

Du Perikles - Ka' Du  
sige mig - hvornaar  
spørger du din patient?

Hvergang!



# **The systematic use of outcome measures for the improvement of health care - the ICHOM initiative**

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## **Implementing NICE guidelines for the psychological treatment of depression and anxiety disorders: The IAPT experience**

DAVID M. CLARK

*University of Oxford, UK*



### **Abstract**

The Improving Access to Psychological Therapies (IAPT) programme is a large-scale initiative that aims to greatly increase the availability of NICE recommended psychological treatment for depression and anxiety disorders within the National Health Service in England. This article describes the background to the programme, the arguments on which it is based, the therapist training scheme, the clinical service model, and a summary of progress to date. At mid-point in a national roll-out of the programme progress is generally in line with expectation, and a large number of people who would not otherwise have had the opportunity to receive evidence-based psychological treatment have accessed, and benefited from, the new IAPT services. Planned future developments and challenges for the programme are briefly described.

Evidence based practice demands  
practice based evidence

Evidence  Practice

# The WHO quest for sustainable care models

# Importance

- Chronic disease is responsible for 75% of total health care costs.
- Existing delivery models are poorly constructed to manage chronic disease, as evidenced by low adherence to quality and control indicators.
- New technologies have emerged that can engage patients and offer additional modalities in treating chronic disease.
- Modifying health care delivery to include team-based care combined with patient-centered technologies offers great promise.

