Patient Reported Outcomes- mEVAL Project

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Table of Contents

• Background Information
• Origination at University of Utah
• Phase I- Implementation
• Phase II- Research and Analysis
• Phase III- Strategic Initiatives and Population Management
Background Information

Patient Reported Outcomes
Engaging Patients

A growing body of evidence demonstrates that patients who are more actively involved in their health care experience better health outcomes and incur lower costs. “

-Robert Wood Johnson Foundation
“Measuring, reporting and comparing outcomes are perhaps the most important steps toward rapidly improving outcomes and making good choices about reducing costs”

Michael Porter, NEJM Dec, 2010
What are PROs?

Patient-reported outcome (PRO):

“Any report of the status of a patient’s health condition that comes directly from the patient, without interpretation of the patient’s response by a clinician or anyone else.”

What are PROs?

• A set of questions
  – Traditional forms or questionnaires
  – Computer-Adaptive Testing (CAT)
  – PROMIS
  – “Legacy” scales
• A patient “questionnaire” could include:
  – PROs
  – Patient medical history, allergies, meds, etc…
Origination at the University of Utah
"PRO is so powerful because it sets up a conversation with the patient about their physical, mental, and social health in a very short amount of time," said Charles Saltzman, M.D., Department of Orthopaedics chair. "It allows providers to systematically track what matters most to patients, and it gives patients a way to follow their own health status."
ACCESS

4 Hospitals
11 Community Clinics
15 Regional Partners
10% of the Continental U.S.

1.4 MILLION Patient Visits

$3.2 BILLION Expense Budget FY15

50% GROWTH IN 4 YEARS
Principles For Setting up a Health System
PRO Collection System

- Leadership needs to establish expectations
- Patient Care Focus –Not Research
- Decrease Burden of PRO collection on patients
  - Short questionnaires
  - Collect only what is needed; Nothing More
  - Collect Remotely
- PRO results available at time of visit to provider
Tactics For Setting up a Health System
PRO Collection System

• Leadership communicates expectations and stays on message
• All Providers, office staff understand this is NOT RESEARCH
• Instruments: CATs, VAS, Simple questionnaires
• Collect only what is needed at each visit. System logic set to administer instruments based on
  – Self reported change in symptoms
  – Date of last instruments completed
• Home based remote collection enabled
• PRO results discussed with patient at time of visit
Phase I - Implementation
Why PROMIS?

- Patient Reported Outcome Measurement Information System
- The uniqueness of PROMIS® lies in four key areas:
  1. Comparability—measures have been standardized so there are common domains and metrics across conditions, allowing for comparisons across domains and diseases.
  2. Reliability and Validity—all metrics for each domain have been rigorously reviewed and tested
  3. Flexibility—PROMIS can be administered in a variety of ways, in different forms
  4. Inclusiveness—PROMIS encompasses all people, regardless of literacy, language, physical function or life course.
Cross-walked Instruments

- Neuro-QoL Mobility
- Neuro-QoL Upper Extremity
- PROMIS Physical Function v1.2
- HAQ-Disability Index
- SF-36 Physical Function
Cross-walked Instruments

PROMIS Depression v1.0

PHQ-2

PANAS

PHQ-9

SF-36

Kessler 6 Mental Health Scale

Neuro-QoL Depression

CES-D

Beck Depression Inventory-II
Enterprise Standardization

Instrument selection

Core

• 1 General Health Assessment (GHA)
• 1 Visual Analog Scale
• 2 CAT Instruments
  – PROMIS Physical Function and Depression

Specialty Specific

• 1 Specialty Instrument
  – Can be CAT or legacy

Minimize patient burden: 5-7 minutes (goal); no more than 10 minutes total (maximum)
Computerized Adaptive Testing “CAT”

- Each subsequent question is based on the response to the previous question

- Limits questions to only those relevant

- With minimal # of questions (4 to 8) can get the precision of all 124.
Lower Extremity
CAT

1. Unable to do
2. With much difficulty
3. With some difficulty
4. With a little difficulty
5. Without any difficulty

I can walk several steps
I can run a mile.
I can run 5 miles.
I can run 10 miles.
Patients check in with OSS

OSS finds patient encounter within mEVAL Portal

QR Code generated with MRN information embedded

Application (mEVAL) is launched

Patient is handed tablet to complete all questionnaires

OSS scans QR Code with tablet

After completion, patient is instructed to return tablet

Note: There will be a minimum and maximum interval based on clinic which patients will complete the baseline health assessments
Does your health now limit you in doing strenuous activities such as backpacking, skiing, playing tennis, bicycling or jogging?

<table>
<thead>
<tr>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
</tr>
<tr>
<td>Very little</td>
</tr>
<tr>
<td>Somewhat</td>
</tr>
<tr>
<td>Quite a lot</td>
</tr>
<tr>
<td>Cannot do</td>
</tr>
</tbody>
</table>
Data Accessible in Epic

***Data also in flowsheets, can be graphed, used in synopsis, pulled into your note
Timeline

FY Goal - 330k
Phase II - Research and Analysis
Possible Research Topics

• Instrument Comparison
  – Ex: Edinburgh Postnatal Depression Scale vs PROMIS Depression

• Cost Benefit Analysis

• Use of Predictive Analytics to Tailor Treatment Plan

• Population Management by Demographic

• Validation of Translated Instruments
Data Analysis- Demo Data Only

• Ability to compare patients' progress compared to historical trends
• Transparency of communication with patient to pick correct treatment for their lifestyle
Phase III- Strategic Initiatives and Population Management
Strategic Initiatives / Population Management

• Treatment determination based upon outcome for demographic
  – Outcome accomplished with minimal intervention
  – Use of Predictive Analytics to Tailor Treatment Plan

• Cost Benefit Analysis; Treatments with similar outcomes but varying costs

• Allow for more bundled payments