USING PATIENT REPORTED OUTCOMES: PERSPECTIVES FROM THE AMERICAN COLLEGE OF SURGEONS

Clifford Ko, MD, MS, MSHS
Director, Division of Research and Optimal Patient Care
American College of Surgeons
Professor and Vice Chair
UCLA Department of Surgery
cko@facs.org
Mission: Dedicated to improving the care of the surgical patient and to safeguarding standards of care in an optimal and ethical practice environment

ACS Facts:
• 100 year history
• 80,000 ACS members
• Main ACS initiatives: education and quality
• “House of Surgery”
NATIONAL CENTER FOR HEALTH STATISTICS (2009)

- 48 million surgical inpatient procedures were performed in the United States.
- Outpatient/Ambulatory: 50+ million
- Cardiovascular system surgeries: 7.3 million
- Digestive system surgeries: 6.1 million
- Musculoskeletal system surgeries: 5.2 million
- Integumentary (skin) system surgeries: 1.4 million
- Respiratory system surgeries: 1.3 million
- Urinary system surgeries: 1.1 million
- Nervous system surgeries: 1.2 million
- Eye surgeries: 69,000
- Nose, mouth, and pharynx surgeries: 289,000
- Ear surgeries: 24,000
The Quality and Safety Programs of the American College of Surgeons

1913 1922 1950 2004 2017

- Cancer
- Trauma
- Outcomes (adult)
- Outcomes (peds)
- Surgeon Registry
- Breast Care
- Trauma Registry
- Bariatric Surgery
- Pediatric Surgery

- Commission on Cancer
- Trauma Registry
- Cancer Registry
- NSQIP
- Surgeon Specific Registry
ACS QUALITY PROGRAMS (MANY DIFFERENT TYPES OF ENVIRONMENTS)
WHY PRO/PROM/PRO-PM?

IMPACT
WHY PRO?

- Better outcomes
- Better care
- Look better
- Investigative
- Accountability/Regulatory
- (F) All the above

Which stakeholder perspective are we talking?
Achieving Quality

1. Right Infrastructure
   - Staffing/Specialists
   - Staffing levels/Organization
   - Systems/Policies
   - Equipment

2. Standardized Processes
   - Produces reliability
   - Backed by evidence
   - Pre, Intra, Postop
   - Checklists, Protocols, SOP

3. Rigorous Data
   - Processes and outcomes
   - From records, patients
   - Clinically meaningful
   - Appropriate analytics

4. Verification (i.e., verify standards of infrastructure, processes and data are met
   - On-site
   - External peer-review
   - Creates public assurance
The ACS Data Platform Project
2016-2019

- EHR Data
- Manual
- PROs
- Financial
- Claims

ACS Registry

- NSQIP
- NSQIP Peds
- NCDB
- TQIP
- MBSAQIP
- SSR

- Reports
- Dashboards
- Alerts
Low Outliers (Better than Expected)

High Outliers (Needs Improvement)
118 Institutions Present 2006-2007

Results- Change in O/E

<table>
<thead>
<tr>
<th>Complication</th>
<th>Mean Change in O/E</th>
<th>P-value (mean not zero)</th>
<th>Volume weighted mean</th>
<th>P-value (mean not zero)</th>
<th>% Institutions Improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality</td>
<td>-0.1740</td>
<td>&lt;0.0001</td>
<td>-0.1631</td>
<td>&lt;0.0001</td>
<td>66%</td>
</tr>
<tr>
<td></td>
<td>-0.1126</td>
<td>&lt;0.000001</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"Improvement" was sustained...
Achieving Quality

1. Right Infrastructure
   - Staffing/Specialists
   - Staffing levels/Organization
   - Systems/Policies
   - Equipment

2. Standardized Processes
   - Produces reliability
   - Backed by evidence
   - Pre, Intra, Postop
   - Checklists, Protocols, SOP

3. Rigorous Data
   - Processes and outcomes
   - From records, patients
   - Clinically meaningful
   - Appropriate analytics

4. Verification (i.e., verify standards of infrastructure, processes and data are met)
   - On-site
   - External peer-review
   - Creates public assurance

• PROs are one component of the data
• Data are one component of Achieving Quality
THE OPTIMAL RESOURCES FOR SURGICAL QUALITY AND SAFETY (QUALITY MANUAL)

1. Resources for Quality and Safety
2. The Five Phases of Care
3. Surgical Quality Officer
4. Case/Peer Review
5. Quality/Safety Cmtes
6. Credentialing/Privileging
7. Culture of Safety/Quality
8. High Reliability
9. Multidisciplinary Disease Management
10. External Policy/Regulatory
11. Data/Performance Measures
12. Interpreting and Using Data
13. Collaboratives
14. Practice Guidelines
15. Education/Training
16. Surgeon Responsibility
17. Disruptive Behavior
18. Mentoring/Coaching

Released July 2017
THE FIVE PHASES OF SURGICAL CARE

I. Preoperative
II. Immediate Preoperative
III. Intraoperative
IV. Postoperative
V. Post Discharge

• PROs/PROMs (Preoperative vs. Postoperative): e.g. preoperative vs. postoperative function
• PROs informing appropriate process: e.g. pain score leading to timely, appropriate pain management
• PREs/PREM (All phases potentially): e.g. patient experience with key aspects of care (example issue: aligning patient goals with surgical treatment)
THE ACS PHASES OF CARE MEASURES (PRELIMINARY): SPANS ACROSS THE CONTINUUM OF SURGICAL CARE. ALIGNS WITH PATIENT CARE. CONDUCIVE TO A COMPOSITE MEASURE GROUP.

Working with CMS to identify solutions for measurement for both MIPS and APMs.

“Core” and “Targeted” measure group
HEALTHCARE’S JOURNEY TO EXCELLENCE INCLUDES TRANSLATIONAL DISCOVERY AND RESEARCH

Diagram:

- T1: Potential Application
  - Basic Scientific Discovery → Potential Clinical Application
  - Basic Knowledge → Theoretical Knowledge

- T2: Efficacy
  - Evidence Based Guidelines
  - Efficacy Knowledge

- T3: Effectiveness
  - Clinical Care of Intervention
  - Applied Knowledge

- T4: Population-Based
  - Health of Community or Population
  - Public Health Knowledge
JUST A FEW BASIC QUESTIONS WE MIGHT TRY TO ADDRESS AS WE MOVE FORWARD...

- To what extent do PROMs impact patient outcomes (efficacy/effectiveness)?
- When using PROMs, what is the provider level variation vs. patient level attributes (attribution)?
- What sample sizes are needed? To what extent do follow up logistics play a role? (operational)
- Do people use publicly reported data to choose providers?
- Will benchmarking of providers based on PROMs/PREMs lead to improvements?
- Are PROMs sufficiently mutable for use in QI, provider evaluations, other?
- What might the best ways to use PROMs to achieve better quality?
THANK YOU!
USING PATIENT REPORTED OUTCOMES:
PERSPECTIVES FROM THE AMERICAN COLLEGE OF SURGEONS

Clifford Ko, MD, MS, MSHS
Director, Division of Research and Optimal Patient Care
American College of Surgeons
Professor and Vice Chair
UCLA Department of Surgery
cko@facs.org