Proposed Panel Presentation for the CAHSPR 2012 Conference
Making Sense of Electronic Medical Record Adoption as Complex Interventions in Primary Health Care
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Panel Abstract

Background - Substantial investments have been made in the adoption of electronic medical record (EMR) in primary health care. Yet its overall impact on the quality of care has been variable. Recent reviews suggest some evidence of modest improvement in preventive care and work practice through EMRs. However their impact is dependent on such contextual factors as organizational makeup and other concurrent interventions. A few studies suggest the notion of complex interventions to explain the variable findings. Yet there is no consistent way to define and measure these complex interventions when studying EMR adoption. As such, there is a need to make better sense of EMR adoption as a form of complex interventions to improve the quality of primary health care.

Purpose – Our objective is to provide new insights into understanding EMR adoption as complex interventions in primary health care. This presentation has three parts covering: (a) a scoping review on current state of knowledge on complex healthcare interventions; (b) an example of EMR-supported complex interventions in primary health care; (c) a multivariate model to quantify the impact of EMR-supported complex interventions in primary health care.

Presentation Overview - In Part-1 we present our scoping review on different approaches used to conceptualize, implement and evaluate complex healthcare interventions. In Part-2 we present an example of EMR-supported complex interventions in the primary health care setting. It is based on ten years of research conducted within PPRNet, a primary care practice-based research network (PBRN) of primary care practices throughout the United States that use the Practice Partner® EMR. PPRNet, based at the Medical University of South Carolina, has done a series of Translation of Research into Practice (TRIP) projects that involved the design, implementation and evaluation of a set of EMR-supported quality improvement (QI) initiatives for community-based primary care practices. Through this example key characteristics of EMR-supported complex interventions are identified and examined. Lessons learned across seven studies are synthesized to update the internally developed and empirically supported PPRNet-TRIP QI model, a conceptual framework for improving healthcare quality in primary care using health information technology. In Part-3 we propose a multivariate model of EMR-supported complex interventions designed by the eHealth Observatory team. The intent of this model is to define/quantify the contexts, factors and processes that influence successful EMR adoption and improved care.

Presenters - Dr. Lau is the CIHR/Infoway Applied Chair in eHealth and lead researcher of the UVic eHealth Observatory. Its mandate is to evaluate the effects of health information system deployment in Canada, and to translate new knowledge and build capacity in eHealth research. **Dr. Nemeth** is a U.S. researcher who has served as a co-investigator, principal investigator and project director for ten NIH/AHRQ funded studies related to improving quality in primary care practices using EMRs. She has led the evaluations in PPRNet research, and has developed the conceptual models underlying its' interventions, using mixed methods. **Ms. Kim** is a PhD student at UVic focused on the effect of EMR-supported complex interventions in managing chronic disease in primary care.