

Verdibasert helsetjeneste: fra teori til virkelighet

Del II. Implementing Health Outcomes Sets: Highlights and Learnings

Dr. Christina R Åkerman

Nov 5, 2019

HelseCampus Stavanger & Norwegian Smart Care Cluster

Patient-reported outcomes can improve survival

Patient self-reporting increased survival 20%

Letters

JAMA The Journal of the American Medical Association

RESEARCH LETTER

Overall Survival Results of a Trial Assessing Patient-Reported Outcomes for Symptom Monitoring During Routine Cancer Treatment

Symptoms are common among patients receiving treatment for advanced cancers,¹ yet are undetected by clinicians up to half the time.² There is growing interest in integrating electronic patient-reported outcomes (PROs) into routine oncology practice for symptom monitoring, but evidence demonstrating clinical benefit has been limited.³

We assessed overall survival associated with electronic patient-reported symptom monitoring vs usual care based on follow-up from a randomized clinical trial.⁴

Methods | The study was approved by the Memorial Sloan Kettering institutional review board and written informed consent was obtained from participants. Consecutive patients initiating routine chemotherapy for metastatic solid tumors at Memorial Sloan Kettering Cancer Center in New York between September 2007 and January 2011 were invited to participate in a randomized clinical trial. Participants were randomly assigned either to the usual care group or to the PRO group, in which patients provided self-report of 12 common symptoms from the National Cancer Institute's Common Terminology Criteria for Adverse Events at and between visits via a web-based PRO questionnaire platform. Participation was continuous until cessation of cancer treatment, voluntary withdrawal from the trial, transition to hospice care, or death.

When the PRO group participants reported a severe or worsening symptom, an email alert was triggered to a clinical

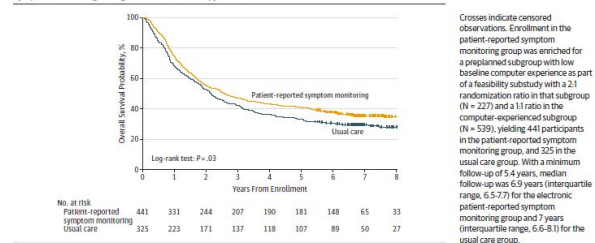
nurse responsible for the care of that patient. A report profiling each participant's symptom burden history was generated at clinic visits for the treating oncologist. The usual care group received the standard procedure for monitoring symptoms in oncology practice: symptoms were discussed during clinical encounters, and patients could contact the office by telephone between visits for concerning symptoms.

The protocol-specified primary outcome was change in health-related quality of life at 6 months compared with enrollment and was the basis of the sample size determination.⁴ Significant benefits in quality of life as well as secondary outcomes of 1-year quality-adjusted survival (mean: 8.7 months in the PRO group vs 8.0 months in the usual care group; $P = .004$), duration of chemotherapy, and emergency department use were found and previously reported.⁴ A post hoc decision to analyze overall survival was made prior to data analysis. Mortality was verified from the National Death Index. Overall survival was estimated using the Kaplan-Meier method and compared between groups using a log-rank test and Cox proportional hazards regression adjusting for age, sex, race, education level, level of prior computer use, and primary cancer type. All analyses were conducted using SAS (SAS Institute), version 9.4, and testing was 2-sided with P values less than .05 considered significant.

Results | Of 766 patients randomized, the median age was 61 years (range, 26-91), 86% were white, 58% women, 22% had less than a high school education, and 30% were computer inexperienced, as reported.⁴ Baseline variables were well balanced between study groups.

Overall survival was assessed in June 2016 after 517 of 766 participants (67%) had died, at which time the median

Figure. Overall Survival Among Patients With Metastatic Cancer Assigned to Electronic Patient-Reported Symptom Monitoring During Routine Chemotherapy vs Usual Care



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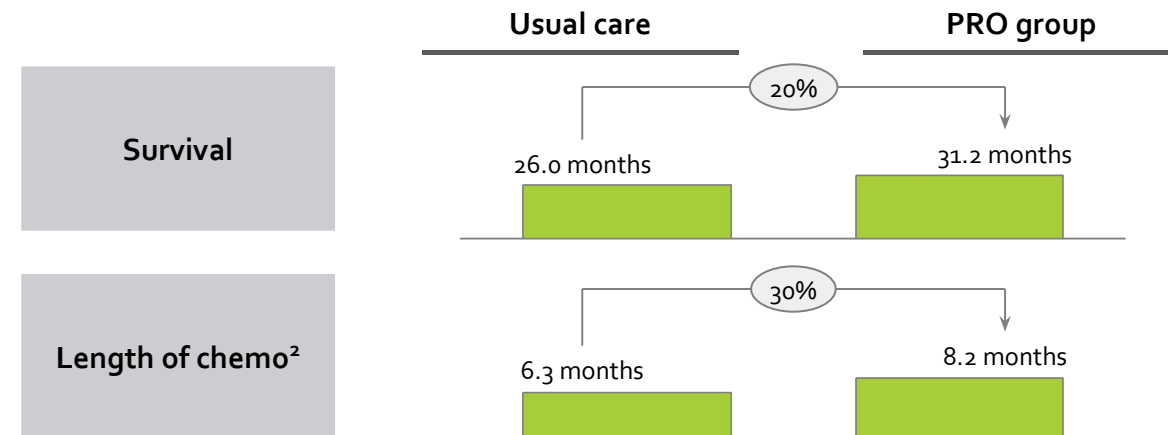
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JAMA Published online June 4, 2017

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A study at Memorial Sloan Kettering Cancer Center evaluated the impact of patient-reported outcomes, PROs, on survival rates

- 766 cancer patients on chemotherapy were randomized to either a PRO group (self-report of 12 symptoms), or to the usual care group
- When a patient reported worsening symptoms, an email alert was triggered to a clinical nurse responsible for the care of that patient
- 77% of the symptom alerts led to modified clinical interventions¹



1. Including providing symptom management counseling, supportive medications, chemotherapy dose modifications, and referrals.