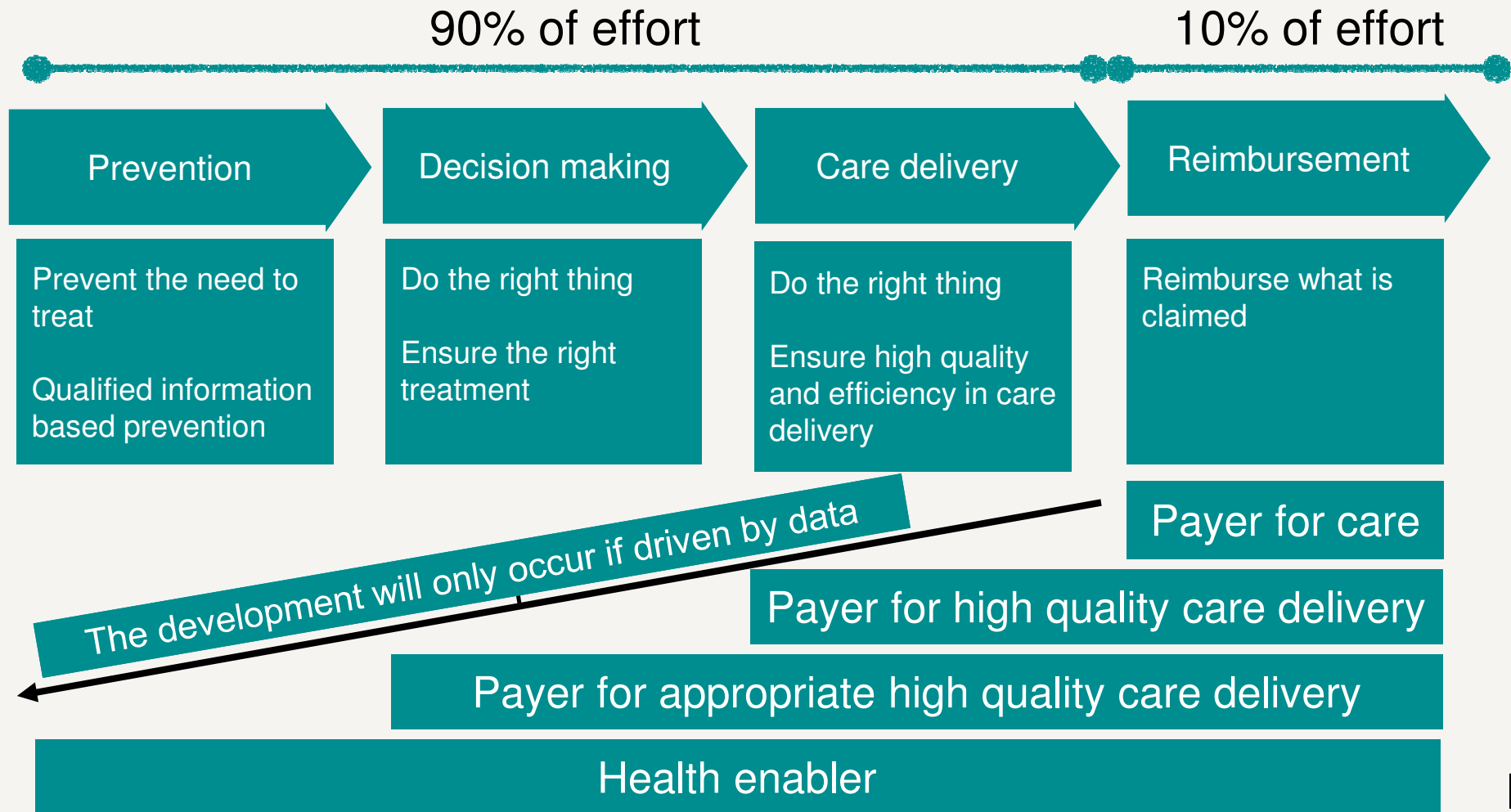
# Value based healthcare

$$\text{Value} = \frac{\text{Health outcome}}{\text{Assigned resources}}$$

Aligning patient, payer and profession interests



# Paying for the right thing

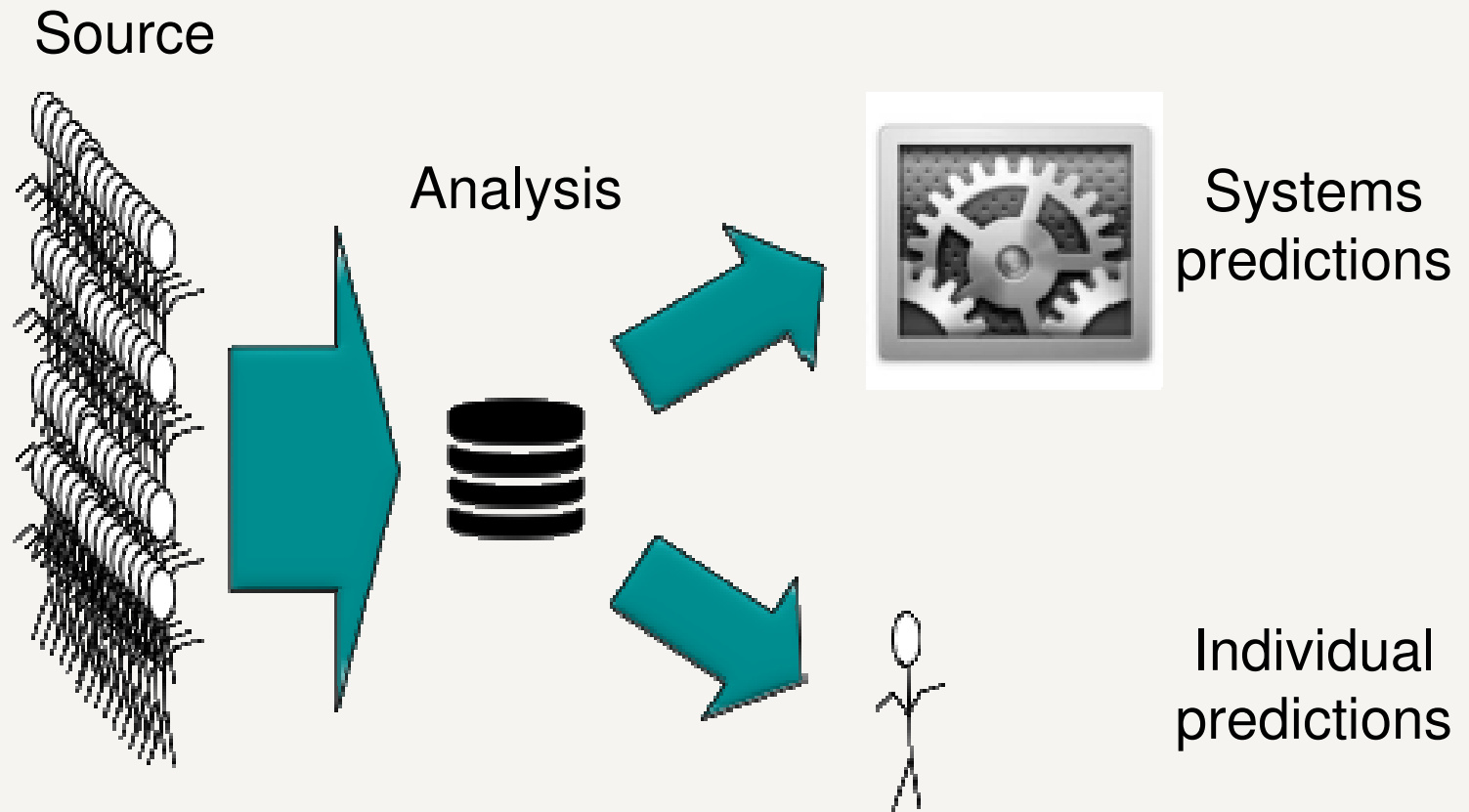


# Levels of quality

- Local quality (Local processes and structured EMRs, 4D)
- National Quality (Quality registers)
- International Quality (ICHOM)

