Collection and Use of Patient Reported Outcome (PRO) Measures in Vascular Surgery

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DISCLOSURES

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• No relevant financial relationship reported
Model for Measuring Quality of Care in Surgery
Patient Experience = Reimbursement†

† CMS. Hospital inpatient value-based purchasing program. Fed Regist. 2011;76(88):26490-26547
Patient-Reported Outcomes (PRO)

• What are PROs?
  • “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.”
    - U.S. FOOD AND DRUG ADMINISTRATION, Federal Register 2009;74(35):65132-133

• How do we measure PROs?
  • Traditional forms or questionnaires
  • “Legacy” scales (e.g. SF-36)
## Commonly Used PRO Tools for PAD

<table>
<thead>
<tr>
<th>Tool</th>
<th>Year</th>
<th># Items</th>
<th># Domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>VascuQoL</td>
<td>2001</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>VascuQoL-6</td>
<td>2014</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>PAQ</td>
<td>2004</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>WIQ</td>
<td>1990</td>
<td>22</td>
<td>4</td>
</tr>
<tr>
<td>CLAU-S</td>
<td>1995</td>
<td>47</td>
<td>5</td>
</tr>
<tr>
<td>PAVK-86</td>
<td>1995</td>
<td>86</td>
<td>7</td>
</tr>
<tr>
<td>SIP\text{Ic}</td>
<td>1975</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>ICQ</td>
<td>2002</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>FLeQKI</td>
<td>2007</td>
<td>35</td>
<td>7</td>
</tr>
<tr>
<td>WHO/Rose Questionnaire</td>
<td>1962</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Edinburgh Claudication Questionnaire</td>
<td>1992</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

How Do We Make PRO Assessment Vascular Surgeon Friendly?
How Do We Make PRO Assessment Vascular Surgeon Friendly?

PROMIS®

Computerized Adaptive Testing (CAT)

HIT / EHR Automation
Patient Reported Outcomes Measurement Information System

• Online Repository of validated instruments to measure patient’s assessment of physical, social and mental health across a range of different disease conditions

• Developed and validated with NIH Funding - publicly available

http://www.healthmeasures.net/explore-measurement-systems/promis
## Available PROMIS Measures

<table>
<thead>
<tr>
<th>Domains</th>
<th>Topic</th>
<th># of Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Health</td>
<td>Overall evaluation of mental &amp; physical health</td>
<td>3</td>
</tr>
<tr>
<td>Mental Health</td>
<td>Alcohol Use</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Cognitive Function</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Emotional Distress</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Psychosocial Illness Impact</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Self Efficacy</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Smoking Behavior</td>
<td>6</td>
</tr>
<tr>
<td>Physical Health</td>
<td>Dyspnea</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Cancer Fatigue</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Gastrointestinal</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Pain</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Physical Function</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Sexual Function &amp; Satisfaction</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Sleep</td>
<td>2</td>
</tr>
<tr>
<td>Social Health</td>
<td>Companionship</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Emotional Support</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Informational &amp; Instrumental Support</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Satisfaction with Social Roles &amp; Activities</td>
<td>4</td>
</tr>
</tbody>
</table>
Why Use PROMIS?

1. **Comparability**—measures are standardized so there are common domains and metrics across conditions, allowing for comparisons across domains and diseases.

2. **Reliability & Validity**—all metrics for each domain have been rigorously reviewed and tested.

3. **Inclusiveness**—PROMIS encompasses all patients, regardless of literacy, language, or physical function.

4. **Flexibility & Efficiency**—PROMIS can be administered in a variety of ways, including short forms and using computerized adaptive testing (CAT).
Computerized adaptive testing (CAT)

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

• Limits questions to only those that are relevant

• CAT shortens time to complete a survey > 50%
  • For example, with just 4 to 8 questions you can get the same precision of an instrument using 50 questions.
How Does This All Work in the Workflow of a Vascular Surgery Practice?
Health Information Technology
Because of your hip, how much difficulty do you have with the following?

Low-impact activities like fast walking

- No difficulty at all
- Slight difficulty
- Moderate difficulty
- Extreme difficulty
- Unable to do
Data Accessed within the patient’s EHR (Epic®)

***Data can be graphed, used in synopsis, and pulled into your clinic note***
Vascular Surgery MeVAL Program

- Launched January 2016
- Completed assessments- **1,894**
- Unique Patients- **1,569**
- PRO Measures Assessed
  1. PROMIS General Health
  2. PROMIS Depression
  3. PROMIS Physical Function
  4. PROMIS Social Activities
  5. Frail Non-Disabled [FiND] instrument

![Vascular MeVAL Patient Assessment Status](image)

- Completed In Clinic: 58%
- Completed at Home: 27%
- Refused: 13%
- Not Completed: 2%

PACIFIC NORTHWEST ENDOVASCULAR CONFERENCE
10th ANNIVERSARY
PNEC-SEATTLE.ORG
<table>
<thead>
<tr>
<th>Instrument</th>
<th>Median Time to Complete (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UUHC Intro</td>
<td>0.31 min</td>
</tr>
<tr>
<td>Current Health VAS</td>
<td>0.38 min</td>
</tr>
<tr>
<td>General Health</td>
<td>0.20 min</td>
</tr>
<tr>
<td>PROMIS v1.0 - Depression</td>
<td>0.66 min</td>
</tr>
<tr>
<td>PROMIS v1.2 – Physical Function</td>
<td>0.88 min</td>
</tr>
<tr>
<td>FiND</td>
<td>0.90 min</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.35 min</strong></td>
</tr>
</tbody>
</table>
PROMIS Assessment Scores for [Patient Name]

MAX SCORE

Assessment Date

- 1/5/2016
- 2/9/2016
- 3/23/2016
- 5/5/2016
- 5/10/2016
- 6/13/2016
- 9/27/2016

Legend:
- Current Health VAS
- FiND
- General Health
- PROMIS Bank v1.0 - Depression
- PROMIS Bank v1.2 - Physical Function
PROMIS Assessment Scores for

- MAX SCORE

Assessment Date

- Current Health VAS
- FiND
- General Health
- OMIS Bank v1.0 - Depression
- PROMIS Bank v1.2 - Physical Function

LE Bypass Surgery

Clinic Visit
Summary

• PRO assessment is another important metric for assessing quality of care in vascular surgery.

• Numerous advances in PRO assessment over the past decade have allowed it to become quick, reliable, automated, and most-important.... surgeon friendly.

• PRO assessment can be customized for your specific EHR and clinical setting
Thank You

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