

Using Mobile Technology to Collect Patient-Reported Outcomes for Quality Improvement in Primary Care: There's an App for That

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Learning objectives:

1. Identify how innovative mobile technology can be used to improve care delivery for patients with multiple chronic illnesses and complex care needs, while also supporting quality improvement for primary care organizations.
2. Understand the potential value add of mobile technology to primary care practice from both a research and system-level perspective through a co-presentation format delivered by a Research Scientist and senior leader from a Canadian association representing primary care practices.

Context:

Patients experiencing multiple chronic illnesses are at high risk of hospitalization and health decline. Primary care teams struggle to deliver care to this population. They also struggle to collect meaningful data to inform quality improvement efforts. Innovative mobile technology to help patients set and track meaningful goals for their care may offer a solution to both challenges.

Objective:

Demonstrate how the electronic Patient Reported Outcomes (ePRO) mobile application supports goal-oriented primary care for complex patients while facilitating collection of meaningful data to monitor and continually improve quality of care.

Study Design:

Secondary analysis of data from a mixed methods exploratory trial of ePRO. **Setting:** Two interdisciplinary primary care practices in Ontario.

Participants:

Eight providers and 16 patients, of whom 9 were randomly assigned to the intervention group.

Intervention:

Patients were randomized into control (usual care) and intervention groups. The intervention group used ePRO in collaboration with providers to set and monitor goals over 4 months.

Main and Secondary Outcome Measures:

Goal attainment and other validated outcome measures (such as PROMIS General Health Survey) collected using ePRO. Qualitative data from provider and patient interviews analyzed using thematic content analysis to determine the perceived value of ePRO to support quality improvement.

Results:

1. Better care: Patients *and* providers reported improved provider-patient communication and more support for self-management through increased collaborative decision making and engagement.
2. Better outcome data: All intervention patients identified goals. Goals were personal, unique, meaningful and unpredictable, but progress reporting was standardized so that providers could see how many patients were setting and achieving goals over time.

Conclusions:

Using mobile technology guided patients and primary care providers to focus and progress on goals that mattered to patients. The unique combination of electronic recording of personalized goals and standardized monitoring was key to achieving better care and generating easily accessible, meaningful data to continuously improve it.