Supporting Nursing Informatics in Practice - Lessons Learned by Nursing Informatics Pioneers

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Abstract

The advancement of Nursing Informatics (NI) in practice differs between regions and there is a need to support the advancement of NI all over the world. Exemplifying means that have been successful in supporting NI in practice could be used to guide the development of NI in other places as well. To address this need, the IMIA-NI SIG Student and Emerging Professionals (SEP) group proposes a panel of pioneers in the field to discuss means of how to support NI in practice throughout the continuum - from places where the field is just emerging to those where NI today is more advanced. The discussion will cover issues such as NI roles, requirements, competencies and education. Discussed ideas will be collected and reported in the future.

Keywords:

Education, Nursing Informatics, Professional Competence

Panel Description

Nursing informatics (NI) is developing rapidly in our information society. The advancement is however not equal in different regions around the world. This was highlighted by an international survey conducted by the *International Medical Informatics Association - Nursing Informatics Special Interest Group* (IMIA-NI SIG) *Student and Emerging Professionals* (SEP) group in 2014. Based on the findings from the survey, there is a need for a robust support to advance NI in clinical practice in countries where the discipline is now emerging as well as in countries where NI today already is more advanced. To address this need, the IMIA-NI SIG SEP group proposes a panel of NI pioneers to discuss lessons learned to be held at the NI2018 conference from the 6th to the 8th of JUNE in 2018 (Guadalajara, Mexico).

This panel aims to support capacity building of NI in clinical settings by exploring for example different structures and operating tactics, which have been associated with the success of NI. The panelists will provide examples of both successful and unsuccessful initiatives and policies on organizational, regional and national levels, which have influenced the advancement of NI, based on their experience in the field. The discussion will cover issues such as NI roles, requirements, competencies and education. After opening and presentations of panelists (10 minutes), the panel starts with four short presentations by the panelists (10 minutes each) covering central topics related to the theme. This is followed by questions and answers (30

minutes) and summing up and closing of the panel (10 min). The presentations cover the following topics:

1. Joyce Sensmeier: Evolution of nursing informatics workforce job roles and responsibilities
2. Kaija Saranto: Nursing informatics requirements on professionals' competences
3. Susan Newbold: Nursing informatics capacity building through education
4. Claudine Ramírez: Current state of nursing informatics in Mexico

The panelists will discuss lessons learned and provide recommendations for how to move forward to advance NI on different levels. The discussion is also to activate the audience to participate. Discussed ideas will be collected and reported in the future.

Topic 1. Evolution of nursing informatics workforce job roles and responsibilities

Joyce Sensmeier, Vice President, Informatics for HIMSS North America, San Diego, California, USA

HIMSS has surveyed the United States NI community every three years since 2004 to understand the roles and responsibilities of the informatics nurse professional. This survey captures the experience and background of NI professionals while also identifying changes in the NI workforce that have occurred over the last 13 years. The HIMSS 2017 Nursing Informatics Workforce Survey, supported by the HIMSS Nursing Informatics Community, builds on previous HIMSS research from 2004, 2007, 2011, and 2014. The 2017 survey [2] continues to suggest that nurse informaticists play a crucial role in the development, implementation, and optimization of clinical applications including nursing clinical documentation, computerized practitioner order entry (CPOE) and electronic medical/health records (EMR/EHR). Over half (57 percent) of respondents have a post-graduate degree in any field. In addition, 41 percent of respondents planned to pursue additional informatics education and training and just over half (51 percent) of the nurse informaticist respondents indicated that they would be pursuing some type of certification within the next year. Over the history of the survey, there has been a shift in the identified barriers to success as a nurse informaticist. Lack of administrative support as a top barrier increased from 17 percent in 2014 in 21 percent in 2017.

Topic 2. Nursing informatics requirements on professionals' competences

Kaija Saranto, Professor in Health and Human Services Informatics, University of Eastern Finland, Finland

Digitalization of health care services is creating needs for new competences for nurses. Several items highlight the need for nurses to be involved in the designing and implementation of new services using various technological tools, based on international and national strategies for eHealth adoption.

