

Outcomes Measurement: Principles and Processes



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Goals for Today

A healthcare journey

The role of outcomes in value-based health care

The evolution of quality and outcomes measurement

The principles and process of outcome measurement

Barriers to outcome measurement

The International Consortium for Health Outcomes Measurement

A Health Care Journey



Stanford University 1978-97



The University of Texas
MD Anderson Cancer Center
1997-2017

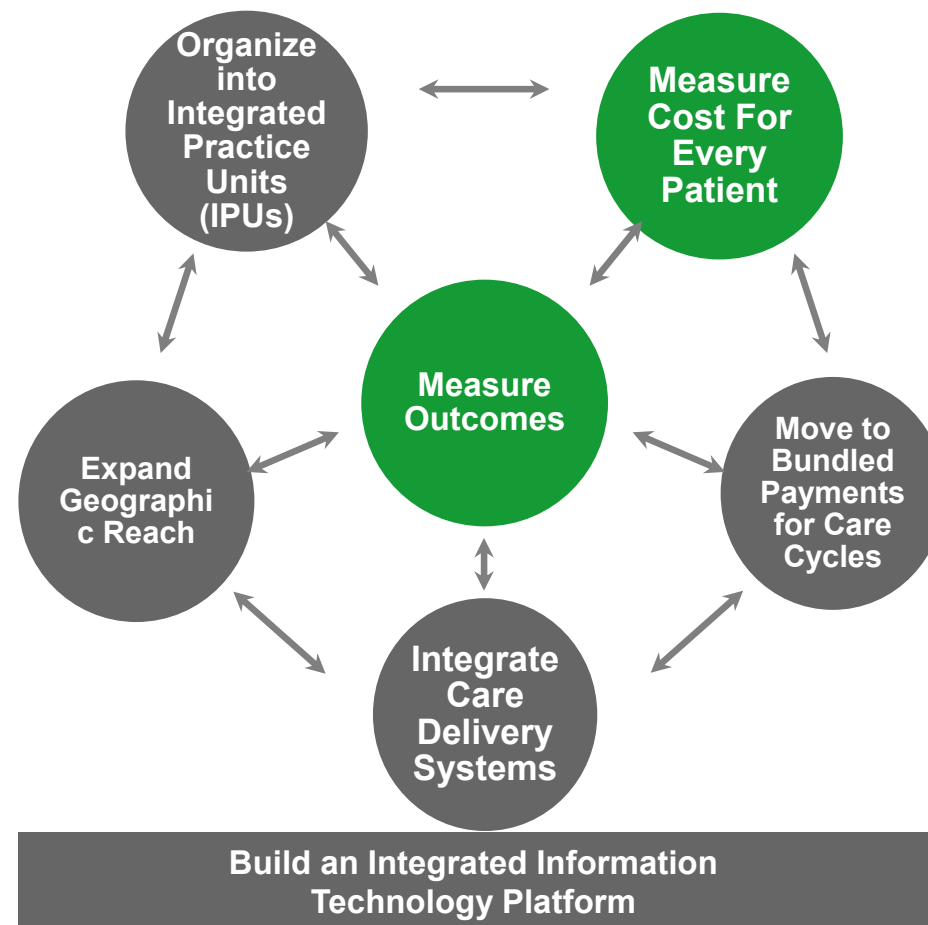


Beth Israel Hospital 1972-76



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A Mutually Reinforcing Strategic Agenda