2. How long patients tolerated a continuation of chemotherapy.

Note: The usual care group could discuss symptoms during visits and could make telephone calls to the office concerning symptoms

Source: Basch et al. JAMA June 4, 2017

Patient-reported outcomes are helping make patients and doctors happier



Perspective OCTOBER 5, 2017

Making Patients and Doctors Happier — The Potential of Patient-Reported Outcomes

Lisa S. Rotenstein, M.D., M.B.A., Robert S. Huckman, Ph.D., and Neil W. Wagle, M.D., M.B.A.

Measuring relevant outcomes in a timely manner is a priority in a health care system increasingly focused on the delivery of high-value care. Most quality measures focus

on care processes or downstream outcomes such as survival; until recently, there has been less emphasis on quantitative measurements of functional outcomes, symptoms, and quality of life. Measuring patient-reported outcomes (PROs) with standardized questionnaires is one way of getting this information. PRO collection has proliferated in oncology, where it has been linked to improved symptom management, enhanced quality of life, and longer survival.¹ Given these bene-

fits, payers have started to encourage providers to incorporate PRO collection into routine care. For example, the Medicare Comprehensive Care for Joint Replacement model includes financial incentives for hospitals to collect and submit PRO data for patients undergoing elective hip or knee replacement.

Several institutions have incorporated PRO collection into daily practice and have seen promising results. Dartmouth-Hitchcock Medical Center (DHMC) started

collecting PROs for clinical and research purposes in 1998. In 2009, patients at the DHMC Spine Center were surveyed, and one third of them said that incorporation of PROs led to positive changes in their visits.² DHMC patients can also use a calculator based on historical PRO data to project outcomes of surgical versus nonsurgical interventions for patients similar to them. The University of Rochester Orthopedic Surgery Department introduced a core set of PROs in 2015. Data from the more than 1.1 million PRO assessments completed thus far are now used to engage patients in shared decision making regarding therapy options, and PROs have been introduced

N ENGL J MED 377:14 NEJM.ORG OCTOBER 5, 2017
The New England Journal of Medicine
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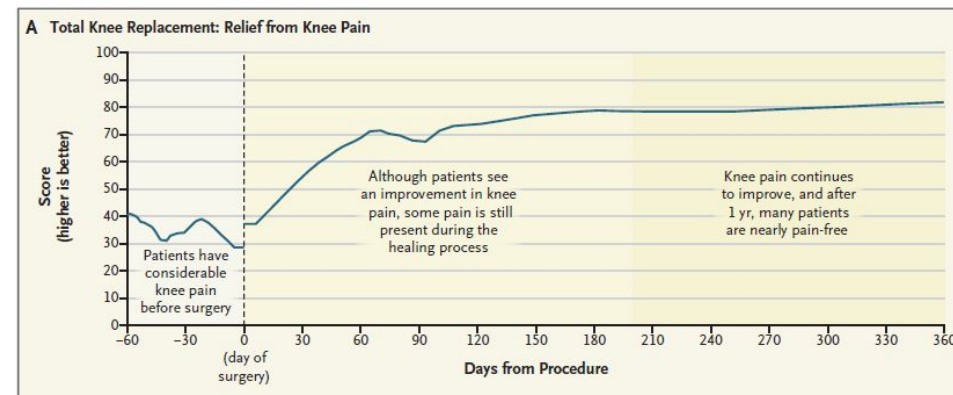
PROs improve physician satisfaction, enhance physician-patient relationships, increase efficiency and enable crucial conversations

Partners introduces PROs system-wide in 2012—>1.2M PRO scores in 75 clinics across 21 specialties collected to date

Evidence from experienced PROs users suggests PRO collection may enhance physician satisfaction and prevent burnout, for several reasons:

- Allows providers to better understand their patients—improving relationships
- Enhance shared decision making
- Enhance workflow efficiencies and save time
- Facilitate conversations that might not otherwise have taken

Example of Patient-Reported Outcomes for shared decision-making



Source: Lisa S. Rotenstein, M.D., M.B.A., Robert S. Huckman, Ph.D., and Neil W. Wagle, M.D., M.B.A.; N Engl J Med 2017; 377:1309-1312 October 5, 2017; DOI: 10.1056/NEJMp1707537; <http://www.nejm.org/doi/full/10.1056/NEJMp1707537>

Payer-provider collaboration is improving patient outcomes and lowering cost

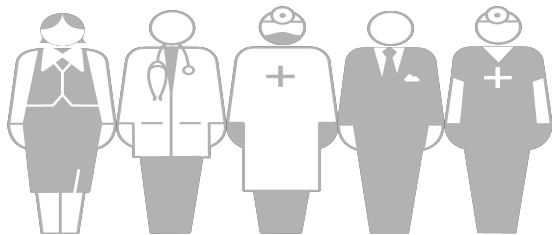
Collaborative Quality Initiatives (CQIs)

Payer funds infrastructure for data collection and analysis across 20+ conditions

Coordinating Center (Univ. of Michigan) analyzes data from clinical registries and reports back to providers

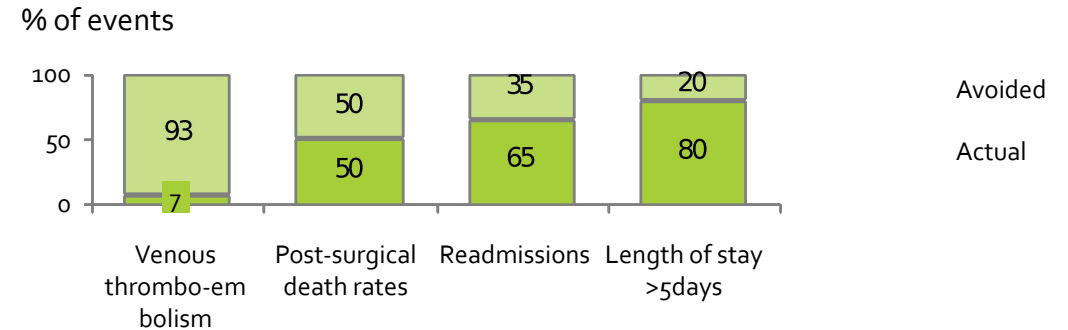
Clinician-led provider meetings encourage quality improvement through collaborative learning