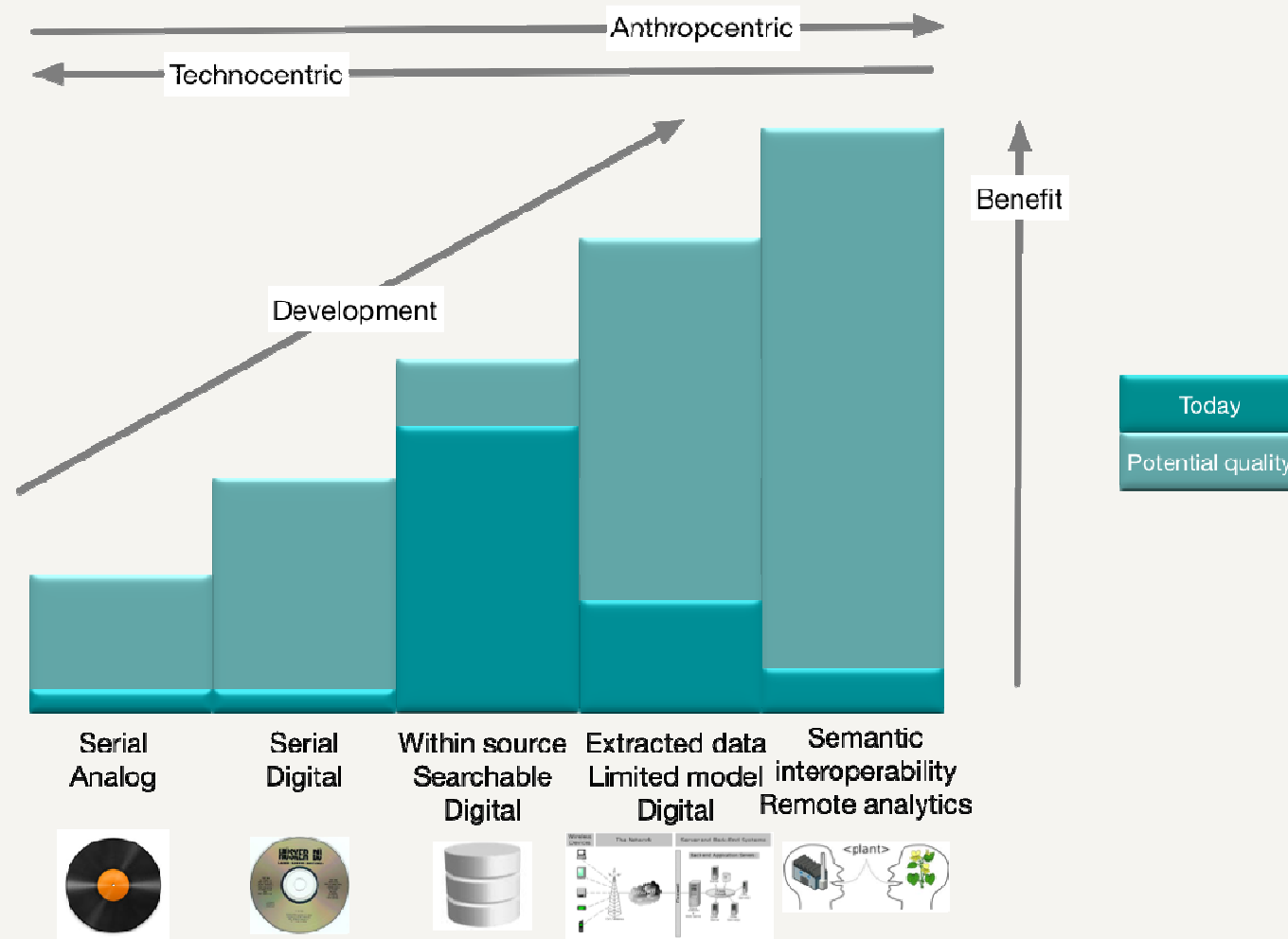
**The limiting factor is data quality!!**

