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Mapping critical data skills for tomorrow's nurses & paramedics: The informatics competency challenges & trends

Nurses, first responders and paramedics, often regarded as a critical group of experts and community heroes, must now be armed with new skills and competencies to ensure the successful digital transformation of organizations and work processes throughout the world via e-technologies and secured network infrastructures. In past decades, major global destabilization, rapid aging populations as well as ongoing unpredictable events (Fukushima, climate change and new kind of warfare), have called upon the need for nurses, first responders (ie., community workers) and paramedics to practice time-critical and technology-savvy solutions globally. In an era of rapid digital transformation of organizations and the Internet of Things, many governments are looking to train a new breed of health practitioners and social workers. This talk overviews prevailing informatics competency challenges and trends for next generation nurses, community workers and first responders, providing insights into new type of data skills and ongoing challenges arising from applications of emerging technologies. Such challenges include (a) applying data sciences to enhance

problem solving in health engineering and operational management; (b) acquiring new knowledge/skills to translate lean thinking into workplace practices such as nursing; (c) incorporating smart interfaces to improve user engagements of healthcare services and the monitoring of key health indicators, as well as (d) understanding the influence of social media for transforming nursing care and nursing practices. While identifying the critical informatics competencies, challenges and trends in the age of accelerative digital transformation of organizations and industries, I will also attempt to provide thoughts and lessons gleaned from ongoing studies conducted at McMaster and elsewhere on paramedics, community workers and other healthcare professions. Finally, the talk will conclude with the observation that regardless of how digital and e-technologies evolve for nurses and other healthcare providers, it will be confined by regulatory policies, sustainable paradigms, standards, privacy-security, socio-political, legal and ethical concerns.

Biography

Joseph Tan, PhD is Professor of eBusiness Innovation/eHealth Informatics, McMaster University. He has been named as among the "top 10 most influential informatics professors" on HealthTechTopia website, invited to publish in the scientific journal, Nature, and sits on multiple peer-review federal grant agencies and journal editorial boards. Dr. Tan has demonstrated high-performing skills and ability to serve in both academia and industry. To date, he has appeared as invited keynote for numerous local as well as major national and international conferences across North America, Asia, Africa, and elsewhere, and networks widely with key decision and policy makers apart from academic scholars and practitioners at local, provincial/state, national and international levels, including private, public and non-governmental organizations and universities. He is also the founding Editor-in-Chief, IJHISI and has served as distinguished faculty, invited speaker, panel moderator, research fellow and keynote for numerous local, national and international conferences across North America, Asia, Middle East and Africa. His overall career focus is on reshaping the landscape of IS/IT applications and promotion in e-Business innovation and e-Health informatics.

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