The Nursing Informatics e-Repository to Improve Practice Through Sharing

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SIGNIFICANCE: Despite a half century of efforts by industry, practitioners and government to develop a useful, usable electronic health record (EHR) that facilitates clinicians’ practice and improves patient care outcomes, nurses continue to encounter a “data-rich, information-poor” EHR (xxx, and xxx, Fall, 2017; xxx and Weaver, 2016). Although there are numerous big data and data science initiatives around the world, nurses remain “information-poor” because we are only beginning to learn how to access and share best practices and use big data. As part of the University of Minnesota School of Nursing Knowledge Big Data Science (NKBDS) Initiative, the Transforming Nursing Documentation Workgroup synthesized literature and experience to describe concisely how today’s nurses remain “information-poor” (O’Brien et al., 2015) and consulted nursing informatics leaders who had tackled this problem in their own agencies. To increase broader sharing of nursing informatics innovations, a Repository Workgroup was created and asked to identify potential repositories to house tools emerging from NKBDS Workgroups along with vendor-neutral best practices in electronic documentation that could streamline nursing workflow, increase the amount of decision support for nurses, provide feedback about performance, and improve patient safety and quality outcomes (XXX et al., 2016).

PURPOSE: The purpose of this presentation is to provide an overview of the repository project, its current status, and mechanisms for international participation.

METHODOLOGY: We selected the Sigma Theta Tau (STT) Henderson Repository. The STT repository is well suited for this project because it has nearly 10 years of experience and is supported by ongoing funding. The repository infrastructure is well established and can house artifacts in any format—even videos. Authors retain copyright of any materials they submit. When users download and apply a best practice or tool in their setting, they will be asked to submit a short evaluation of their experience in its application to provide feedback to creators and help assess its generalizability. We are currently crafting a plan with STT Repository staff for initial and ongoing curation by nursing informatics experts, as well as a plan for initial and ongoing evaluation.

CONCLUSION: We anticipate that the Best Informatics Practices E-Repository will provide an efficient way for nurses world-wide to share informatics tools and best practices to streamline nursing workload while improving patient outcomes and building nursing informatics science.

Title:
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Keywords:
Evidence Based Practice, Nursing Informatics and Repository

References:


Abstract Summary:

Here we describe our project to establish a nursing informatics e-repository with the Sigma Theta Tau Henderson Repository to improve practice through broad sharing of evidence based artifacts and innovations. We are confident this project will result in advancing nursing informatics science and practice and improve patient outcomes.

Content Outline:

Significance:

1. Nursing informatics has become "data-rich, information-poor"

2. Working with nursing informatics experts and University of Minnesota School of Nursing Knowledge Big Data Science (NKBDS) Initiative, the Transforming Nursing Documentation Workgroup, synthesized literature supporting nurses are "information-poor"

3. We then sought a means for developing an e-repository for broad sharing of nursing informatics innovations, streamline workflow, increase amount of decisions support for nurses, performance feedback, and improved patient safety and quality outcomes

Purpose:

1. Here we present an overview of the project, current status, and mechanisms for international participation

Methods:

1. Selected Sigma Theta Tau Henderson Repository
2. Authors retain copy-right of submitted materials

3. Those who download materials will provide an evaluation as feedback to its creators and help assess generalizability

4. We are current working on a plan for curation and ongoing evaluation

Conclusion:

1. We anticipate the Best Practices E-Repository will provide a means for world-wide sharing of informatics tools and best practices

2. This repository will lead to improved patient outcomes and quality care

First Primary Presenting Author

**Primary Presenting Author**

Jane Carrington, PhD, RN, FAAN
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**Professional Experience:** Dr. Carrington has over 16 years of experience in informatics and education. She has an extensive career using innovative methods of instruction and analyzing how users interact with technology

**Author Summary:** higher education. She has an extensive career using innovative methods of instruction and analyzing how users interact with technology. She has published her research and strategies for teaching in peer reviewed journals.

Second Author

Judith Effken, PhD, RN, FACMI, FAAN
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**Professional Experience:** Dr. Judith Effken, PhD, RN, FACMI, FAAN has over 50 years of nursing experience (mainly managerial) including over 20 years of experience in nursing informatics. Her research includes designing displays to facilitate nurses’ recognition of hemodynamic and oxygenation problems, as well as the use of computational analysis and social network modeling to study the impact of nursing communication patterns on patient outcomes. Dr. Effken taught health systems and informatics at the University of Arizona for 15 years prior to her retirement with emeritus status. As co-chair of the Repository Workgroup for the University of Minnesota Nursing Knowledge Big Data Science (NKBDS) Initiative, she helped locate and design the Best Informatics Practices Repository within the Virginia Henderson Library that will enable free global sharing of vendor-neutral best practices in nursing informatics and tools promoting best practices that can streamline nursing documentation and improve
communication, thereby improving patient outcomes.

**Author Summary:** Dr. Effken holds a PhD in Cognition & Instruction and is a fellow in the American College of Medical Informatics and the American Academy of Nursing. She has over 50 years of experience in nursing, over 30 of those in nursing informatics. A longtime member of STTI, she co-chaired the Best Practices in Nursing Informatics Repository Workgroup, a project of the University of Minnesota Nursing Knowledge Big Data Science (NKBDS) Initiative.

Third Author

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**Professional Experience:** Dr. Westra is an Associate Professor at the University of Minnesota (UMN), School of Nursing and Director for the Center for Nursing Informatics. She has 12 years experience in the software business and developed the informatics program at the UMN. Her informatics research includes terminology development, application, and evaluation; knowledge discovery in databases; predictive analytics for outcomes; and evaluating and deriving new evidence based guidelines from electronic health record (EHR) data. She leads an interprofessional team to develop information models from flowsheets to extend common data models for comparative effectiveness research. Westra was involved in a 10 site PCORI grant developing a common data model and data standardization. She co-leads a national initiative (Nursing Knowledge: Big Data Science) for comparable and sharable nurse-sensitive data to extend big data for data science. The work includes 10 national virtual working groups with annual meetings to report progress.

**Author Summary:** Dr. Westra's research has been extensively published in high ranking journals and she has contributed on book chapters and is a well known representative of nursing informatics, terminologies, and big-data.

Fourth Author

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**Professional Experience:** Dominique Tobbell, PhD, is associate professor and director of the Program in the History of Medicine at the University of Minnesota. She received her PhD in the History and Sociology of Science from the University of Pennsylvania in 2008. Her research focuses on the history of nursing, health informatics, pharmaceuticals, and health policy.

**Author Summary:** Dr. Tobbell has written two books including "Health Informatics at Minnesota: The First Fifty Years" (Minneapolis: Tasora Books, 2015) and has published several articles on the recent history of nursing.

Fifth Author

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Professional Experience: Maribeth Slebodnik is an associate librarian in the Arizona Health Sciences Library at the University of Arizona, where she is the embedded librarian in the College of Nursing. She was the biomedical sciences information specialist and an associate professor in the Purdue University Libraries from 2006-2015. She earned a bachelor of science in Nursing and a master of Library Science from Indiana University. After twelve years as a neonatal intensive care nurse, she returned to school to retool as a medical librarian.

Author Summary: Ms. Slebodnik has worked to assist nursing students and faculty to publish their work. As a co-author and through acknowledgements, Ms. Slebodnik has become a well respected and expert in information seeking and supporting efforts towards publications.