# Big Data

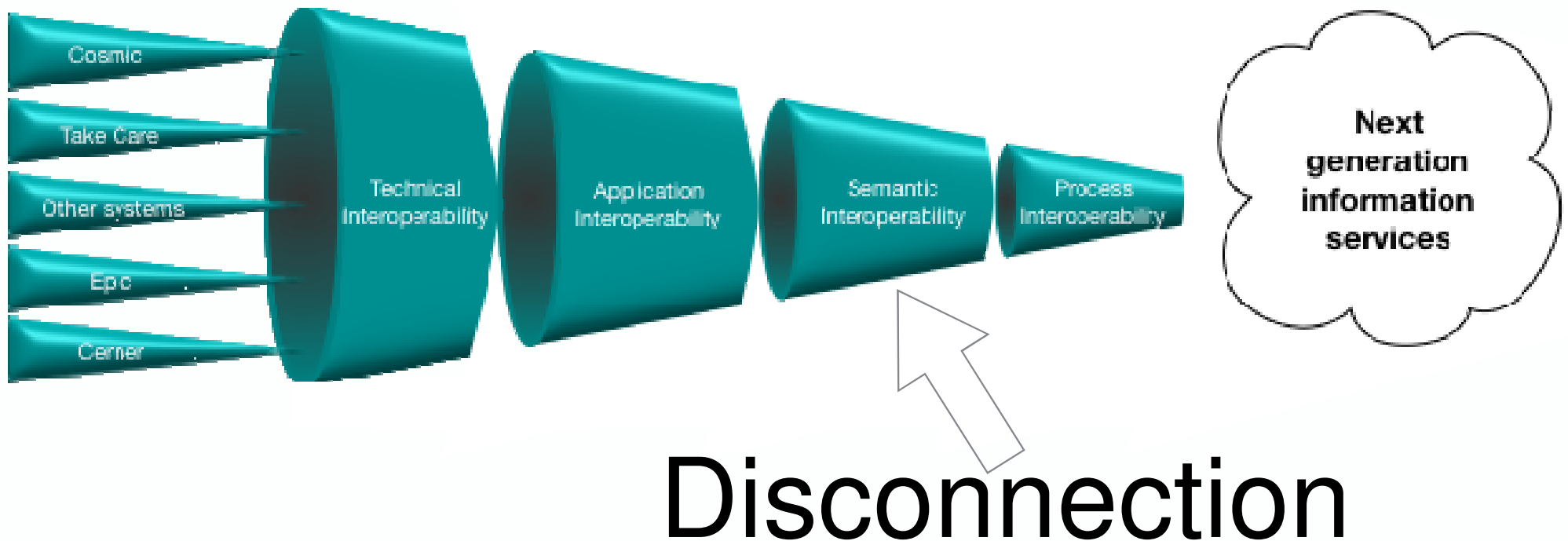


GIGO still rules

# The struggle is ubiquitous



# Strategy: modular, multisystem, gradual





# Patients are always right

Psychosom Med. 2004 Jul-Aug;66(4):559-63.

## **Self-rated health is related to levels of circulating cytokines.**

Lekander M<sup>1</sup>, Elofsson S, Neve IM, Hansson LO, Undén AL.

### **Author information**

### **Abstract**

**OBJECTIVE:** Self-rated health is a powerful and independent predictor of long-term health, but its biological basis is unknown. Because factors associated with poor self-rated health (eg, pain, daily discomforts, and low energy and fitness) resemble symptoms of a generalized cytokine-induced sickness response, we examined the relationship between circulating cytokines and self-rated health.

**METHODS:** In 265 consecutive primary health care patients (174 women and 91 men), we examined self-rated and physician-rated health, circulating levels of interleukin (IL)-1beta, IL-1 receptor antagonist (IL-1ra), IL-6, and tumor necrosis factor (TNF)-alpha as determined from plasma samples using high-sensitivity enzyme-linked immunoassay.

**RESULTS:** Self-rated health correlated with levels of IL-1beta ( $r = 0.27$ ;  $p < .001$ ), IL-1ra ( $r = 0.19$ ;  $p < .05$ ) and TNF-alpha ( $r = 0.46$ ;  $p < .001$ ) in women but not in men. Thus, poorer subjective health was associated with higher levels of inflammatory cytokines. Even when controlling for age, education, physical health, and diagnoses in multiple regression analyses, self-rated health was an independent and more robust predictor of cytokine levels than physician-rated health.

**CONCLUSIONS:** The present findings suggest that an individual's health perception may be coupled to circulating cytokines. Because epidemiological research established that self-rated health predicts morbidity and mortality, the biological correlates and mechanisms of self-rated health need to be understood.

