

Implementation Outcomes, Barriers, and Facilitators of an Electronic Patient-Reported Outcome System for Cancer Rehabilitation

PRESENTER: **Christian** Lopez

BACKGROUND

- **Electronic patient-reported outcome (ePRO)** systems can support the management of cancer-related impairments.¹
- However, their widespread use in routine care remains limited by **persistent implementation challenges**.²
- **Few ePRO systems are designed for rehabilitation**, which presents unique implementation challenges.³
- We developed **REACH**, a web-app that enables patients to **self-monitor** rehabilitation needs during and after treatment and receive **tailored support**, including links to self-management education and community programs and recommendations for further clinical evaluation.^{4,5}

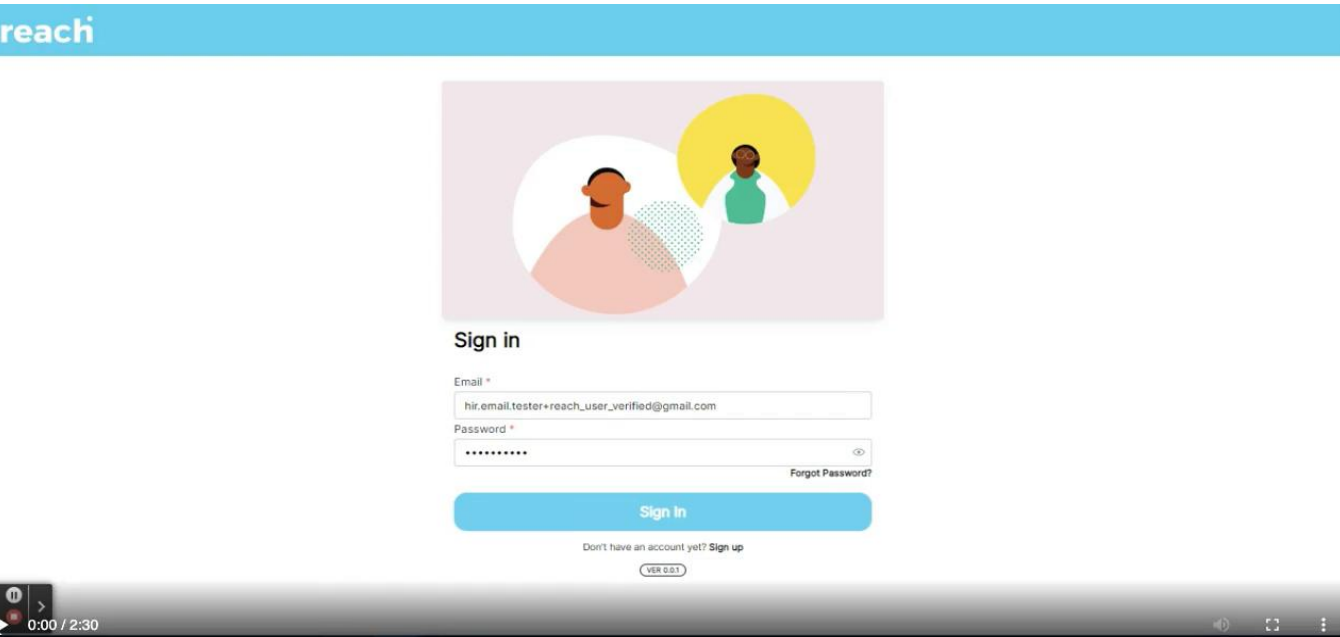
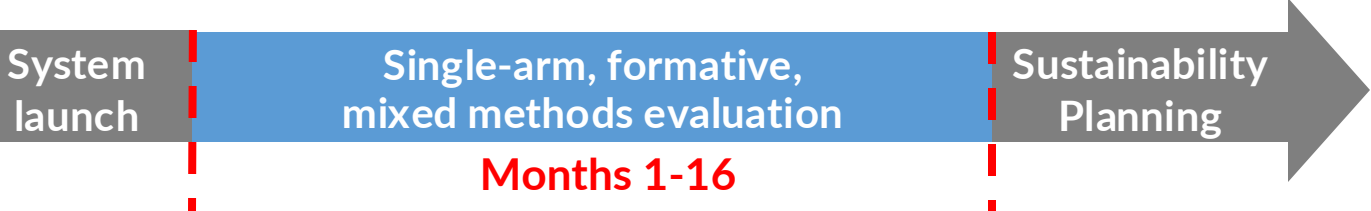