Patient representatives included in discussion to ensure initiative maintains strong patient focus



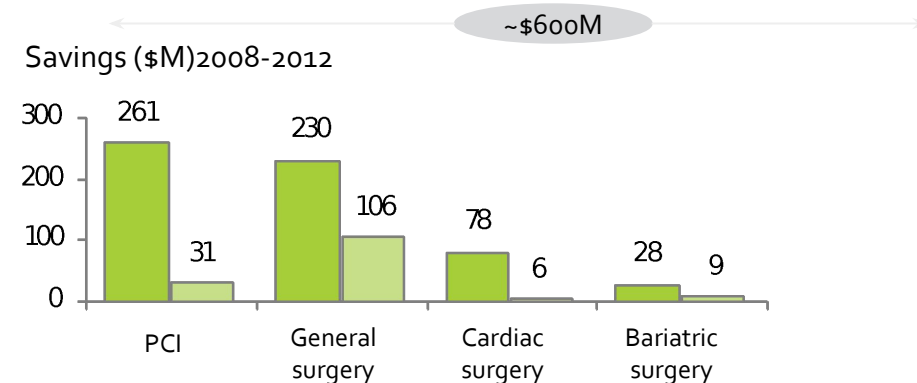
From ICHOM

Outcomes improvement



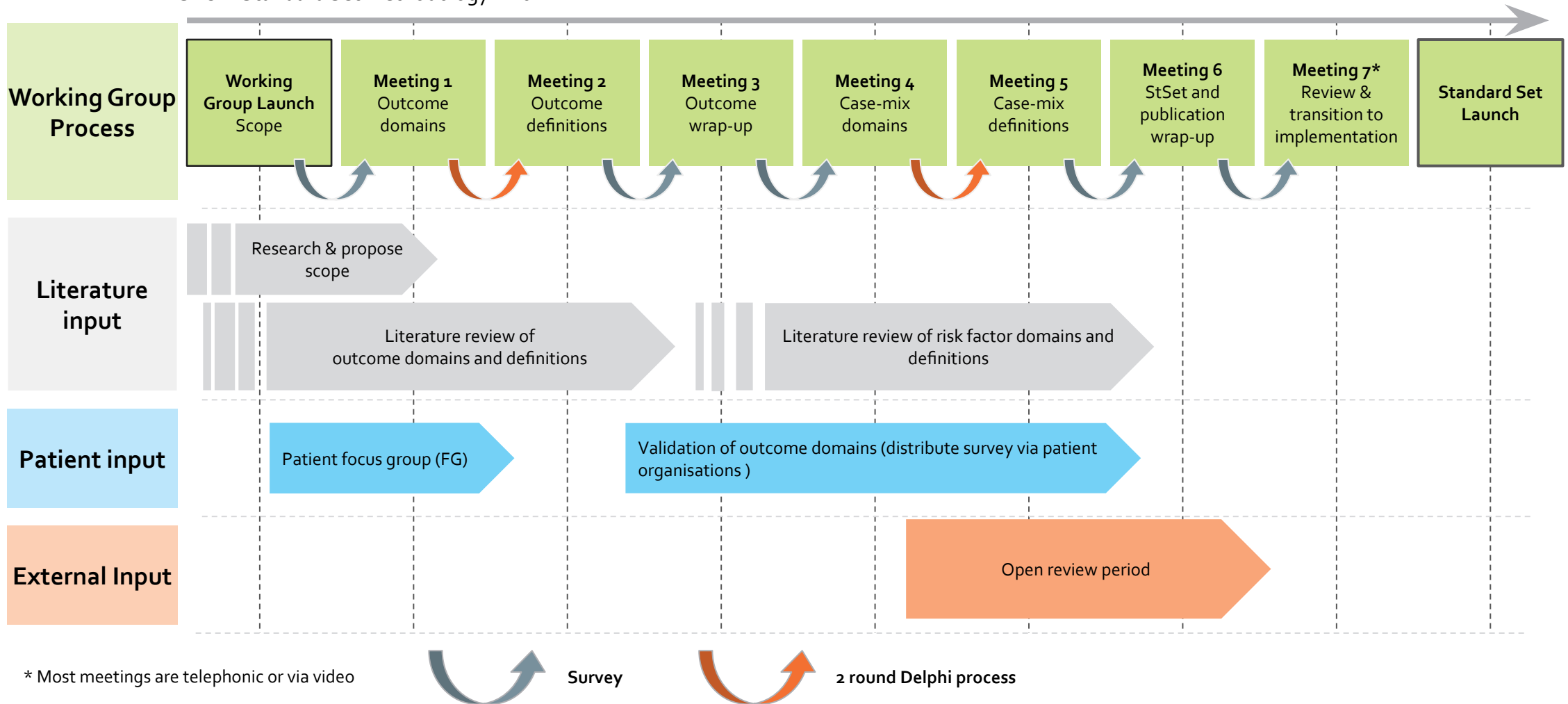
Actual vs avoided events following bariatric surgery based on % change between 2007 and 2012

Cost reduction



A Standard Set is defined through series of teleconference calls, supported by research and patient input

ICHOM Standard Set Methodology v2.0



Stanford was an innovator in outcomes measurement and early adopter of ICHOM's Low Back Pain Standard Set



Overview:

- 600 bed hospital
- 500K patient visits each year
- Primary teaching hospital for Stanford University School of Medicine

Neurological Spine clinic

- 5 doctors
- 120-150 patients per day
- Treat over 15 neurological spine disorders

- 6 clinics across Nairobi
- Launch of 6-month implementation programme on 5th December 2016 – a partnership between ICHOM, PharmAccess and Harvard Medical School
- Initial focus on measuring the ICHOM Pregnancy and Childbirth Standard Set
- Scale to other clinics and other condition areas



Key success factors for implementing outcomes measurement

Find the believers

- Focus on finding clinician champions who want to know their outcomes and want to be transparent with their colleagues.

