Precision Health for Nursing Informatics and Leadership

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Abstract

Background: Precision or personalized health is an emerging trend that has implications for nursing and nursing informatics (NI). In 2015, President Obama announced the Precision Medicine Initiative® (PMI), now the All of Us Research Program. This is a participant driven open access program to incorporate a variety of data such as genomic, lifestyle, and environmental data. Precision health is aligned with the Internet of Things (IoT) and consumer engagement to increase the ability to track and monitor personal health data. While there are numerous opportunities, many challenges and barriers exist to operationalize and integrate emerging data from a variety of sources. **Objectives**: The objectives of this presentation are to 1) inform and educate nurse informatists and nurse leaders about the emergence of precision health and "omic sciences"; 2) describe how these relate to IoT and consumer engagement strategies; 3) discuss opportunities in precision health for nursing informatics education, clinical practice, leadership, and research; 4) Explore leadership opportunities to mitigate challenges and barriers of precision health. **Relevance to Practice of Nursing Informatics**: Current and future nurse informaticians should have knowledge and skills to translate and integrate genomic data into usable and shareable information across care settings. Precision health has relevance to NI in the areas of education, clinical practice, leadership, and research. *Education*: The ANA NI: Scope and Standards of Practice (2015) calls for informatics nurses to build genetic/genomics knowledge to best support this expanding practice. Including genomic and precision health content into nursing informatics curricula can equip NI graduates with knowledge and skills to lead emerging interprofessional teams. *Clinical Practice*: With the expansion of data, the clinical practice of NI will continue to evolve and expand. NI has a unique opportunity to capitalize on clinical expertise, knowledge of clinical documentation systems, and data standards to facilitate the use of a variety of data sources such as IoT, patient generated, and genomic data. *Leadership*: The American Organization of Nurse Executives (2015) competencies "Information Management and Technology" require nurse leaders and nurse executives need to effectively use data to inform decision making, formulate and lead informatics initiates and provide direct leadership to adopt emerging technologies. *Research*: The All of Us Research program introduces a new research paradigm and methodologies. The availability of open source genomic data, patient generated health data, and social media data have implications for big data science and analytics research. *Conclusion*: Nurse informaticians are poised to be leaders and take an integral role in the precision health movement. This presentation will synthesize and integrate precision health within the context of nursing informatics. Precision health is at the core of nursing values as it combines a patients' unique response to health and illness with personalized genomic and biometric data to offer holistic, patient-centered care.