Bringing the Clinical Potential of PROMS to Patients Receiving Orthopedic Care

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Among 155 conditions, diabetes had the highest healthcare spending in 2013 ($101.4 billion), Ischemic heart disease was the second-highest, ($88.1 billion), and \textit{low back and neck pain accounted for the third-highest amount}, with estimated healthcare spending of $87.6 billion.

Spending on low back and neck pain and on diabetes increased the most over the 18 years, by an estimated \$57.2 billion and \$64.4 billion, respectively.

Percentage of visits for acute or acute-on-chronic low back pain (NAMCS and NHAMCS surveys)


Potential of PROMs and Orthopedic Care

• High utilization of low-value care
• Mismatch between patients expectations and care provided
• Suboptimal outcomes
Potential of PROMs and Orthopedic Care

• Aggregate PROM data
  • Evaluate system performance and quality initiatives

• Individual patient PROM data
  • Enhance communication between patients and clinicians
    • Incorporating PROMs into shared decision making to ensure outcomes that matter to patients are accounted for in clinical decisions.
  • Facilitate patient engagement, empower patients to be more involved in their care.
  • Detect patient problems
ACCESS

- 4 Hospitals
- 11 Community Clinics
- 15 Regional Partners
- 10% of the Continental U.S.
- 1,380 Physicians

1.7 MILLION Patient Visits

$3.5 BILLION Expense Budget

50% GROWTH IN 4 YEARS
Vision for PROMs at University of Utah

• Lead the country in systemic collection of PROMs across patients (inpatient & outpatient)

• Lead the country in using the PROM data to improve healthcare
  • Integrate PROM data into value-based care analyses
  • Use PROM data to inform medical decision-making
  • Use PROM data to predict outcomes
  • Use PROM data in population health analyses
Tactics for PROM Collection at University of Utah

• Providers, office staff understand this is operations, not research

• Instruments: CATs, VAS, Simple questionnaires

• Collect only what is needed. System logic 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
Standardized Clinic Workflow

Patients check in - OSS helps register patient

OSS finds patient encounter within EPIC

QR Code generated with MRN information embedded

OSS scans QR Code with tablet

mEVAL is launched

Patient is handed tablet to complete questionnaires

After completion, patient returns tablet
Volume Trends

Completed Assessments and Registered mEVAL Patients

- Total Completed Assessments
- Total New mEVAL Patients
Person with low back pain

With or without sciatica

Exclude specific causes of low back pain, for example:
- Cancer
- Infection
- Trauma
- Inflammatory disease
- Cauda equina

Referral

Imaging
Only consider imaging:
- In specialist care
- If likely to alter management

Provide self management information
- Information on nature of pain
- Encouragement to continue activities

Self management is important for all patients, even those with acute symptoms and/or sciatica

Has Any Treatment Been Attempted?
- NO
  - Consider Physical Therapy referral (See box H)
- YES

Is Patient Improving?
- NO
  - Has patient had NSAIDs, PT or exercise for at least 6 wks?
  - NO
    - Consider Medication Options (See box G)
  - YES
    - Consider Spine Specialist referral
- YES
  - Continue Treatment; emphasize self-management

Follow-Up in 4-6 weeks
Limiting Low-Value Care for Back Pain

3,854 Unique patients with new consult for LBP in UU Health

951 Had PT and/or PMR visit within 180 days

485 (51.0%) PT was first
466 (49.0%) PMR was first

13.6% proceeded to have PMR visit
51.9% proceeded to have PT visit

22.3% Ad. Imaging
9.3% Injections
1.7% Surgery

40.3% Ad. Imaging
32.0% Injections
7.5% Surgery
Patient with LBP scheduling a new specialist consultation

Will patient’s insurance reimburse PT prior to MD visit?

- YES
  - Does patient want to schedule with PT?
    - YES: Schedule PT Visit
    - NO: Schedule Specialist Visit

- NO: Schedule Specialist Visit
Radiographs MRI/CT Injection Surgeon Consult Surgery

- Radiographs: 23.5% PT First, 65.9% Specialist First
- MRI/CT: 7.8% PT First, 26.1% Specialist First
- Injection: 8.7% PT First, 25.9% Specialist First
- Surgeon Consult: 3.5% PT First, 9.7% Specialist First
- Surgery: 2.6% PT First, 2.2% Specialist First
PROMIS PF-CAT scores

PT First
PT After PMR
No PT
Your score 41

Try PT first

PT after seeing MD

U.S. average for people like you

"Most patients don’t embark on a health care experience with a thorough understanding of available treatment options and their anticipated health outcomes. They need tools to help them make value-based, fully informed decisions about their care."

Personalized Decision-Making with PROMs
Personalized Decision-Making with PROMs
### Activity Measure for Post-Acute Care™ (AM-PAC) “6-Clicks” Basic Mobility Short Form (6-Clicks-Mobility)

Please check the box that reflects your (the patient’s) best answer to each question.

<table>
<thead>
<tr>
<th>How much help from another person do you currently need? (If the patient hasn’t done an activity recently, how much help from another person do you think he/she would need if he/she tried?)</th>
<th>Total</th>
<th>A Lot</th>
<th>A Little</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Turning from your back to your side while in a flat bed without using bedrails?</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
</tr>
<tr>
<td>2. Moving from lying on your back to sitting on the side of a flat bed without using bedrails?</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
</tr>
<tr>
<td>3. Moving to and from a bed to a chair (including a wheelchair)?</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
</tr>
<tr>
<td>4. Standing up from a chair using your arms (e.g., wheelchair, or bedside chair)?</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
</tr>
<tr>
<td>5. To walk in hospital room?</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
</tr>
<tr>
<td>6. Climbing 3-5 steps with a railing?</td>
<td>□ 1</td>
<td>□ 2</td>
<td>□ 3</td>
<td>□ 4</td>
</tr>
</tbody>
</table>
1,797
Patients undergoing spine surgery at University of Utah Health and discharged home

Mean age: 56.9 (±14.6) years
Gender: 43.8% female
Procedure: 77.3% lumbar (40% fusion)
Length of Stay: 2.9 (±2.3) days

63 (3.5%)
30-day unplanned readmission

1,734 (96.5%)
Not readmitted

D/C AM-PAC:*
42.0 ±8.5

D/C AM-PAC:*
45.9 ±9.3

Very Low  Low  High
PROMIS PF-CAT scores
PROMIS PF-CAT scores

Pre-Surgery vs. Post-Surgery scores.
Bringing the Clinical Potential of PROMS to Patients Receiving Orthopedic Care

• Shared Decision-Making around patient-centered outcomes

• Predictive Analytics to Tailor Treatment Plan

• Outreach and monitoring beyond the clinic

“By making PROMs an integral part of clinical care, providers can use them to improve an individual patient’s care as well as in aggregate to improve care of a population”

Neil Wagle, Partners HealthCare; Brigham and Women's Hospital,