Organize a cross-functional team with appropriate governance

- A sustainable outcomes measurement system must engage a broad range of functions within the organization.

Invest time and resources

- Engage senior leaders to build bridges across functions and commit resources that will drive long-term benefit.

Celebrate progress along the way

- Successful outcomes measurement programs take time.

Use early successes to scale and spread

- Identify and share early success stories to catalyze interest across the organization

Patientprocess

Results

- 1 Identify prioritized outcome measures
- 2 Identify causality
- 3 Prepare and implement changes

What overall outcome measures are prioritized to focus on?

What needs to change in our processes to bring about improvement?

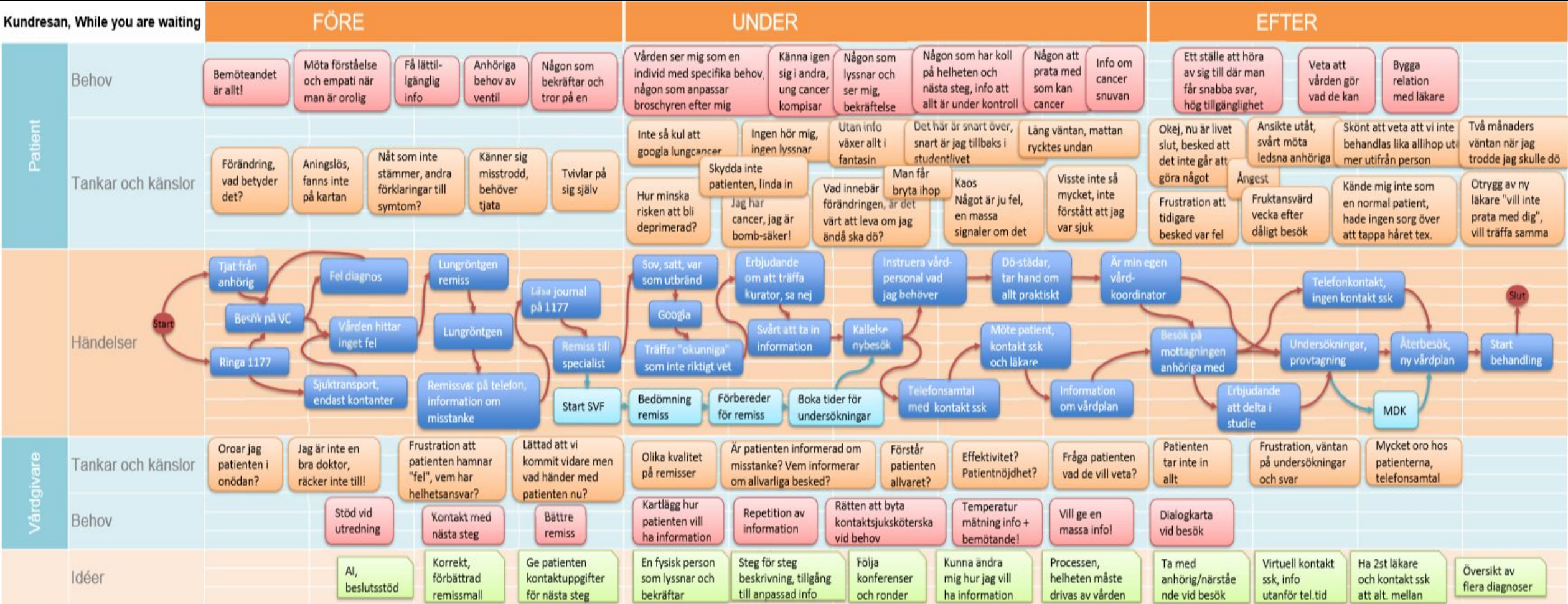
How do we drive and follow up the change work?