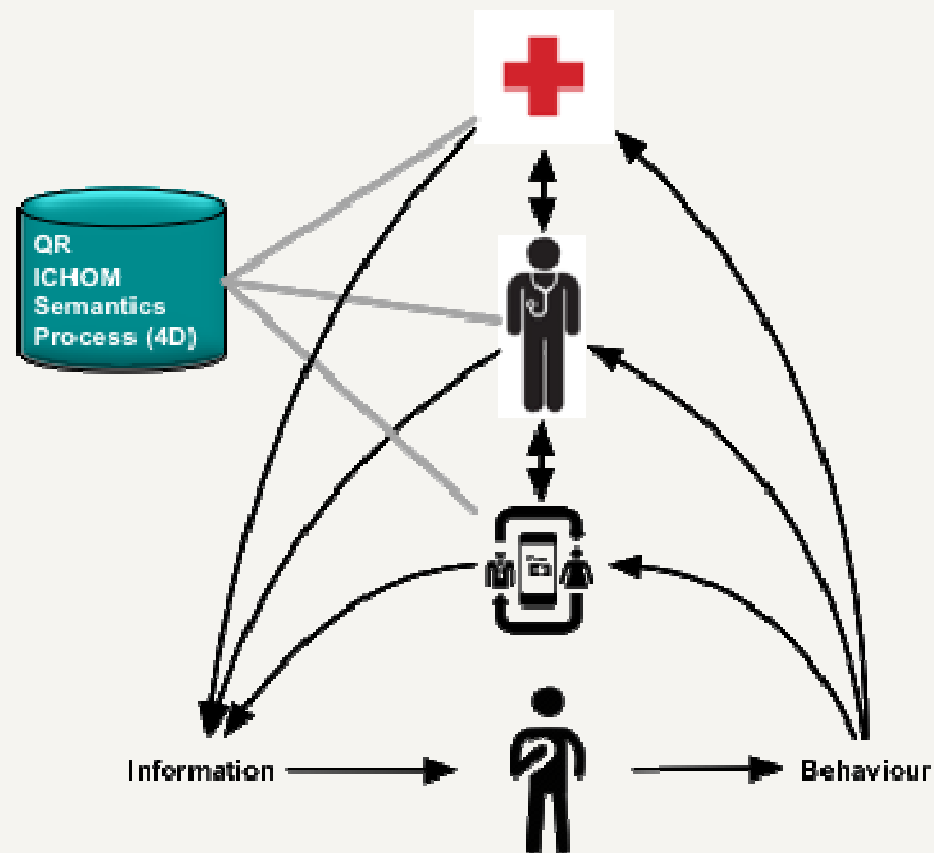
# PROMs

- Meaningless unless used as KPI in all dimensions
- Must be integrated in the quality measurements
- Alignment between local, regional and global measures!
- Integrate into both EMR and BI

# Patient co-production

- The patient owns the information
- The patient may report data to the EMR
- The patient may withdraw from agreements of access
- The participation of the patient is seen as a resource, not as a service
- PROMS represent a delivered service from the patient

# Patient in the center of all loops



# Sustainable health care

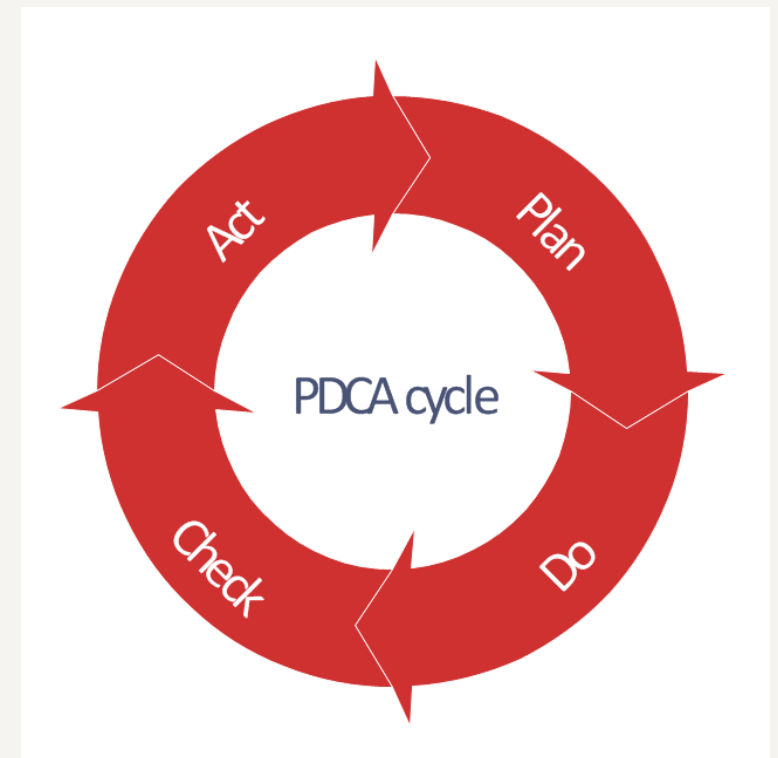
- In house PDCA ownership (improvement cycle)
- The logic of the patient empowerment and profession logic rule
- Process design deeply rooted in the care and developed inter-professionally and with patient participation