Figure 1. REACH assessment and resource delivery interface

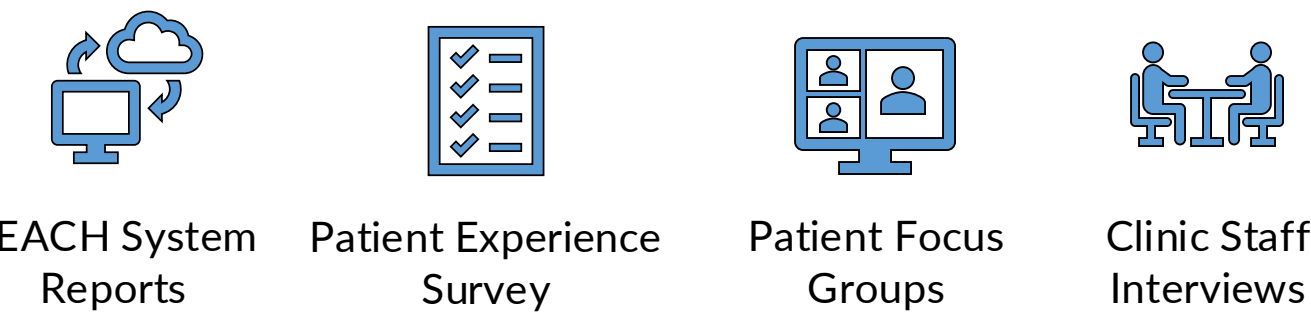
METHODS

Evaluation Design:



Implementation Settings: Four Canadian cancer centers
Patient Eligibility: Adult (≥ 18 years) breast, colorectal, lymphoma, or head and neck cancer survivors, defined as from the date of diagnosis until two years after completing all treatments were invited to self-register to the system.

Quantitative and Qualitative Data Collection:



Immediate delivery of tailored resources after ePRO completion was highly valued, but uptake was hindered by limited integration with organizational decision-making structures, digital systems, and patient education during clinical encounters.