✓ **Better health**



AKADEMISKA
SJUKHUSET

Kundresan, While you are waiting

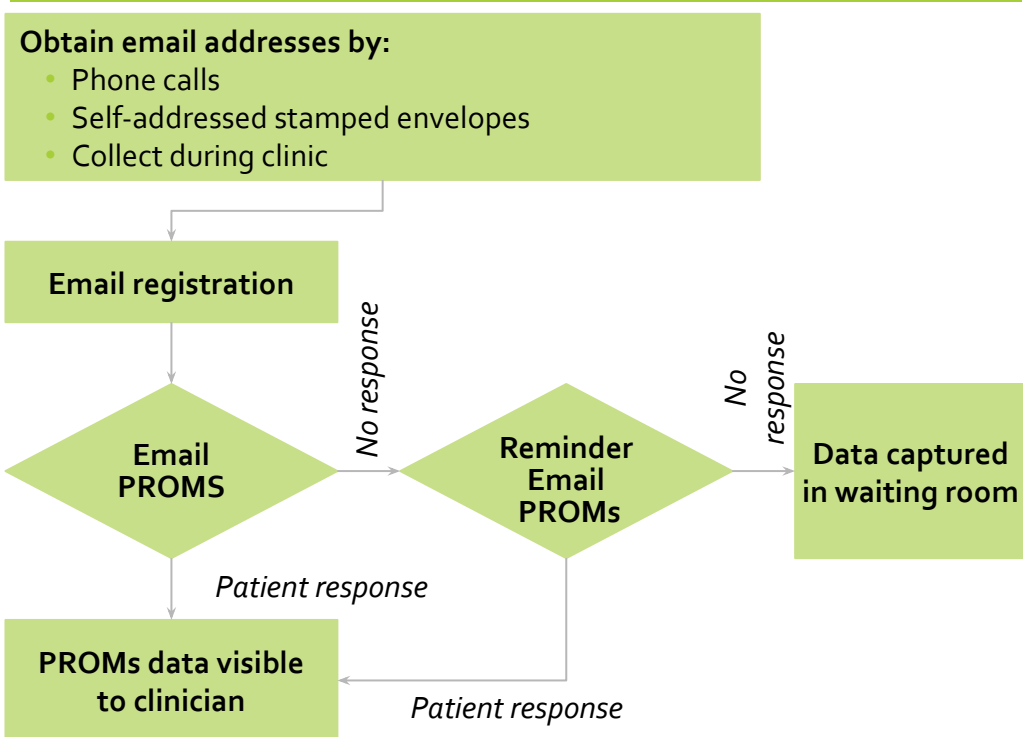


Dedicated teams and tools helped Erasmus MC achieve 90% PROMs compliance in early pilots

Impact on Outcome

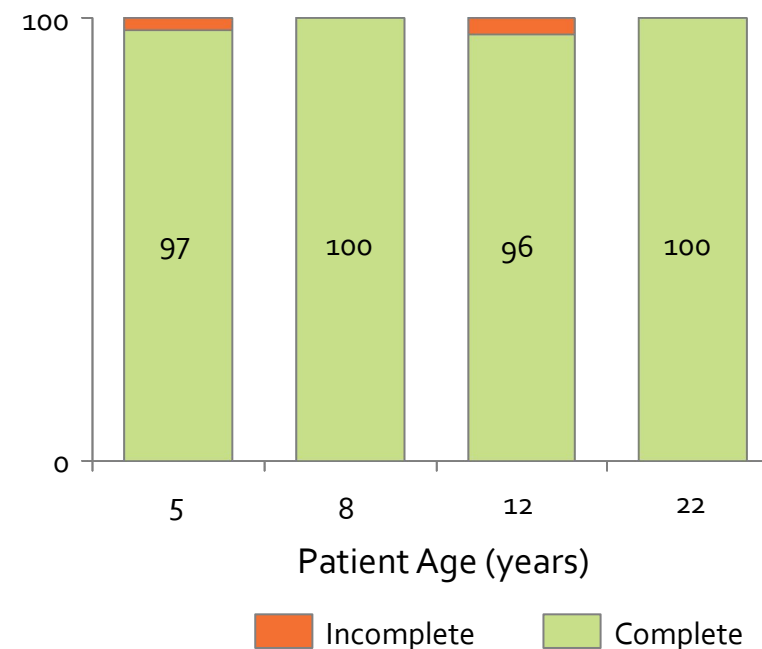
Dedicated team, fit-for-purpose data capturing tools, and changes to workflow helped achieve 90% compliance

Project team's workflow for capturing PROMs Data

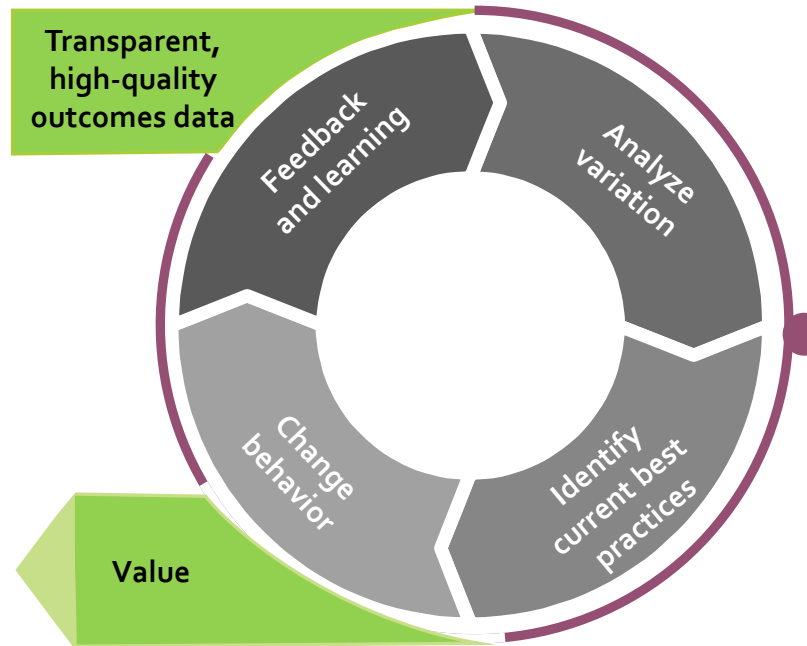


Data collection and compliance: Clinical and administrative questions

Completion (%)



Outcome measurement empowers stakeholders to generate value



Key stakeholders



- **Patients** will **choose their provider** based on expected outcomes and their share of the cost



- **Clinicians** will improve quality of care by **comparing performance** and learning from each other



- **Hospitals** will **differentiate** into areas where they deliver superior outcomes at competitive prices




- **Payers** will **negotiate contracts based** on results, not volume, and encourage innovation to achieve those results



- **Life science** will **market their products on value**, showing improved outcomes relative to costs

Patient-reported outcomes are helping improve patient care and placing the patient's voice at the forefront

PROs collected from Total Kneel Replacement patients at the University of Rochester are helping improve patient outcomes



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PERSPECTIVE

Patient-Reported Outcomes — Are They Living Up to Their Potential?

Judith F. Baumhauer, M.D., M.P.H.
N Engl J Med 2017; 377:6-9 | [July 6, 2017](#) | DOI: 10.1056/NEJMp1702978

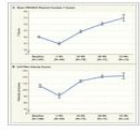
There is a growing chorus of support for measuring patient-reported outcomes in clinical care. But there are still important practical questions about how data on these outcomes should be collected, visualized, shared, and used to improve the quality of care.

[Disclosure forms](#) provided by the author are available at NEJM.org.

