Implementation of PROMIS® Data Collection in a Private Orthopedic Surgery Practice

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PROMIS® (Patient-Reported Outcomes Measurement Information System) is a set of person-centered measures that evaluate and monitor physical, mental, and social health in adults and children. It can be used with the general population and with individuals living with chronic conditions.

- Dept HHS - NIH program
- Validated
- Multiple Domains
- Computer Adaptive
- Patient Reported

How did we get here?

2013 AFOAS Study

2013-14 AOFAS Multi-center Study

- Road-blocks
  - Regulatory
  - Questionnaire administration
  - Data retrieval

CONCLUSION: Not a feasible model in a busy private practice
2013 2015
AFOAS Study  Pilot Study

2015 Launch of Pilot Study

Pilot Study - Methods

- Tablet based
  - No PHI is collected
  - Scores are immediately available
- Administered to every patient
  - No disruption to clinic work flow
- Store data in patient’s (EHR) chart
  - Individual’s privacy is protected (HIPAA compliant)
- Compliance
  - No IRB requirement to collect or retrieve (de-identified) data

Tablet Program
Results

- March - December 2015
- 2 surgeons
- 1688 PROMIS / 6226 patient visits
- Age 53±16 (7-102) years
- Pain intensity
- Pain interference
- Physical function
- Global physical health
- Global mental health

Time required

There is a significant effect of age on time to complete the CAT, taking an additional 10.5 seconds per decade (*p*<0.05)

Capture Rate

The proportion of patients who complete the PROMIS questionnaires is related to the number of tablets available for use (*p*<0.05).
PROMIS Scores for an Orthopedic Cohort

<table>
<thead>
<tr>
<th>MEAN</th>
<th>SD</th>
<th>EFFECT OF AGE ON SCORE</th>
<th># SUBJECTS NEEDED</th>
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<td>50</td>
<td>10</td>
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<td>47.8*</td>
<td>8.6</td>
<td>0.3</td>
<td>13</td>
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<td>57.8*</td>
<td>8.8</td>
<td>0.3</td>
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<td>9.0</td>
<td>-0.6</td>
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<td>8.9</td>
<td>-0.9</td>
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</tbody>
</table>

*Mean different from expected mean of 50 (p<0.05).

Pain Intensity

- Non-surgical patients
- Surgical patients

Conservative care results in pain improvement (p<0.05)

Surgery results in pain improvement (p<0.05)

Final pre-op visit different from final non-op visit (p<0.05)

Pain Interference

- Non-surgical patients
- Surgical patients

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Summary

- PROMIS tablet based implementation
  - High return rate
  - Minimal resource requirement
  - Minimal imposition on clinic flow

- PROMIS computer adaptive tests
  - Effective measurement tool across multiple domains
  - Allow for clinical studies with acceptable sample size
  - Demonstrate our value

Thank You

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