



Amazing News for Sharable/Comparable Nursing Data to Support Big Data Science

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Minnesota is the first state to recommend a standardized nursing terminology in electronic health records (EHRs) for all healthcare settings. The Minnesota e-Health Initiative is a legislatively chartered public-private partnership that coordinates and recommends statewide policy on e-Health; develops and acts on statewide e-Health priorities; and reflects the health community's strong commitment to act in a coordinated, systematic, and focused way. The e-Health initiative's vision is to accelerate the adoption and effective use of health information technology to improve healthcare quality, increase patient safety, reduce healthcare costs, and enable individuals and communities to make the best possible health decisions. It is composed of members appointed by the Commissioner of Health including five nurses representing multiple stakeholders.

On April 17, 2014, the Minnesota e-Health Advisory Committee met and heard a report from the cochairs of the Standards Workgroup. The report included a recommendation that an American Nurses Association (ANA)-recognized standardized nursing terminology be incorporated into EHR in all healthcare settings. The Standards Workgroup includes interprofessional members and is cochaired by Greg Linden (vice president, Information Services/chief information officer, Stratis Health) and Johnathan Shoemaker (director, Information Services/Clinical Applications Allina Health). Minnesota has a long history of implementing one of the ANA-recognized nursing terminologies, the Omaha System, in community-based settings. Almost every county in Minnesota has implemented the Omaha System in its public health agency, and many home care agencies also have adopted the Omaha System. Thus, the Omaha System was called out specifically in the Standards Workgroup recommendations. The Minnesota e-Health Advisory Board voted and approved the following recommendations:

- All healthcare settings should create a plan for implementing an ANA-recognized nursing terminology within their EHR.
- Each setting type should achieve consensus on a standard terminology that best suits its needs and select that terminology for its EHR either individually or collectively as a group (eg, EHR user group).
- Education should be provided and guidance be developed for selecting the nursing terminology standard that suits the needs for a specific setting.
- When exchanging a Consolidated Continuity of Care Document (C-CDA) with another setting for problems and care plans, SNOMED-CT and LOINC should be used for exchange.

- The Omaha System for exchange between public health and community-based settings for reporting of results should be used where appropriate (eg, two public health agencies or a public health and home care agency that both use the Omaha System).
- Exchange between providers that do not use the Omaha System and a provider that does will require a common terminology for exchange, which should be SNOMED-CT and LOINC.

Karen Monsen, Bonnie Westra, Lisa Klotzbach, and Diane Thorson presented at the Standards Workgroup on the importance of using an ANA-recognized standardized nursing terminology to exchange health information through use of the C-CDA. Karen Monsen (University of Minnesota) leads the Omaha System Partnership, and Connie Delaney and Bonnie Westra (both from the University of Minnesota) lead the development of a National Action Plan to have sharable/comparable nursing data to conduct big data science. Lisa Klotzboch from Olmsted county (Leadership in Health Information Technology for Health Professional Certificate graduate) presented on the work she was involved with through Mayo Clinic's Beacon grant to use the Omaha System for exchange of information, and Diane Thorsen from Otter Tail Public Health presented on the integration and exchange of Omaha System data in the C-CDA between two software vendors (Champ Nightingale Notes and PhDoc).

The amazing news of a statewide recommendation emerged both because of the 10-year history of the Minnesota e-Health Initiative and the University of Minnesota School of Nursing's leadership in implementation of nursing terminologies. The specific effort for a statewide recommenda-

tion was enhanced through development and implementation of a national action plan to create sharable/comparable nursing data for "big data" science, the subject of the 2014 Nursing Knowledge conference, Big Data & Science for Transforming Healthcare, held at the University of Minnesota School of Nursing in early June (<http://www.nursing.umn.edu/about/calendar-of-events/2014-events/big-data-2014/index.htm>). Integration of standardized coding of nursing data, along with data from other disciplines, affords the opportunity to discover new knowledge about the most effective interventions to improve individual and population health.

Minnesota is just the first state to make this recommendation, and others are making efforts to increase the standardized representation of nursing data in EHRs. Nurses along with other providers, as a result of the 2013 Nursing Knowledge Big Data Research to Transforming Healthcare conference, are furthering the effort for sharable and comparable nursing data. The ANA is increasing its lobbying for nurse-sensitive clinical quality measures derived from EHRs for Meaningful Use of EHRs in Stage 3. The National Institute for Nursing Research is forming a nursing informatics research collaborative as part of the nursing special interest group within Clinical Translational Science Institute-funded academic health centers. Nursing informatics organizations are advocating for consistent standards in the design and optimization of EHRs.

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