SOURCE INFORMATION
From the Department of Orthopedics, University of Rochester Medical Center, Rochester, NY.

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MEDIA IN THIS ARTICLE



Physical Function Assessments after Knee-Ligament Reconstruction.

The University of Rochester collects scores from 80% of Total Knee Replacement patients on three PROs domains — physical function, pain interference, and depression —helping improve patient care by:

At an individual's point of care:

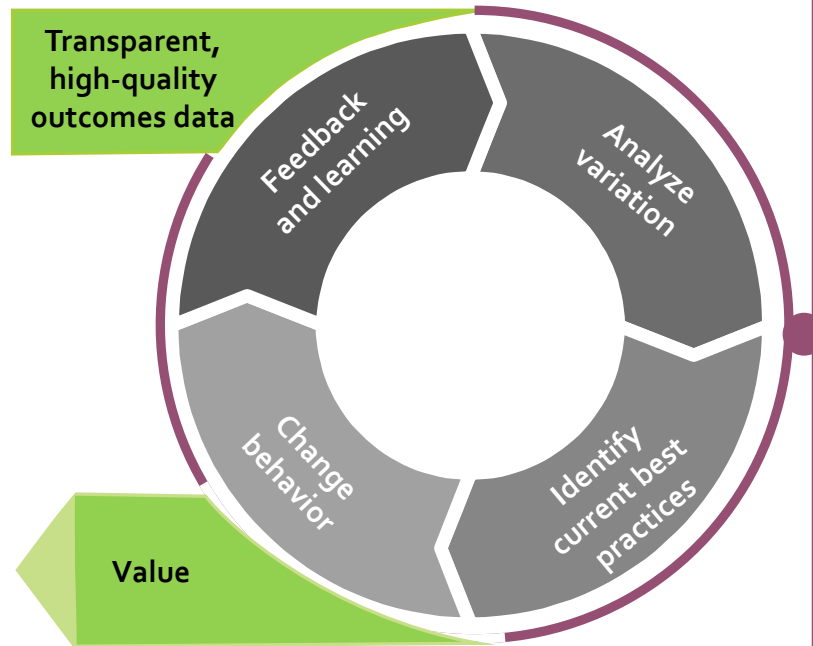
- Comparing a patient's preoperative scores with prospective population-level PRO data, can create a roadmap of recovery
- Help patients understand what to expect during recovery e.g., patients often want to know when they can return to work or participate in sports.

At an aggregate level

- Help minimize care variation e.g., compare data from different procedures for the same condition to determine which have the best outcomes
- Compare factors such as costs, risks, and time to full recovery after surgery can be compared, for procedures with similar outcomes
- Determine whether an individual surgeon's technique needs improvement or the approach should be abandoned when procedures have poor outcomes

Source: Judith F. Baumhauer, M.D., M.P.H.; N Engl J Med 2017; 377:6-9 [July 6, 2017](#) DOI: 10.1056/NEJMp1702978

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From DEPARTMENT OF LEARNING, INFORMATICS,
MANAGEMENT AND ETHICS
Karolinska Institutet, Stockholm, Sweden

