Shared Knowledge Conference

Nov 7th, 2:00 PM - 3:45 PM

**Machine Learning and System Dynamics Modeling for Study of Health Care Transition**

LisaMarie Turk

Christine Kasper

Follow this and additional works at: [https://digitalrepository.unm.edu/skc](https://digitalrepository.unm.edu/skc)
Title: Machine Learning and System Dynamics Modeling for Study of Health Care Transition
Authors: Lisa Marie Turk, MSN, RN, UNM College of Nursing (PhD Candidate, Primary Author); Christine E. Kasper, PhD, RN, FAAN, FACSM, Dean and Professor, Crenshaw Endowed Chair, UNM College of Nursing (PhD Advisor; Chair, PhD Committee)

Abstract:

Study Purpose: This study is designed for exploration of patterns and systems associated with health care transition (HCT) for adolescents and emerging adults (AEA) with special health care needs (SHCN) (hereinafter referred to as AEA-SHCN).

Background/Relevance: HCT for AEA-SHCN is generally defined as “transfer of adolescents and young adults with chronic physical and medical conditions from child-centered to adult-oriented health care systems.” It is a complex public health problem directly affecting, annually, an estimated 4 million children and families in the United States. Ineffective HCT further impacts broader society, as evidenced in high and rising public health care costs attributable to both avoidable health care utilization and poor health risk mitigation for these individuals with SHCN. Given its broad scale of impact, HCT for AEA-SHCN is increasingly recognized as a research imperative. It is broadly acknowledged that understanding of health services systems is needed to address complex public health problems; however, systems associated with HCT are under-investigated and poorly understood.

Methods/Implications: This study will incorporate data mining, machine learning, and System Dynamics modeling to examine HCT for AEA-SHCN. This approach facilitates the study of patterns and interrelationship among features in health services systems, thus advancing understanding of complex systems, including policy subsystems, associated with HCT for AEA-SHCN.

Results: In progress