The Importance of Outcome Measurement

Outcomes are the most important information for patients

Outcomes define success for every physician, health care organization and payer

Outcomes encourage multidisciplinary IPUs and facilitate care improvement

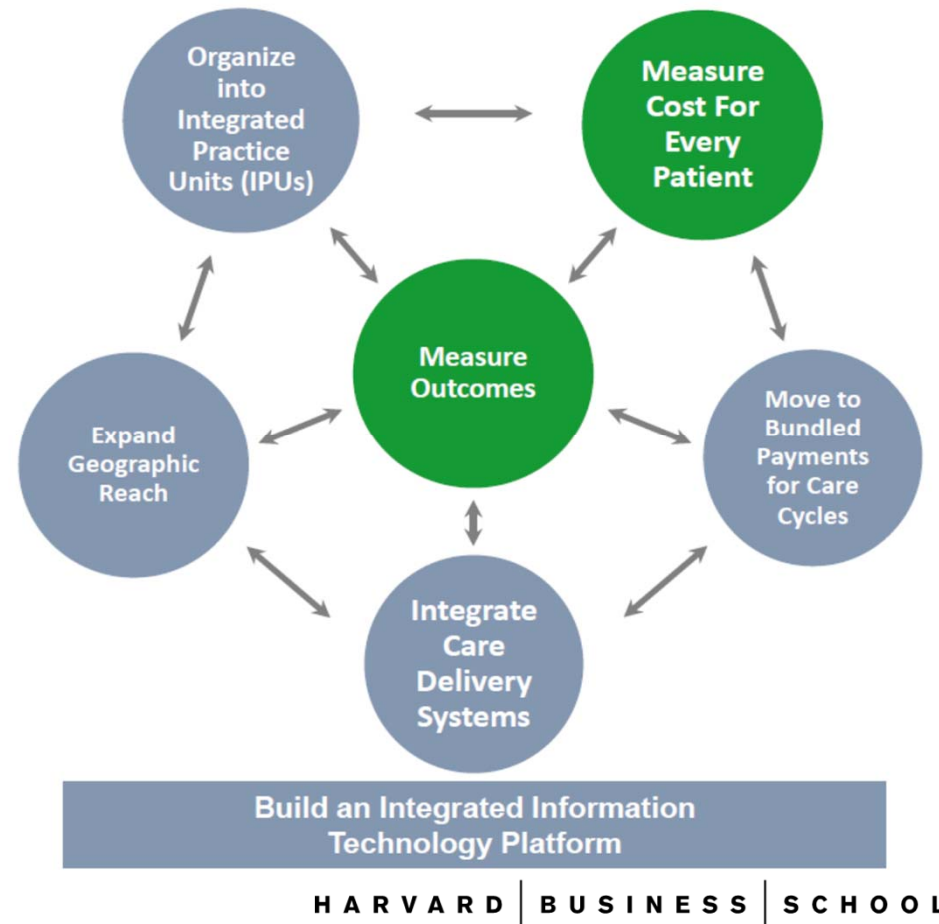
Outcomes highlight and validate value-enhancing cost reduction

Outcomes enable shifting to true value-based bundled payments

Outcomes guide the delivery of the right services at the right locations

Outcomes define areas for service line choices and areas for affiliation

Standardization of outcomes by condition unlocks comparison and improvement



Evolution of Outcomes Measurement



Emergence of Outcomes

1910s – 1940s

Ernest Codman

- Father of outcome measurement
- Tracked patients with end result cards
- Surgeons refused to participate
- Left MGH to form own hospital
- Codman's work led to the formation of The Joint Commission



Focus on Quality

1950s – 1980s

Avedis Donebedian

- Described the dimensions of health system quality as structure, process, and outcomes
- Led to widespread measurement of structure and process
- Little progress on outcome measurement
- Society of Thoracic Surgeons began cardiac surgery outcome reporting in 1989.



The Society of Thoracic Surgeons



Focus on Safety

1980s – 2000s

Ken Shine – Don Berwick

- Significant public pressure to improve after high profile never events (e.g Libby Zion)
- The Institute of Medicine released two reports – “To Err is Human” & “Crossing the Quality Chasm” – outlining new aims for care delivery that highlighted safety
- Institute for Healthcare Improvement (IHI) (1991) founded to lead the improvement of health care throughout the world



Focus on High Quality Hospitals

1990s

Avery Comerow

- U.S. News – Best Hospitals
- First prominent effort to benchmark
- Structure, process & outcomes adopted as the measurement framework
- Systematic measurement of structural indicators
- Process quality inferred from reputation surveys
- Outcomes limited to inpatient mortality



Focus on Performance Improvement

1990s

Brent James

- Healthcare looked to other industries to guide performance improvement including Six Sigma and Lean Management

Despite recognition of its importance, quality measurement was limited in 20th century healthcare

