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 diseases, 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.
- NIH PROMIS® Technology set of tools to measure self-reported physical, mental, and social health in people ages 5–90.
- PROMIS® was completed at 70.2% of eligible clinic visits; of these, 88.5% reported outcomes on all PROMIS® domains.
- Severe symptoms of anger (9.5%), anxiety (10.8%), depression (7.1%), and fatigue (2.9%), and pain interference (4.8%) were identified in this population. (Table 1)

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 Care 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 cognitively or physically impaired 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%), and fatigue (2.9%), and pain interference (4.8%) were identified in this population. (Table 1)

Table 1. PROMIS® Symptom Severity in Screened ICO Patients

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Normal (&lt;55)</th>
<th>Mild (55-69)</th>
<th>Moderate (70-84)</th>
<th>Severe (&gt;85)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>43.8%</td>
<td>21.2%</td>
<td>25.7%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Anxiety</td>
<td>33.8%</td>
<td>20.0%</td>
<td>35.4%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Depression</td>
<td>45.4%</td>
<td>18.5%</td>
<td>29.0%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Fatigue</td>
<td>67.1%</td>
<td>14.4%</td>
<td>15.6%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Pain Interference</td>
<td>39.0%</td>
<td>25.2%</td>
<td>31.0%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

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.