Orientation to the Electronic Patient Reported Outcome (ePRO) Tool: A look at the tool and the pragmatic trial planned for 2017-2018

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Today’s Agenda

- **Project Overview**
  - CIHR eHIPP funding aims
  - Project team and partners
- **Introducing the ePRO tool**
  - Development of the tool
  - Demo
- **Trial design**
  - Project aims/goals/research questions
  - Site recruitment
  - Patient recruitment
  - Data collection
  - Post-study
CIHR eHealth Innovation Partnership Program

• Canadian Institute for Health Research invested $13.8 million in funding for 22 innovative eHealth projects
• Projects aimed at improving patient empowerment and patient-centered care delivery through adoption of new technologies into health care delivery
• Aim of stimulating collaborations between health researchers with the technology industry and supporting research teams that include providers, clients and families
• Projects focus on either youth mental health (8) or seniors with complex care needs at home (14)
• **Supporting Goal-Oriented Primary Health Care for Seniors with Complex Care Needs using Mobile Technology**

Project Team

Co-Principal Investigators
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Co-Investigators
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Ted Palen, PhD, MD (Kaiser Permanente)
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Collaborators
Angie Heydon, Carol Mulder & Catherine Macdonald (AFHTO)
Lee Fairclough & Sandie Seaman (HQO)
Renee Lyons, PhD (UofT, Emeritus)

Technology Partner
QoC Health Inc. (Sarah Sharpe)

Patient & Caregiver
Valerie Hepburn
Bob Alexander (previous)
ePRO Project Partners
e/mHealth Enabled Goal-Oriented Care using ePRO tool
User-centred Design Evaluation Approach

Phase 1: Needs Assessment
Patient focus groups & provider interviews

Phase 2: Tool Development
Working groups and iterative design

Phase 3: Usability Pilot
4 week pilot with 11 patients and 6 providers

Phase 4: Exploratory Trial
4 month trial exploring impact and implementation

Full Evaluation, Scale and Spread
Multi-center pragmatic trial to evaluate impact

[14]
Peer-Reviewed Publications

Needs Assessment

Development

Usability Pilot (in press)
Check-in point

Any Questions
https://eprs.bridgpoint.care
http://hsprn.ca/?p=189

Videos
Long version – covers entire project
Short version – covers tool only
Check-in point

Any Questions
Pragmatic Trial Phase

Phase 1: Needs Assessment
Patient focus groups & provider interviews

Phase 2: Tool Development
Working groups and iterative design

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4 week pilot with 11 patients and 6 providers

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Pragmatic Trial Phase

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Project Aims

Evaluate the use, effectiveness, and value for money of the ePRO tool

1. Does ePRO improve quality of life, care experience, and self-management in older adults with complex needs?
2. Is ePRO cost-effective for older adults with complex needs from the perspective of the health care system?
3. What are the most important implementation factors to effectively scale and spread ePRO in primary health care settings?
Trial Design

Developmental Evaluation

– Evaluation questions are used to support decision-making and modifications to improve interventions and programs [15]

• Cluster randomized pragmatic trial
  – Outcomes and cost-effectiveness (RQs 1 & 2)

• Embedded case study
  – Implementation (RQ 3)
Project Timeline

- **Site Recruitment**: June – Sept 2016
- **Patient Recruitment & Training**: Oct – Dec 2016
- **Intervention**: Jan – Dec 2017
- **Final data collection**: Jan – Dec 2018
Site Recruitment

• Cluster randomized pragmatic trial of Family Health Teams across Ontario
• 22 sites
  – 11 randomly assigned to intervention group
  – Should vary in terms of geography and organizational structure
  – Site leads identified at each site (EDs and/or clinician leads).
    • Weekly or bi-weekly communication with research team
  – Readiness assessments conducted to assess readiness to uptake new technology
• 4 selected for case study
Patient recruitment

- 30 patients recruited at each site
  - \( \geq 65 \) years
  - 2+ chronic conditions
  - 10+ visits in last 12 months (can include home visiting patients)
  - Ability to use mobile phone OR has a caregiver who can assist

- Expect more than 300 patients from each practice will be eligible (ie. 10% participation rate)

- Use EMR data to identify eligible patients
  - randomly placed on an ordered list until reach required number

- Recruitment will occur:
  - During a scheduled visit
  - By phone within one month of the study start date

- FHT admin staff will provide eligible patients with information about the study and will share contact information of those interested with the research team.
Check-in point

Any Questions
Training and on-boarding (intervention sites)

- Providers will be trained in a single 30-minute session at the practice by a member of research staff.
- Patients will be trained individually in 30-minute sessions just prior to on-boarding to the trial.
- Handbooks will be provided to both providers and patients.
- Webinar training refreshers will be offered every 3 months for both patients and providers.
- Patient on-boarding will be scheduled in a 1-2 week block (up to 4 weeks maximum) – January 2017.
Intervention

- **Set-up**
- **Monitoring**
- **Final visit**

12 months

Follow-up visits (2-3), part of usual care
Pragmatic Trial Measures

- Patients (baseline, 3,6,9,12 months)
  - Information sheet (demographics) (baseline only)
  - Assessment of Quality of Life (AQoL-4D)
  - Patient Activation Measure (PAM)
  - Patient experience survey (AFHTO & HQO)
  - Self-reported health care utilization
  - Goal-attainment (intervention only)
  - Post-study system usability questionnaire (PSSUQ) (intervention, not baseline)

- Providers
  - Information sheet (demographics) (baseline only)
  - PSSUQ (intervention only) (3,6,9,12 months)

- Health administrative data
  - Health system utilization (Institute for Clinical Evaluative Sciences)
  - EMR extraction
Case Site Measures

- 4 sites, selected on a most-different design
- Capturing process and contextual measures
- Patients
  - Focus groups (6 months and post-study)
- Providers
  - Interviews, based on Assessment of Chronic Illness Care
    (6 months and post-study)
- Organizational managers/leaders
  - Interviews (6 months and post-study)
- Document analysis
  - Capturing additional organizational variables
Total participant sites $N=22$

**Intervention sites ($N=11$)**
- Per site: 3-5 providers; 30 patients
- Collect baseline data
  - AQoL-4D, PAM, utilization, self-report, ICES data, demographic information
- Intervention
  - ePRO tool monitoring (goal attainment & health outcomes)
- Collect mid-study data
  - All outcome measures at 3, 6 and 9 months & PSSUQ
- Focus Groups with patients
  - Interviews with providers
  - Case sites only
- Collect end study data
  - All outcome measures & PSSUQ
  - Focus Groups with patients
  - Interviews with providers
  - Case sites only

**Control sites ($N=11$)**
- Per site: 3-5 providers; 30 patients
- Collect baseline data
  - AQoL-4D, PAM, utilization, self-report, ICES data, demographic information
- Usual care
  - Collect mid-study data
    - All outcome measures at 3, 6 and 9 months
- Usual care
  - Collect end study data
    - All outcome measures
Post-study

• Working with local and international partners we will develop an implementation and knowledge translation strategy

• If the tool proves effective we will work with AFHTO and HQO to spread tool locally
  – Work with our international network to spread more widely

• Continue to scale tool, adding in features and functions to improve effectiveness and usability

• Identify new opportunities for eHealth and mHealth innovation to support primary care delivery to seniors with complex care needs
Thank you!
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Final Questions


References