Evolution of Outcomes Measurement



Measuring Surgical Outcomes

2001

Clifford Ko

- VA program in 1990s (NVASRS) developed surgical outcome program
- Private sector added in 2001 with ACS to do validated, risk adjusted measurement benchmarked over 30 day post operative period



Introduction of the Value Agenda

2006

Michael Porter

- Outline six steps needed to achieve value
- Spearheaded significant efforts around the world to implement value-based health care



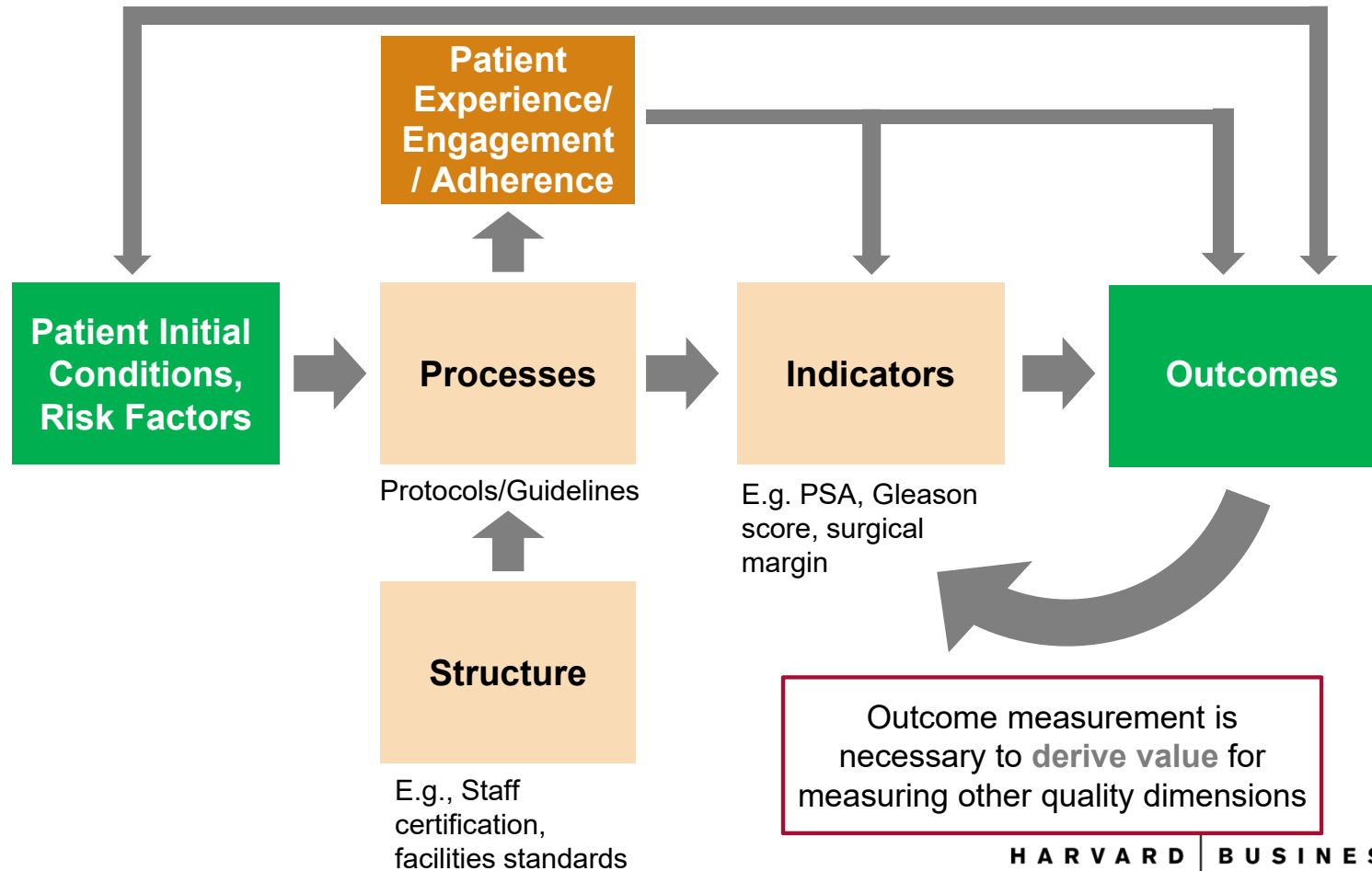
Creation of Standard Outcome Measure Sets