# Guiding principle of clinical improvement

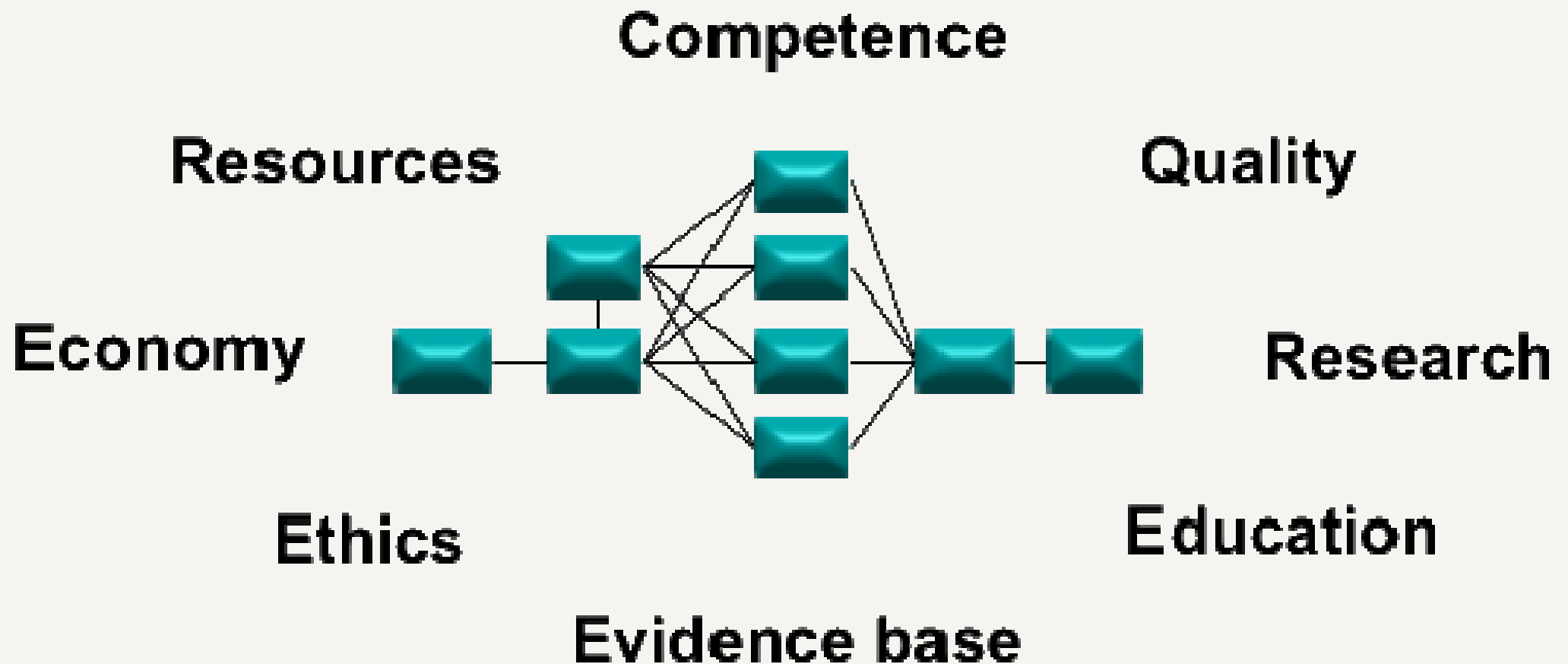
Strategic information services should strive for short feed back loops

The more complex the process the more important that KPIs properly describe composite organisational goals