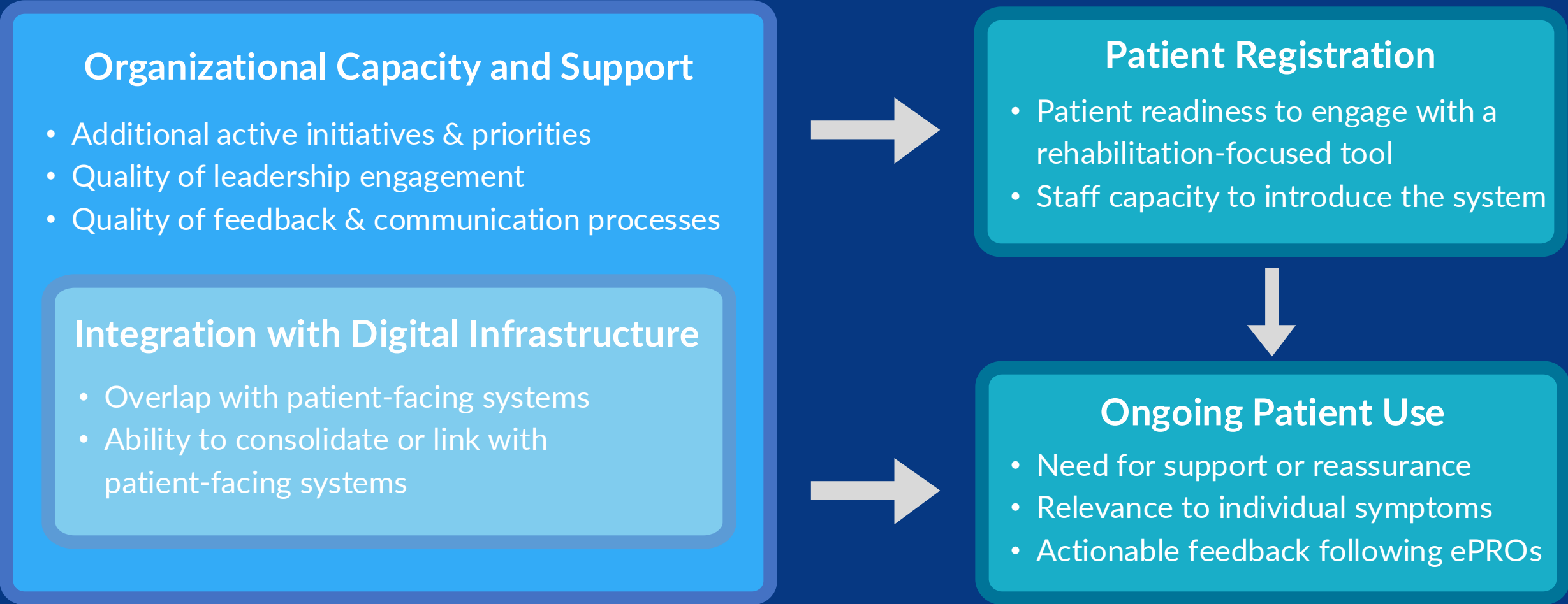


Figure 2. Organizational and individual-level factors supporting patient uptake and sustained engagement

RESULTS

Patient Uptake: 722 total, 610 (85%) consented to research

Patient Characteristics:

Median (range) age: 57 (21-91) years
Sex & cancer type: 67% female, 44% breast cancer
Tx status at registration: 29% dx, 45% on tx, 37% post-tx

System Engagement (Fidelity):

Completed ≥ 1 assessment: 99% of patients
Overall completion rate: 39% of assessments
Viewed ≥ 1 resource in their library: 68% of patients

System Engagement (Feasibility & Acceptability):

Median time to complete assessments: 2.65 min
Reporting REACH is easy to use: 73% of patients
Reporting REACH was useful: 40% of patients

Table 1. Qualitative Themes (n=24 patients and 24 staff) via the Consolidated Framework for Implementation Research⁶

Theme 1:	Absence of existing implementation processes that could be leveraged, resource constraints, and limited engagement with key decision-makers hindered implementation.
Theme 2:	Alignment with strategic priorities supported adoption, but the complex and evolving digital environment , including other ePRO systems and new EMRs, created integration challenges .
Theme 3:	Patient readiness for support enabled registration, but uptake was limited by reliance on passive promotion and staff capacity constraints during clinic visits, especially during active treatment.
Theme 4:	Patient engagement was driven by their need for support , a clear understanding of REACH's purpose, its ability to deliver immediate resources , and the convenience of a centralized hub .

DISCUSSION

- REACH is a **feasible** system with **moderate levels** of ePRO completion and engagement with recommended resources
- **Automatic delivery of tailored self-management resources** was a key driver of perceived value and use of REACH
- To support sustained patient uptake and engagement, REACH will need to be **embedded within a comprehensive digital experience** at the cancer center

AUTHORS & REFERENCES

Christian Lopez,^{1,2} Sarah E Neil-Sztramko,³ Kristin L Campbell,⁴ David M Langelier,^{2,5} Gillian Strudwick,² Jackie L Bender,^{1,2} Jonathan Greenland,⁶ Tony Reiman,⁷ Jennifer M Jones^{1,2}

¹Princess Margaret Cancer Centre, Toronto, Canada; ²University of Toronto, Toronto, Canada; ³McMaster University, Hamilton, Canada; ⁴University of British Columbia, Vancouver, Canada; ⁵University of Calgary, Calgary, Canada; ⁶Memorial University of Newfoundland, St. John's, Canada; ⁷Department of Medicine, Dalhousie University, Saint John, Canada

