

Nursing Informatics Competencies for Emerging Professionals: International Leaders Panel

Lisiane PRUINELLI

School of Nursing, University of Minnesota, Minneapolis, USA

pruin001@umn.edu

Abstract To achieve a cursory review of the competencies necessary to acquire a successful career in a competitive job market, the panel will bring together leaders from renowned academic, successful health corporations, and international leaders in nursing informatics to the table for discussion, dialogue, and make recommendations. Panelists will reflect on their experiences within the different types of informatics organizations and present some of the current challenges when educating skillful professionals. The panel will provide personal experiences, thoughts, and advice on the competencies development in nursing informatics from their lens.

Keywords. Nursing informatics, Competencies, Leadership, Academia, Industry, Education

1. Panel Organization

Panel Organizers: Lisiane PRUINELLI¹; Maxim TOPAZ², Charlene RONQUILLO³, Laura-Maria PELTONEN⁴

The proposed panelists are:

Suzanne Bakken, RN, PhD, FAAN, FACMI, is the Alumni Professor of Nursing and Professor of Biomedical Informatics at Columbia University. She currently directs the Center for Evidence-based Practice in the Underserved and the Reducing Health Disparities Through Informatics (RHeaDI) pre- and post-doctoral training program. Dr. Bakken has published more than 250 peer-reviewed papers. She is Fellow of the American Academy of Nursing, and President of the American College of Medical Informatics. Dr. Bakken is currently the AAN/ANA/ANF Distinguished Nurse Scholar-in-Residence at the Institute of Medicine where she is focusing on the intersection of data science and health equity.

Ellen Harper, DNP, RN-BC, MBA, is Vice President and Chief Nursing Officer (CNO) at Cerner Corporation. She has more than 30 years of experience in healthcare, of which 20 plus years have been focused on using technology and informatics to automate evidence based, interdisciplinary, patient centered workflows. As a nurse informatician, Dr Harper demonstrates that although nursing informatics is still a relatively new field, it is critical to healthcare in the new millennium. Her work is

¹School of Nursing, University of Minnesota, Minneapolis, MN, USA; ²Harvard Medical School & Brigham and Women's Hospital, Boston, MA, USA; ³School of Nursing, University of British Columbia, Vancouver, BC, Canada; ⁴University of Turku, Turku, Finland

centered on transforming healthcare by reducing error, variance and waste. An accomplished writer and international speaker Dr Harper's solutions/models optimize processes for healthcare organizations ranging in size from single-doctor practices, to health systems, to entire countries. She is a fellow of the American Academy of Nursing.

Polun Chang, PhD, Professor, Institute of BioMedical Informatics and School of Nursing. Director, Integrated Health Care Research Center, National Yang-Ming University. polun@ym.edu.tw, polunchang@gmail.com. Dr. Chang has been one of few active medical informatics leaders in Taiwan since late 1990s. He used a successful strategy of End-User Computing with the tool of Excel and embedded VBA to promote the informatics training. He started the Taiwan Nursing Informatics Initiative in 2003, and then led to establish the national NI association in 2006. Under his leadership, the nursing informatics practice, research and activities in Taiwan has become active and popular and most of the NI specialists in Taiwan are program graduates. In 2013, he was the first non-US scholar picked as the Face of AMIA. Dr. Chang is currently working with the nursing colleagues and leaders in China and internationally countries to promote the NI and ideas and visions set in TIGER globally. For his achievements, Dr. Chang was honored with the position of Distinguished Professor in the Capital Medical University in Beijing and awarded as the 2015 Hundred-Talent Program Laureate by the ShanXi Province in China.

Maxim Topaz, Postdoctoral Research Fellow, PhD, RN, MA. Harvard Medical School & Brigham Women's Health Hospital, Boston, MA, USA. mtopaz80@gmail.com. Dr. Topaz is a postdoctoral research fellow at the Harvard Medical School & Brigham Women's Health Hospital. He received his PhD from the University of Pennsylvania School of Nursing focusing on clinical decision support and standardized terminologies. Maxim was involved in diverse range of professional activities including membership in a student editorial board of bioinformatics journals (e.g., the Journal of American Medical Informatics Association) and policy development with the Office of National Coordinator for Health Information Technology, USA (Internship). He also co-founded, and is currently chairing, the IMIA-NISIG Students working group. Maxim has over 30 publications in peer-reviewed journals (including the Journal of American Medical Informatics Association, Computers Informatics Nursing, etc.) and a record of over 50 presentations at national and international conferences.

2. Panel Description

2.1. Format

Timeline of activities: 1) Moderator introduces panelists and discussion guidelines (5 minutes); 2) Panelist position presentations (10-12 minutes each); 3) Questions & answers (30 minutes); 4) Moderator thanks all participants and closes panel (5 minutes).

Sample list of debatable questions: Describe the main requirements of different informatics competencies (academia, practice, professional organizations)?; How should informaticians prepare themselves in lifelong learning for diverse professional and leadership roles in nursing informatics?; What are some of the effective strategies for finding training in different skillset necessary for the job market?

2.2. Description

In academic settings, nursing informatics (NI) education developed significantly during the last decades. Several sets of criteria for NI education developed, for example the Technology Informatics Guiding Education Reform [TIGER] initiative in the United States. TIGER created a three parts model for NI competencies: basic computer competencies, information literacy, and information management. Many new informatics educational programs were established across the world, and NI students are increasing in number. On the international level, NI is a growing field with many research and applied opportunities. Legislative agendas and policies have been driving NI into the public policy arena. For example, the United States Congress mandated the Health Information Technology for Economic and Clinical Health Act. This legislative action involves using the Electronic Health Record and related technology to improve quality, safety and efficiency of patient care; engage patients and families; improve care coordination; and ensures adequate privacy and security for people's personal health information. Other governments adopted similar legislative trends facilitating the adoption of health information technology by healthcare providers mandated including the United Kingdom, Jordan, and Austria.

In the light of an increasing demand for informatics professionals, it is imperative that nursing informatics students understand educational requirements, skillsets, and networking strategies needed to align educational development and future career and opportunities. To address this need, the IMIA-NISIG Students Working Group proposes a panel of nursing informatics leaders. The panelists will provide insights and recommendations on career development, educational requirements and skillsets needed, to be competitive for opportunities available for nursing informatics emerging professionals. The aim of the panel is to provide a view through the lens of their experiences on career development and to focus on how to prepare for the future. Panel members will reflect on advantages and disadvantages of each of the professional paths, the different educational requirements, and skillsets needed. This will provide the audience with actionable insights on the possible career choices, how to plan during the student's development, and opportunities for the emerging nurse informaticians in the areas of practice, research and leadership.