Short feed back loops



# Clinical models = Process KPI

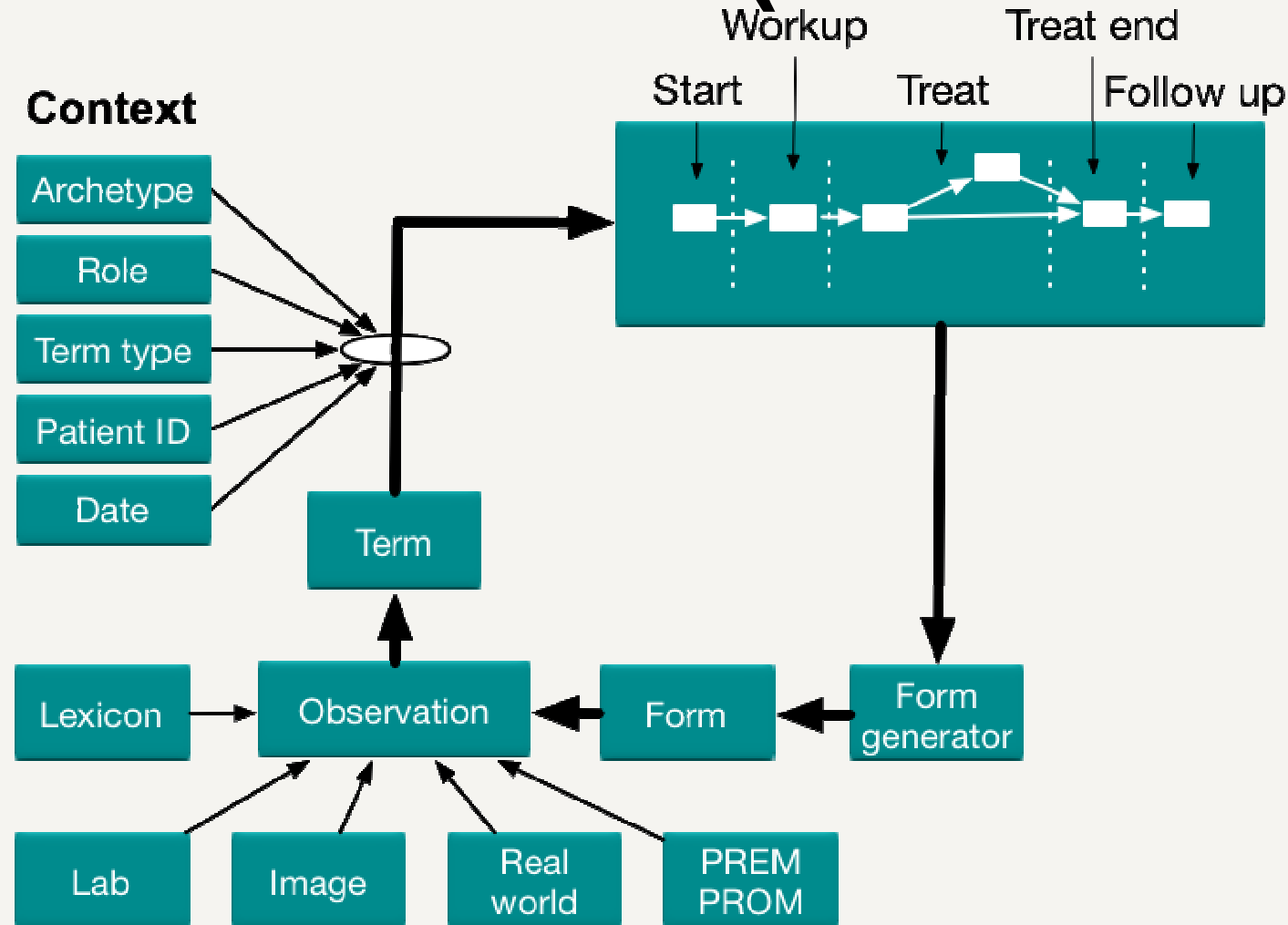


# Lateral spread of practice

- We need to move from the master apprentice model to the industrial model.
- We need to develop our common language also for processes (and not only observations)
- I.e. we have to build defined clinical models (e.g. Intermountain Health Care)