One example in Finland is the *Virtual Hospital 2.0* -program, which is completely changing access to health services. This is a joint collaboration of five university hospitals to design and implement a national Health Village that provides care virtually similar to an outpatient clinic visit. By 2018, the Health Village will contain 30 hubs covering mental health, women's health, rehabilitation, heart health, allergy and asthma, pain management, and surgery. Citizens and outpatients can visit these to gather information and support. This means a change in practice, a design for virtual encounters, and an adoption of various new tools, for nurses who will provide virtual care in the near future. However, beyond the technology, there will always be the fundamental characteristics of nursing – confidentiality, interaction and safety – to be able to provide high quality care. Thus, despite the evolving technology there still exist the basic content areas for nursing informatics competence areas.

Topic 3. Nursing informatics capacity building through education

Susan K Newbold, Consultant, Nursing Informatics Boot Camp, Franklin, TN, USA

Nursing education in NI is advancing in the United States, but there is still room to grow. Many nurses in the field have learned about informatics through on the job training, continuing education, and attending conferences. Nurses now have competencies in NI that are required in bachelor's, master's, and doctoral programs. Continuing education is available in person and online in NI.

One example of continuing education is the Nursing Informatics Boot Camp. This intensive two day course focuses on current informatics trends and issues in health. It includes content for nurses interested in becoming Certified Informatics Nurses. Other clinical professionals working in informatics may wish to take the course to become exposed to the course topics.

A brief review of academic programs in informatics available online or in person at the bachelor's, master's, or doctoral level will be presented. One lesson learned by this pioneer is that anyone who practices in the field of nursing informatics has to be committed to life-long learning.

Topic 4. Current state of nursing informatics in Mexico

Claudine Ramírez, Master in Science, Coordinator of the Nursing Informatics Network of Mexico, CDMX, Mexico.

In Mexico, nursing as a discipline had a change of paradigm in which the main axis is still patient care, but now, we are immersed in the digital age so we are not exempt to assume these transformations. Making use of information and communication technologies has become a daily practice in areas such as: academic training, direct attention to users of health services and research. Therefore, it is necessary to orient the programs to future professionals, through scenarios and contexts that respond to the health problems of the population considering that the daily practice is transformed by the effects of technology, as well as by the demographic transition, epidemiological transition or for emerging diseases.

Great advances have been reached in the field of "on-line education" for undergraduate, graduate, master's and doctoral degrees, Webinar cycles for ongoing training and the e-Health program, which consists of two basic telemedicine / telehealth systems. In addition to having the Network of Informatics in Nursing of Mexico, belonging to the International Network of Computer Nursing; which promotes activities such as annual teleconference cycles where the knowledge of this area is disseminated, and although we still have a long way to go, I believe that the new generations of nursing professionals will have much to contribute to strengthen the necessary skills of computer nursing.

Panel Organisation

Biographies

Moderator

Laura-Maria Peltonen, RN, MHSc, Phd(c), is a researcher at the Department of Nursing Science, Faculty of Medicine, University of Turku in Finland. She is currently the Chair for the IMIA-NI SIG Student and Emerging Professionals (SEP) group and the secretary for the Nursing Informatics Working Group of the European Federation for Medical Informatics (EFMI) as well as the country representative for Finland in this group. She is a member of the European Academy of Nursing Science (EANS), which is a scientific community in Europe that provides inventiveness, partnership and academic leadership in nursing. She is also a member of the IKITK consortium, a research consortium with the purpose to support the construction and use of health information by developing pioneering, clever and modern clinical information and language technology solutions. She teaches master's students knowledge management and health technology at the university of Turku, Finland. She was the secretary for the Scientific Committee of the 14th National Conference in Nursing Science held in 2016 in Turku, Finland.