MEASURING HEALTH CARE PERFORMANCE

**VARIATIONS IN CARE PROCESS, RESOURCE USE AND
OUTCOMES IN CHILDBIRTH CARE**

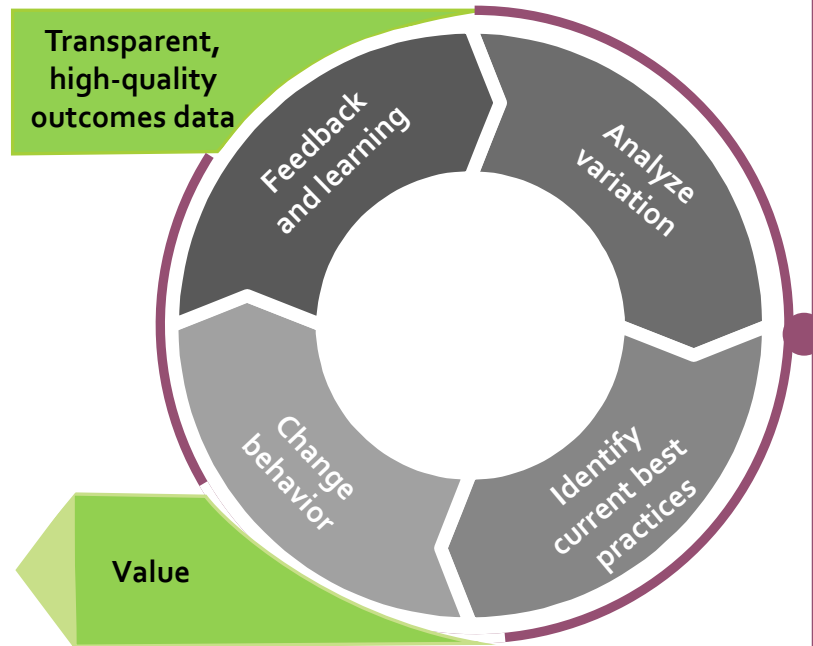
Johan Mesterton



**Karolinska
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Stockholm 2019

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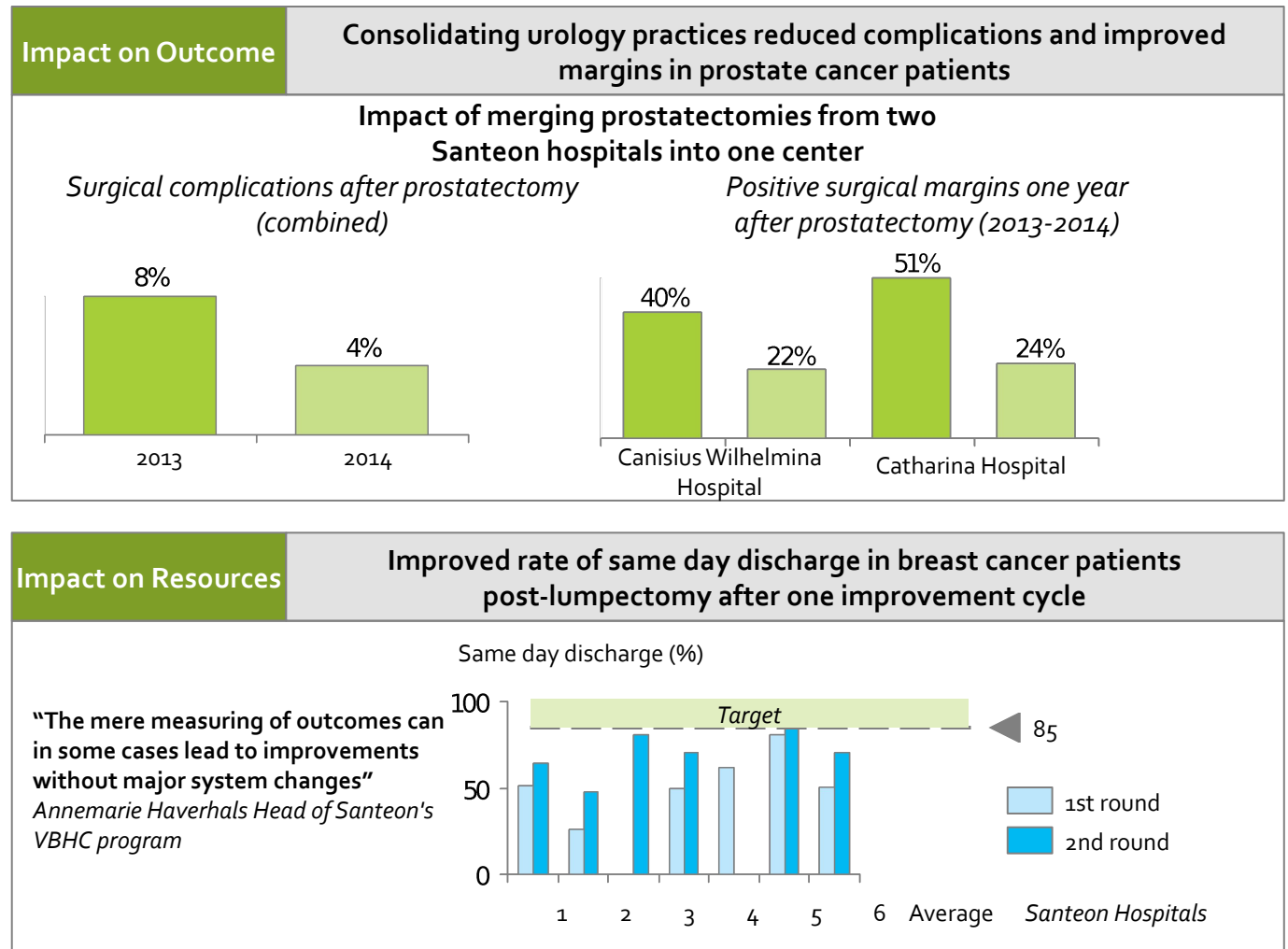