2011

Porter, Larsson, Ingbar

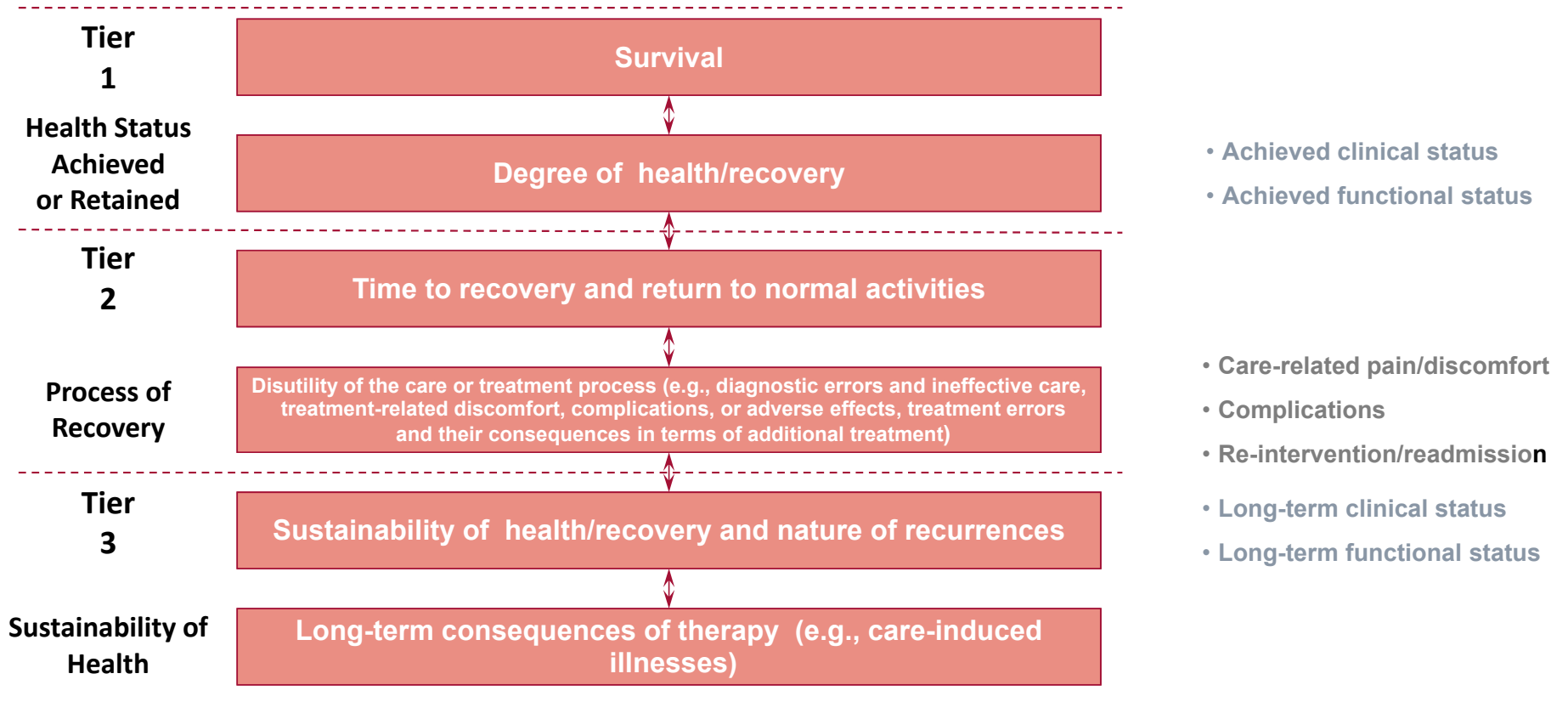
- Non-profit organization founded by individuals from three esteemed institutions
- Purpose to transform health care systems worldwide by measuring and reporting patient outcomes in a standardized way

