

A National Electronic Medical Record Network Opportunity to Measure Impact of E-health Innovations

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PROBLEM

IT IS DIFFICULT AND EXPENSIVE TO TEST E-HEALTH TECHNOLOGIES FOR SAFETY AND EFFECTIVENESS IN PRIMARY CARE

BACKGROUND

The Canadian Primary Care Sentinel Surveillance Network (CPCSSN) is conducting surveillance and research on chronic diseases in primary care across Canada.

CPCSSN is a 'network of networks', with 9 existing family practice research networks, each using electronic medical records (EMR) to capture data on their patients at the time of care. We have developed a secure and robust architecture that extracts data from 7 different EMRs on a quarterly basis, standardizes the format, cleans the data, removes identifiable text, de-identifies the database and transmits it to a central data repository for research purposes.

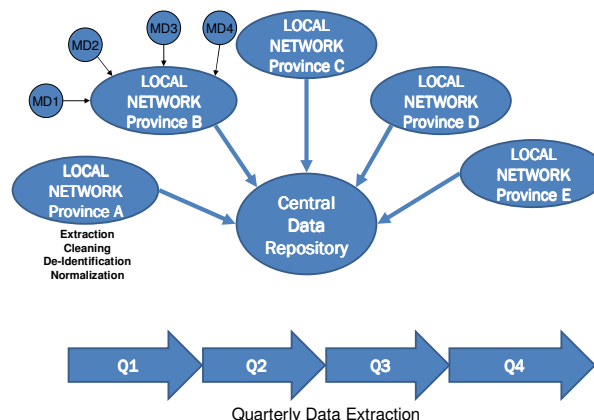
The data extraction system delivers information on patients with 5 chronic diseases (diabetes, high blood pressure, depression, arthritis and COPD) on a routine, production schedule. The dataset has information on 40,000 patients from the practices of 100 physicians. Basic demographics, co-morbid conditions, medications, lab results, risk factors, referrals and procedures are available in the database.

Evaluating patient outcomes from using e-health technologies in chronic disease care is expensive and complex. The logistics of recruiting physicians, developing data collection tools and transmitting data securely is complex and expensive. CPCSSN can help lower these barriers and increase the feasibility of conducting studies of e-health technologies such as remote monitoring tools, personal health records and self-management tools.

LOCATIONS



CPCSSN ARCHITECTURE

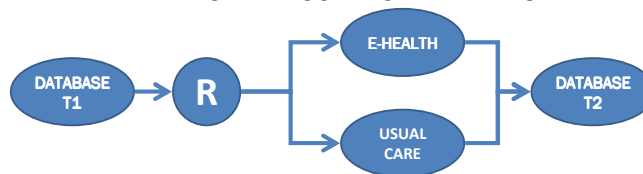


MODELS OF E-HEALTH EVALUATION

COMPARE ACROSS GEOGRAPHY



RANDOMIZED CONTROLLED TRIALS



CPCSSN SERVICES

- RECRUITMENT** CPCSSN can help identify and recruit appropriate physicians to participate in e-health technology evaluation trials
- PROGRAM DESIGN** CPCSSN can assist in developing a chronic disease management program for deployment across the networks.
- PROTOCOL DEVELOPMENT** CPCSSN can assist in developing the research protocol and study design for e-health technology assessment
- EMR MODIFICATION** CPCSSN can assist in design work to modify EMRs to meet the requirements of the project. This could include integration with another e-health technology, such as a clinical decision support system or a web service. This could also include a custom data entry template that works across multiple EMRs with entry of data fields that can be validated and sent directly to the central repository.
- DATA COLLECTION** CPCSSN already collects data on a quarterly basis. This data, including data from the intervention, could be made available to researchers for analysis.
- STATISTICAL ANALYSIS** CPCSSN can provide statistical support for analyzing the data collected during the study.

CONCLUSION

- OPERATIONAL:** CPCSSN provides a unique infrastructure to conduct research on e-health technologies for primary care on a National basis
- RELIABLE:** Quarterly data extractions and processing decrease the need to build a data collection, extraction and processing system for each study

RECOMMENDATIONS

Conduct primary care patient safety and effectiveness studies for your e-health technology in CPCSSN. It's faster, easier and more affordable.