Patient Reported Outcomes:
Laying Down a Conceptual Framework

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"The common sense notion I propose is that every hospital should follow every patient it treats, long enough to determine whether or not the treatment has been successful, and then to inquire, "If not, why not?" with a view to preventing similar failures in the future."
- Ernest Amory Codman, M.D., Harvard Medical School, 1917

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Our Story (at Partners) Starts With Porter...

"The central goal in health care must be value for patients, not access, volume, convenience or cost containment".

"Health care systems need to be redesigned so that they dramatically improve patient value".

Professor Michael E. Porter
Harvard Business School

Care Redesign Overarching Goal:
Improve Value for Patients & Families

Outcomes
- Defined by patient’s condition over entire episode of care

VALUE FOR PATIENTS
- Measured for patient’s condition over entire episode of care

Cost
- Measured for patient’s condition over entire episode of care

Value for Patients over their condition = Health Outcomes - Cost of delivering outcomes

Preliminary Research Objectives

1. Establish a body of evidence and framework by which measures that matter to patients will be developed.
2. Establish implications and feasibility for collecting the data for the measures.
3. Design a pilot for the development of a patient reported outcomes system including measure development, data collection and reporting methodologies.

The pioneers of PROs

The Dartmouth Spine Center, Dartmouth-Hitchcock Medical Center, Lebanon, NH

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1. To make patient reported outcome instruments actionable for care redesign they need to include both a generic functional/mental status tool as well as disease specific patient reported measures. 
2. To ensure PROs would be used to improve care on both a patient specific level and on a population level, a response rate of >60-70% needs to be achieved. 
3. A multi-modal electronic data capture approach should be utilized that would allow for near real-time reporting. This will help achieve a high patient response rate. 
4. Providers need to be able to act proactively on trends of PROM data so eventually data needs to be integrated into the electronic records.

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Key Conclusions (2)

5. Patients should have access to patient reported outcome data (through patient portals) so that they feel they are getting value for reporting. This would also improve compliance and contribute to patient activation. 
6. Patient reported outcome data, integrated with other value metrics, should play an important role in evaluating and comparing treatment modalities and services both within the organization and for benchmarking outside.

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**One report for patient and provider**

Individual Patient Report:

- Description of score category
- Time trends
- Current score
- Decision aids

**The Vision:**
How will PROMs support Care Redesign?

PROMs support health care value comprehensively through the following stakeholders...

- **Patients**
  - Informed decision making and activation in care
  - Will receive care that is patient-centered outcome driven

- **Providers**
  - Better assessment of patient’s global condition
  - Ability to drive care towards patient centered outcomes with real-time feedback
  - Comparative effectiveness and efficiency analysis

- **Clinical/Quality Managers**
  - Support Care Redesign by using outcomes that matter to patients

**Partners Patient Reported Outcomes Program**

- Constitutes a pioneering attempt by a healthcare system to implement an operational PRO system "pursuing the goal of collecting PROMs from every patient for every diagnosis at every location", including:
  - Collecting PRO data through a multi-modal approach
  - Reporting PRO measures to providers and patients
  - Using PRO data as quality metrics on a physician, clinic, hospital and system level

- Launched in early 2012 with two conditions:
  - CABG (a surgical procedure, many times symptoms driven)
  - Diabetes (chronic, primary care focus)

**PRO Program at Partners: Current Status**

<table>
<thead>
<tr>
<th>Conditions/setting</th>
<th>In service</th>
<th>In development</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Primary care</td>
<td>Vascular surgery</td>
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<tr>
<td></td>
<td>Cardiac surgery</td>
<td>Stroke (inpatient)</td>
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<td></td>
<td>Interventional cardiology</td>
<td>Rheumatology</td>
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<td></td>
<td>Cardiac rehabilitation</td>
<td>Pulmonology (COPD, asthma)</td>
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<tr>
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<td>Orthopedics (lower and upper limbs)</td>
<td>Psychiatry</td>
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<td></td>
<td>Urology</td>
<td>Radiation oncology</td>
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<td></td>
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<td>Orthopedics - spine</td>
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Currently at a rate of 700 PROs collected per week, likely increasing to 1000 by year end.

**The Challenges**

- Getting patients to report
- Getting clinicians buy-in so that they use the data
- Successfully bringing about an organizational PROMs paradigm shift

**PRO Conceptual Framework for Implementation (2.0)**

- Clinical leadership buy-in
  - Define target population
  - Identify champions
  - Provide continuous usability data
  - PRO measures
  - Enhance value to patients / clinicians
  - Population health
  - Benchmark within and externally

- Development phase
  - Tool design
  - Resolve clinic specific work flows
  - IT implementation

- Pilot phase
  - Identify champions
  - Clinical decision pathways
  - Alert thresholds and mechanism

- System wide roll-out
  - PRO measures
  - Population health
  - Benchmark within and externally

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- Identify “real” incentive for clinicians
- Discuss in staff meetings
- Develop case studies and gradually build physician buy-in
- Bring about a PRO paradigm shift

Our approach:

- Providing PROs data across the continuum
- Real time administrative reports
- Discussion with clinicians and PRO dashboards for patients
What’s the “Incentive” for clinicians?

- Improving patient care
  Although strong evidence for that is still lacking
- A solution to a regulation
  Regulation emerging but variable between countries
- A desire to demonstrate my/our value
  Either for reputation or market share
- Research purposes
  Specifically comparative-effectiveness

Information Technology

- Infrastructure
  Kiosks vs. tablets (not just for PROMs), Wi-Fi coverage
- EMR compatibility
  PRO enabled EMR, compatible systems
- Identifying target patients
  Link to scheduling system, patient identification
- Following up patients
  Mobile health apps, patient portal

Building PRO surveys administration into clinic workflows

Building PRO surveys administration into clinic workflows

How Else Can We Use PROMs?

PROMs

PATIENTS

- Public reporting
- Patient activation: shared decision making, Goal oriented patient care
- "How is your health?" report card
- Virtual communities

PROVIDERS

- PROMs oriented Care Redesign
- Comparative effectiveness / efficiency
- Patient generated electronic data
- Clinical research
PROs Collaborations

Patient Reported Outcomes Measures Collaborative

- Cleveland Clinic (Cleveland, OH)
- Partners Healthcare System (Boston, MA)
- Allina Health (Minneapolis, MN)
- Sheba Medical Center (Israel)

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