Panelists

Joyce Sensmeier, MS, RN-BC, CPHIMS, FHIMSS, FAAN is Vice President, Informatics for HIMSS North America, a strategic business unit of HIMSS, the global, cause-based, not-for-profit organization focused on better health through information and technology. In her current role she is responsible for the areas of clinical informatics, interoperability and standards programs and initiatives. She also oversees the HIMSS Innovation Center in Cleveland, OH. An internationally recognized speaker and author of multiple book chapters and articles, Sensmeier achieved fellowship in the American Academy of Nursing in 2010. She is co-founder and ex-officio chair of the Alliance for Nursing Informatics, a global collaboration of 30 distinct NI groups representing a unified voice for NI professionals. In 2017 she received the Virginia K. Saba Nursing Informatics Leadership Award from Sigma Theta Tau, International. Sensmeier is president of IHE USA, which serves as a voice representing national efforts fostering the adoption of a consistent set of standards to enable interoperability of health IT systems. Sensmeier currently serves on the boards of CDISC, the Sequoia Project, and IHE International. She is active in her community, serving as a

Commissioner on the Parks and Recreation Commission, San Marcos California.

Kaija Saranto, PhD, RN, FACMI, FAAN, FIAHSI, works as a full Professor in Health and Human Services Informatics (HHSI) at the University of Eastern Finland, Department of Health and Social Management. In 2012, the HHSI master's degree program received the status "IMIA accredited" by the International Medical Informatics Association as the very first internationally. Dr. Saranto also acts as the Deputy Director at the Finnish Centre for Evidence-Based Health Care, a Joanna Briggs Institute Centre of Excellence. Dr. Saranto has been chairing the scientific program committees for NI2009, MedInfo 2015 and NI2018 as well as the editorial committees for NI2009 and NI2014. Currently, professor Saranto holds the post of the vice chair for the IMIA-NI SIG and the IMIA vice president for MedInfo. Dr. Saranto has also co-edited various publications to enhance the adoption of health informatics and nursing in clinical practice. She was a member of the expert team compiling the eHealth strategy for nurses in Finland. Currently she is leading research projects focusing on patient safety and virtual care.

Susan K. Newbold, PhD, RN-BC, FAAN, FHIMSS, is a Consultant in Healthcare Informatics based in Franklin, Tennessee, USA. Her work represents a lifetime of sustained achievements in NI. She created and conducts the Nursing Informatics Boot Camp. Dr. Newbold is a Fellow in the American Academy of Nursing and HIMSS. Her PhD from the University of Maryland, Baltimore is in Nursing Informatics. Identified as a Pioneer in NI by the AMIA NI Working Group, Dr. Newbold co-edited five books and has written over 110 articles since 1983. She founded CARING (now ANIA) and was the first chair, newsletter editor, list manager, and program chair. Susan has consulted in informatics in the US, Australia, Canada, New Zealand, Qatar, Singapore, Slovenia and Taiwan. She is an active member of the American Medical Informatics Association in multiple volunteer roles for nearly twenty five years. Susan is also an active HIMSS member since 1996 and is now on the HIMSS NI Education & Networking Task Force.

Susan was awarded an Excellence in Teaching Award from Vanderbilt University School of Nursing, the HIT Men-HIT Women award for improving patient care through health information technology, and the Sigma Theta Tau International Honor Society of Nursing award the Information Technology Knowledge Advancement, Information Technology Award for Clinical Nursing Applications. Susan was selected as a "Woman to Watch" by the Nashville Medical News in 2013. In 2016 she earned the HIMSS Chapter Leader of the Year award.

Claudine Ramírez, Master in Science in Health Systems, professor of the Research Methodology I, II modules and Bioethics in the specialization course of Pediatric Nursing of the School of Higher Studies Iztacala, nowadays develops the research lines: Computer Science in Nursing, eHealth, Quality in Care in Health Systems, Quality of Life and Chronic Diseases in the Mexican Institute of Social Security.

Thesis Tutor in the careers of Pediatric Nursing, Degree in Librarianship and Degree in Nutrition, such as in specialization courses. Member of the Editorial Committee of the Neurological Nursing Journal as an external reviewer from 2012 - 2018. Member of the Scientific Committee of the 11th International Congress on Nursing Informatics Montreal, Canada 2012. Member of the Nursing Research Network of the Mexican Social Security Institute since 2013 - 2018 and currently Coordinator of Nursing Programs in the Coordination of Health Research of the Mexican Institute of Social Security, advisor of nursing research nodes with on-line and face-to-face modalities. Member of the International Network of Computer Nursing and Coordinator of the Nursing Informatics Network of Mexico.

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