Quality Measurement Landscape - 2019



The Outcome Measures Hierarchy

Two Dimensions- Clinician Reported and Patient Reported Outcomes



The Principles of Outcome Measurement

Outcomes should be measured by condition or primary care segment

Not for specialties, procedures, or interventions

Outcomes are always multi-dimensional and include what matters most to patients, not just to clinicians

Patient reported outcomes are important in every condition

Outcomes cover the full cycle of care

Outcome measurement includes adjustments for stage of disease, co-morbidities, and social determinants to control for patient differences

Outcomes should be standardized for each condition to optimize comparison, learning, and improvement

The Process of Outcome Measurement

Determine What to Measure

- Identify key stakeholders

- Set up a multi-disciplinary project team with an influential leader

- Identify standards, risk adjustment factors and validated instruments

- Involve patients

- Use established measures (ICHOM, NSQIP, STS)

Collect the Data

- Develop a data-capture model, tools, and a strategic solution

- Surveys to measure patient reported outcomes (PROMs)

- Integrate data collection in the workflow

The Process of Outcome Measurement

Analyze and Disseminate

- Data verification and auditing

- Apply risk adjustment models or report on risk adjusted patient cohorts

- Compare to registry and other benchmarks

- Report data at multiple levels and with increasing transparency

Learn and Innovate

- Meet regularly to analyze and review outcomes

- Create an environment that allows open discussion of results with no repercussions for participants willing to learn and make constructive changes

- Create mechanisms to assist providers whose results are lagging

- Combine outcome data with care cycle costing data to examine opportunities for value improvement

- Identify best practices and opportunities for improvement

- Create mechanisms to diffuse best practices across the team

The Process of Outcome Reporting

Begin with internal reporting to clinicians

Compare outcomes of care teams or physicians over time

Compare across locations

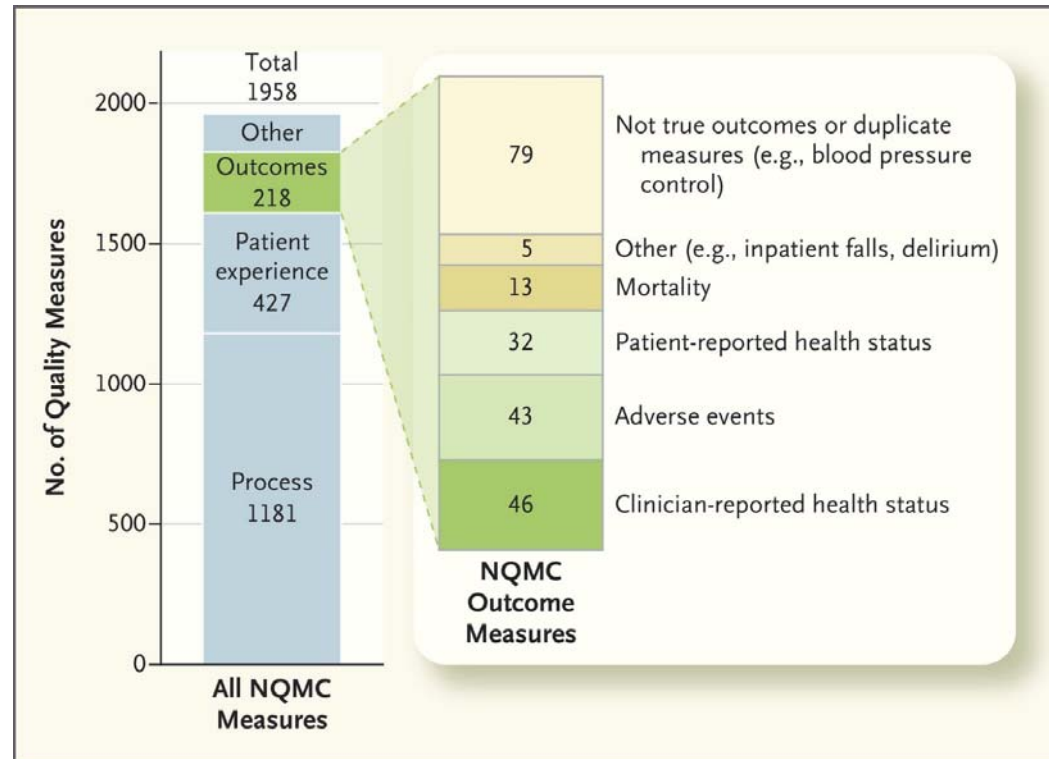
Move from blinded to un-blinded data at the individual provider level

Expand outcome reporting over time to include referring providers, payers, and patients

Develop an agreed upon path to external transparency

Work with provider, payers, and government to standardize measures and methods

Outcomes a Small Part of Standardized US Measures



NQMC: National Quality Measures Clearinghouse

From: Porter ME et al. Standardizing patient outcome measurement N Engl J Med 2016;374:504-506.

