

An Evidence-Based Approach to Implementing the NIH Patient Reported Outcomes Measurement Information System (PROMIS®) in a Bolivian Public Cancer Center



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Background

- Cancer is the second leading cause of death in Bolivia with 18,600 new cancers each year.
- Most cancer patients in Bolivia present with advanced disease, which is associated with a high prevalence of comorbid symptoms impacting quality of life.
- Given the limited cancer workforce in Bolivia, providers must prioritize diagnostic and treatment decisions over comprehensive symptom management during abbreviated patient visits.

NIH PROMIS® Technology

- NIH Patient-Reported Outcomes Measurement Information System (PROMIS®) is a comprehensive set of tools to measure self-reported physical, mental, and social health in people ages 5–90.
- PROMIS® iPad App offers self-administered computer-adaptive tests that provide personalized, precise and rapid evaluations of over 90 symptom and functional domains.
- Despite the availability of PROMIS® translations in Spanish and the extensive validation of PROMIS® in adult and pediatric cancer care, PROMIS® en Español remains underutilized in cancer centers throughout Latin America.

Objectives

- Implement PROMIS® symptom screening in a multicultural, low-resource public cancer center in Bolivia, the Instituto Chuquisaqueño de Oncología (ICO).
- Using evidence-based implementation frameworks, develop a replicable structured implementation approach to help other low-resource centers in Latin America implement NIH PROMIS® technology.

Methods

- The Expert Recommendations for Implementing Change (ERIC) were incorporated into the EPIS model of implementation process (i.e., Exploration, Adoption/Preparation, Implementation, Sustainment) to develop a structured, evidence-based approach to implement PROMIS® in ICO. (Figure 1)
- A multidisciplinary implementation coalition analyzed the ICO-specific barriers and facilitators to PROMIS® implementation across the Consolidated Framework for Implementation Research (CFIR) domains to provide a contextualized intervention and implementation blueprint meeting International Society for Quality of Life Research standards.
- All patients over 18 years old with basic Spanish proficiency receiving cancer care at ICO between 6/2018 and 3/2019 were considered for inclusion; participants were excluded if cognitive or physical impairment precluded participation.
- PROMIS® computer-adapted tests of anger, anxiety, depression, fatigue, and pain interference were completed by eligible participants before each clinic visit with a frequency of no more than once every 3 weeks. (Image 1)

Results

- A total of 958 patients attending 1,973 clinic visits were evaluated for PROMIS® screening. 12% of clinic visits were deemed ineligible due to language barriers (n = 194), physical impairment (n = 26), or age (n = 16).
- PROMIS® was completed at 70.2% of eligible clinic visits; of these, 88.5% completed all PROMIS® domains.
- Severe symptoms of anger (9.5%), anxiety (10.8%), depression (7.1%), fatigue (2.9%), and pain interference (4.8%) were identified in this population. (Table 1)

Table 1. PROMIS® Symptom Severity in Screened ICO Patients

PROMIS® CAT	Normal (<55)	Mild (55-59)	Moderate (60-69)	Severe (>70)
Anger	43.8%	21.2%	25.7%	9.5%
Anxiety	33.8%	20.0%	35.4%	10.8%
Depression	45.4%	18.5%	29.0%	7.1%
Fatigue	67.1%	14.4%	15.6%	2.9%
Pain Interference	39.0%	25.2%	31.0%	4.8%

Figure 1. Structured Implementation Approach of PROMIS® in ICO Cancer Center Utilizing ERIC Recommendations Across EPIS Processes of Implementation

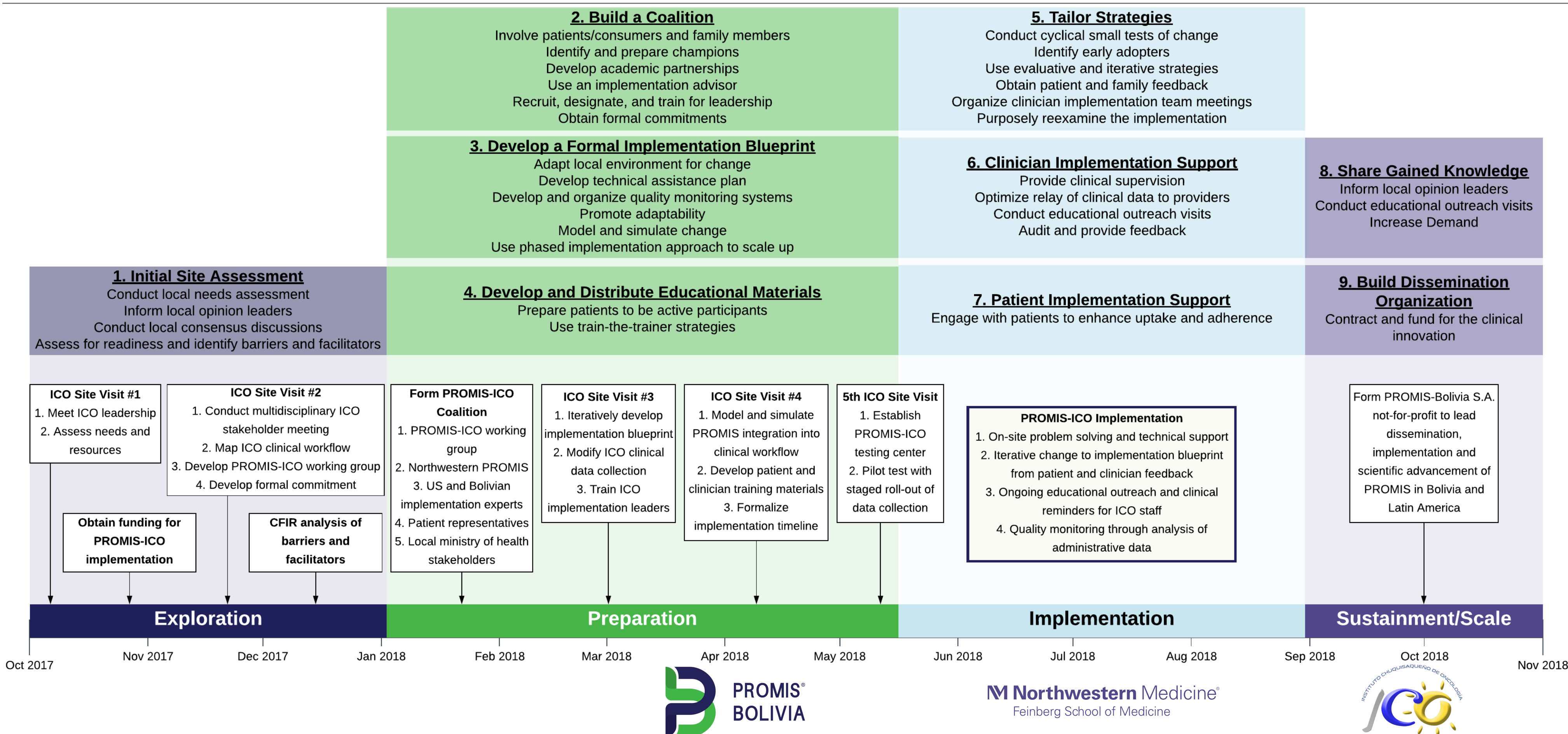


Image 1. PROMIS® Screening with an Indigenous Patient



Conclusions

- Multiple frameworks exist to facilitate evidence-based and sustainable implementation of patient-reported outcome assessment using PROMIS® in diverse settings.
- A structured implementation approach enables the successful application of health technologies from high-resource countries in resource-constrained health centers.