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The Santeon Hospitals

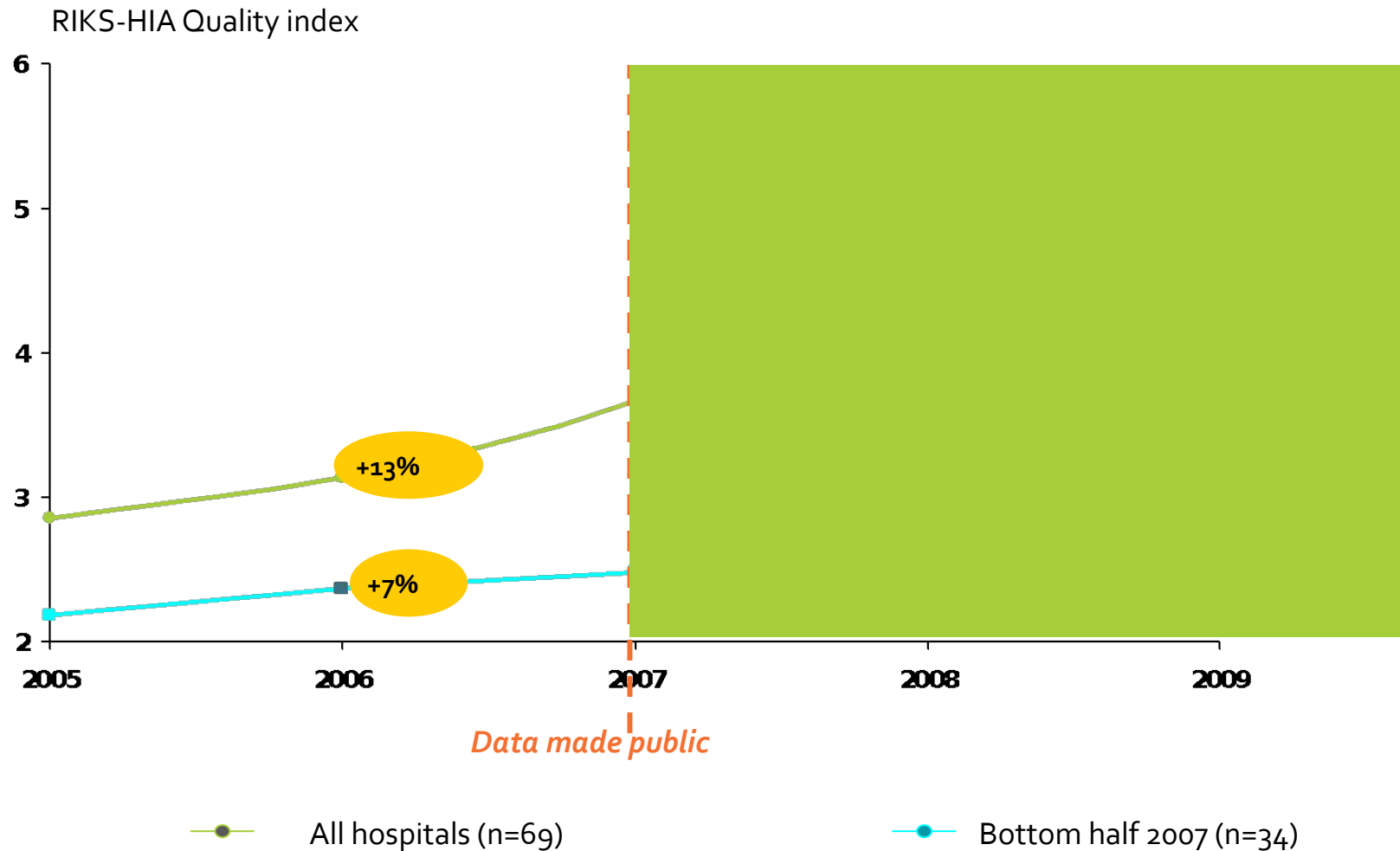
Collaborating for value

- Care for outcome
- Care for improvement

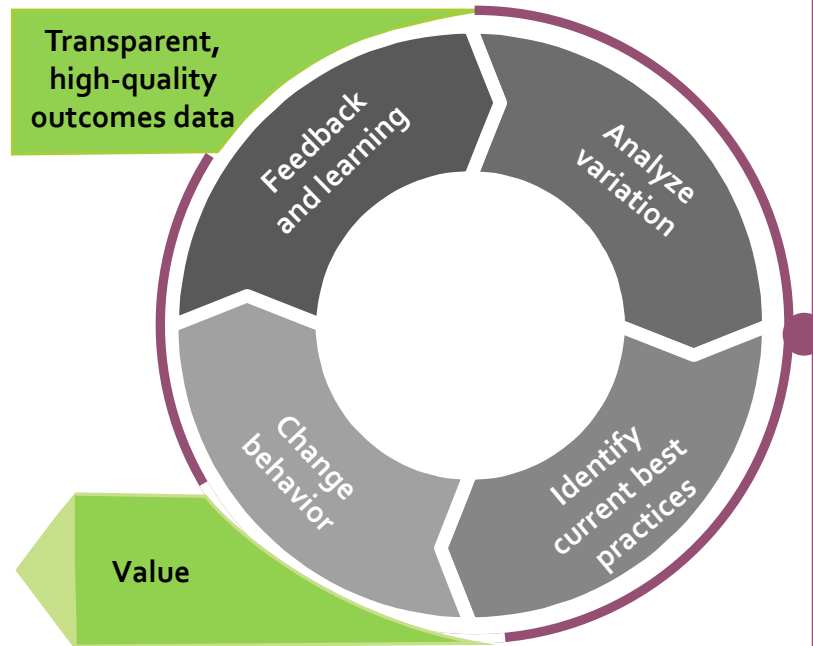


Outcomes transparency improves compliance

Example: Swedish myocardial infarction registry



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New Marketplace

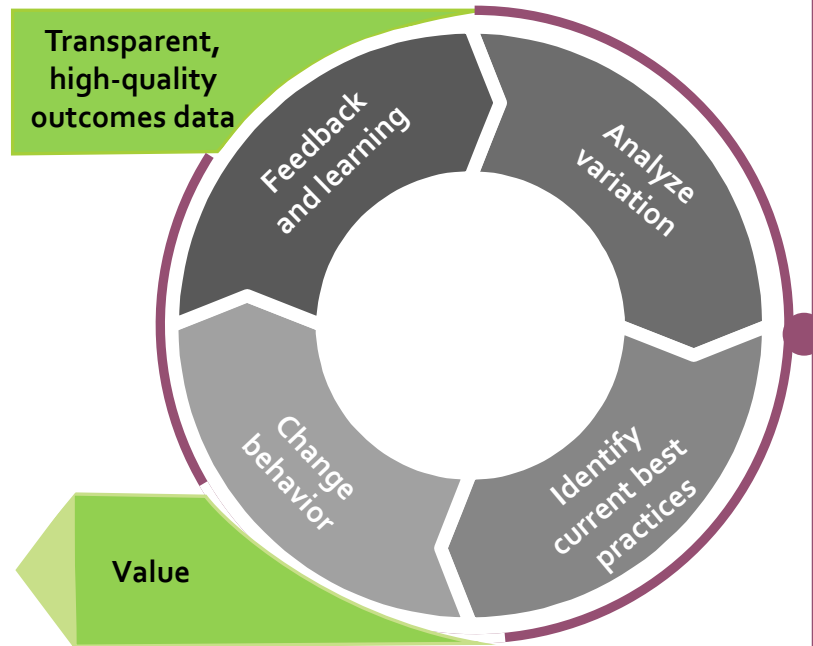
Bundled Payments Are Moving Upstream

Article • February 26, 2019

John P. Andrawis, MD, MBA, Mark
McClellan, MD, PhD & Kevin J.
Bozic, MD, MBA

Dell Medical School, The University of Texas at
Austin

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Next steps...

Pre-Commercial Procurement & Public Procurement of Innovative Solutions

- large needs to solve and limited resources to spend
- appreciate, reward and encourage innovation with the best outcome for patients and society
- improved health and well-being of patients, lowered consumption of health care and other health care related services and increased productivity

Moving forward supporting development, access and uptake

- How will patients themselves describe the outcomes associated with the innovation, from improvements in their medical condition to how it impacts their lives?
- How will you measure these outcomes?

Harvard Business School Case

Medtronic

- Therapy optimization
 - Episodic care bundles
 - Chronic care management
-
- 7-Step Value-Based Healthcare Framework™

Target areas

Cultural transformation

Informatics interoperability

Commissioning

Procurement

Education