Barriers to Outcome Measurement

Resources devoted to non-outcome quality measures

Lack of a clear definition of outcomes

The need for standardized outcomes at the condition level

Need for IT tools to enable seamless outcome collection and aggregation as part of the clinical workflow and from patients

Limited incentives and mandates for outcome collection

- Need to move value-based payment model (e.g. bundled payments)

- Mandatory collection and reporting

Breaking Barriers to Outcome Measurement

Effectively integrate care for conditions

Build a framework for determining outcomes at the condition level

Address the current high hurdles for validating outcomes

Address the cost and complexity of measurement

Incentivize good outcomes

Work with organizations focusing on outcome measurement

Measure Development and Validation Challenges

Standardized outcome measures did not exist and take time to develop

Complex process to test and validate those outcome measures for use by CMS via National Quality Forum (NQF) endorsement

Large data sets needed for measurement testing and validation

Provider preferences for PRO instruments vary - PRO crosswalk is needed in some cases

The time from inception to use in payment can be 3-5 years

ICHOM was founded to define standards for global outcomes measurement and accelerate adoption and international benchmarking

Where ICHOM come from

Three organizations with the desire to unlock the potential of value-based health care founded ICHOM in 2012:



ICHOM is a nonprofit

Independent 501(c)3 organization
Ambitious yet achievable goals
Global focus
Engages diverse stakeholders

ICHOM's mission



Unlock the potential of value-based health care by **defining global Standard Sets of outcome measures that really matter to patients** for the most relevant medical conditions and by **driving adoption and reporting** of these measures worldwide

Value = $\frac{\text{Patient health outcomes achieved}}{\text{Cost of delivering those outcomes}}$

ICHOM is creating standard global outcomes in partnerships

What are ICHOM Standard Sets?

Set of 10-15 outcomes that matter most to patients by condition
Comprises both clinician- and patient-reported outcomes
Includes case-mix variables, measure definitions, and measurement time points

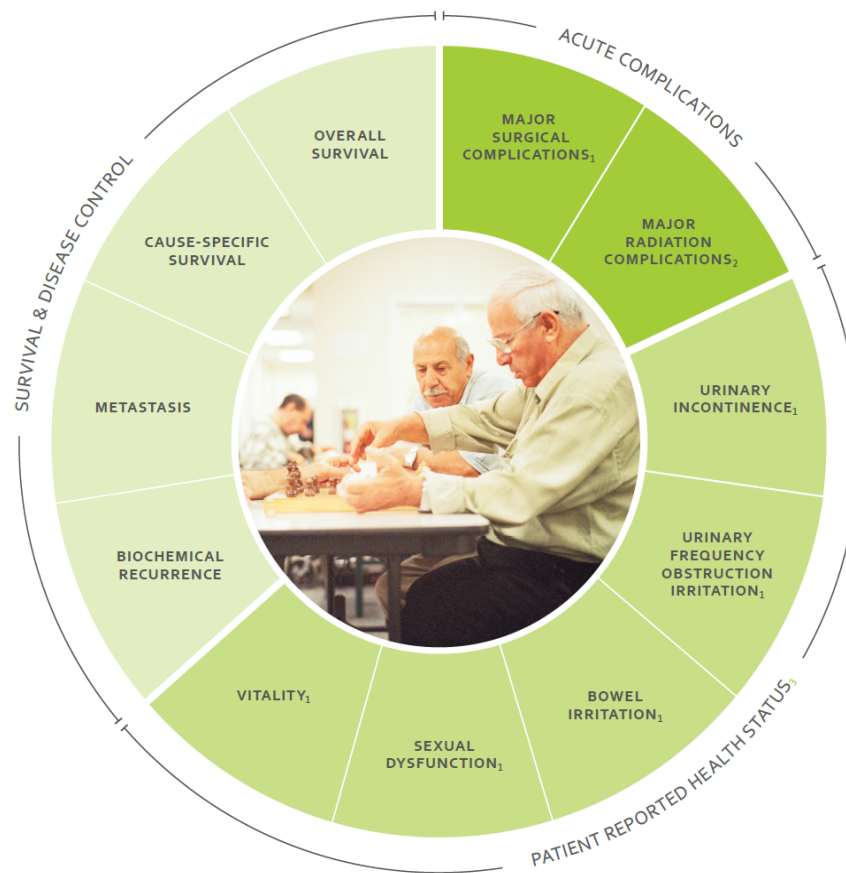
Who develops them?

