lost/stolen identities
- Built-in authentication and authorization protocols
Understanding how to quantify data and apply that, to improve care is an innovative and transformative care model approach that can be realized with the Unique Nurse Identifier.
Digital RN Citizen, Use Case Demonstration
Leveraging the Unique Nurse Identifier

- Center for Medical Interoperability; the work
  - Digital RN Citizen
    - To demonstrate the Unique Nurse Identifier
Additional Proof of Concept Projects

**HCA Healthcare**
- HCA is analyzing nursing practice at the patient level and aggregating the data across experiences and geographic locations from the beginning of the nurse’s career.

**The University of Alabama – Huntsville**
- Acquire the NCSBN ID and create regular notifications of licensure changes.
- NCSBN ID will be used to track nurse career progression.
- Systematic notifications will provide more accurate data on the licensure/certification exam pass rates of students, along with the geographic distribution of current licensure status.
Questions

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