International, multidisciplinary Working Group of clinical experts
Patient representatives play key role in selecting outcome domains
Iterative consensus process to agree on final recommendation

Who is endorsing them?

Strong support from patient advocacy groups, e.g., Movember and the AHA
Active engagement with governments, payers, e.g., Scottish Government, CMS (US)

Standard Set for Localized Prostate Cancer



Treatment approaches covered

- Watchful waiting
- Active surveillance
- Prostatectomy
- External beam radiation therapy
- Brachytherapy
- Androgen Deprivation Treatment
- Other



A "Reference Guide" contains all the details to measure in a standard way the outcomes and case mix factors recommended

Aims for ICHOM Measure Sets

Become the standard outcomes for each disease and condition (aim to cover global disease burden)

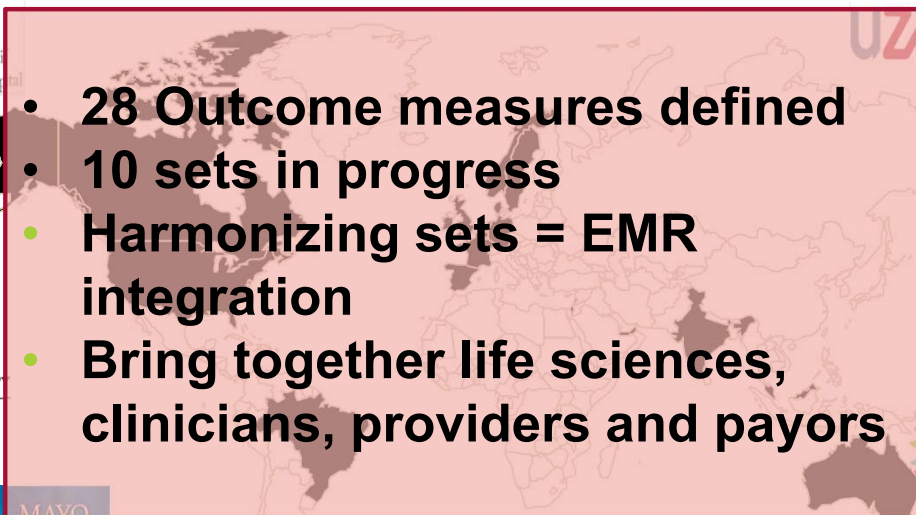
Be internationally meaningful, accepted, and practical across care-settings

They will use harmonized terminology in a searchable data platform

They enable rapid local, national, and international benchmarking

Through the use of a central data repository of outcomes AI-powered analytics and multiple secondary uses of data are enabled





- 28 Outcome measures defined
- 10 sets in progress
- Harmonizing sets = EMR integration
- Bring together life sciences, clinicians, providers and payors

Next phase of ICHOM: Global Flagship Programs

Globally important conditions: HIV, Malaria, Cancer, Diabetes, Respiratory

Integrated: unified projects to define outcome measures, implement them and deliver true benchmarking

Scale: international implementation, high volumes of data

Partnerships: brings together life sciences, foundations/NGOs, clinicians, providers and payors

Data-driven: standardized data platform to collect, manage, interpret and analyze outcomes data

ICHOM Annual Meeting



For More Outcome Measurement Information

Please visit our website:
www.isc.hbs.edu/vbhc