# Clinical Models (case tested)



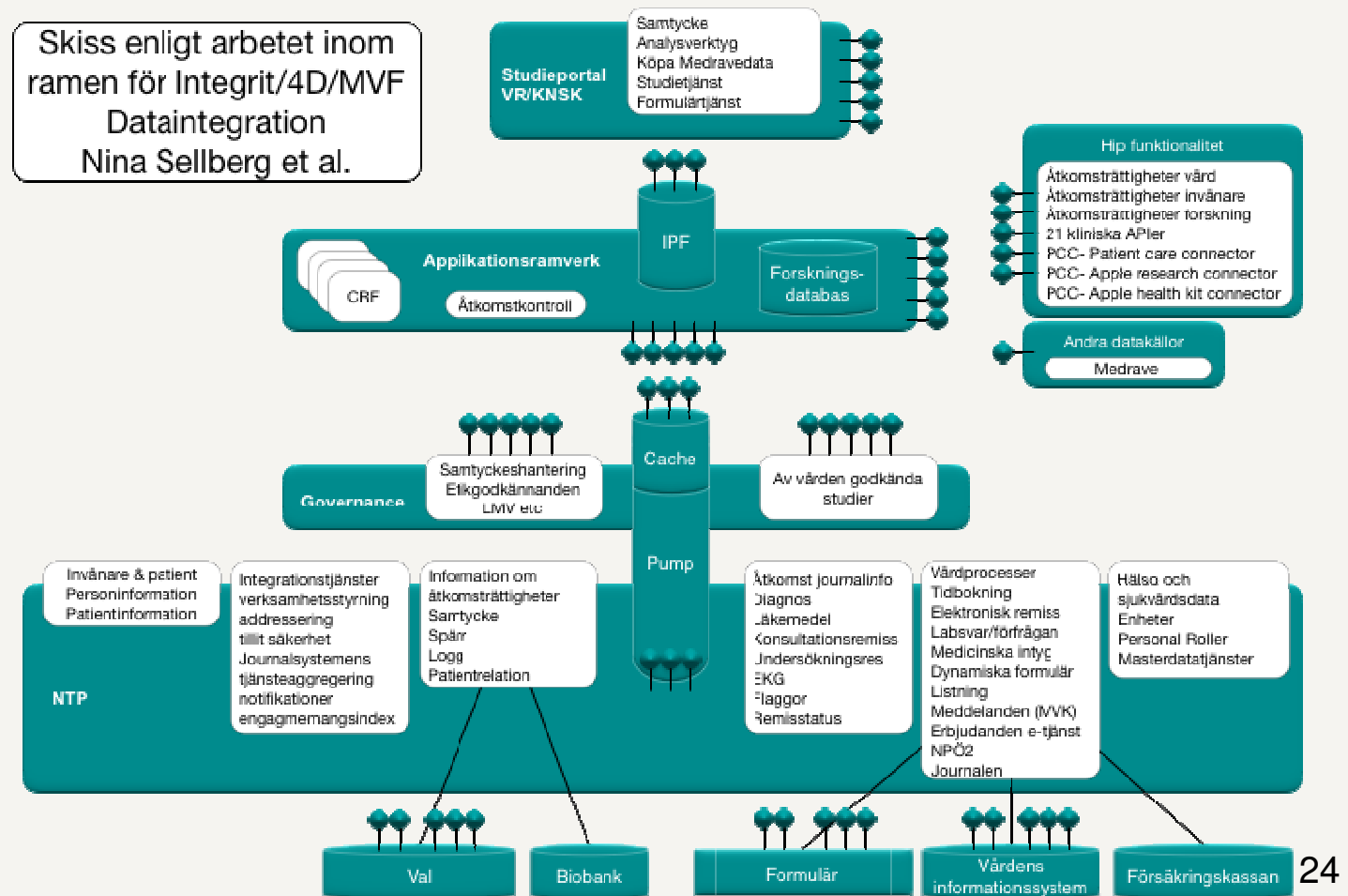
# Data access governance

National Portal

Application level

Governance

Care internal



[lchom.org](http://lchom.org)



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**International Consortium for Health  
Outcomes Measurement**

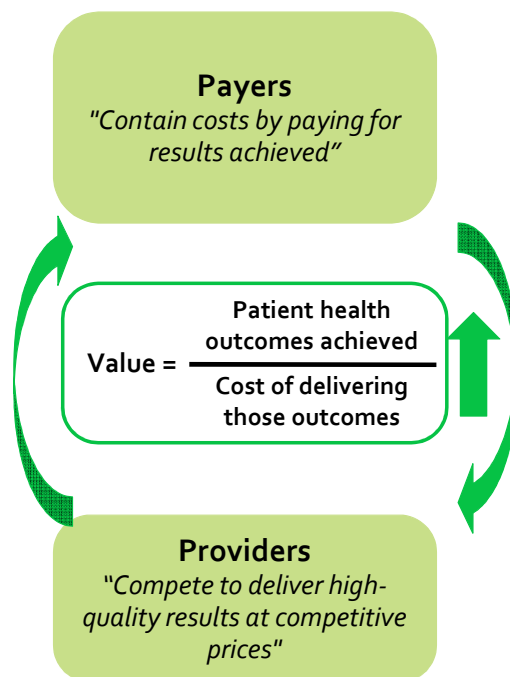
**Overview**

October, 2015

# International comparisons of delivered quality

# ICHOM is founded on the principle of value-based health care

We believe in a model where value is at the center of health care...



... which will impact every stakeholder



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



Providers will **compete** to deliver superior outcomes at competitive prices



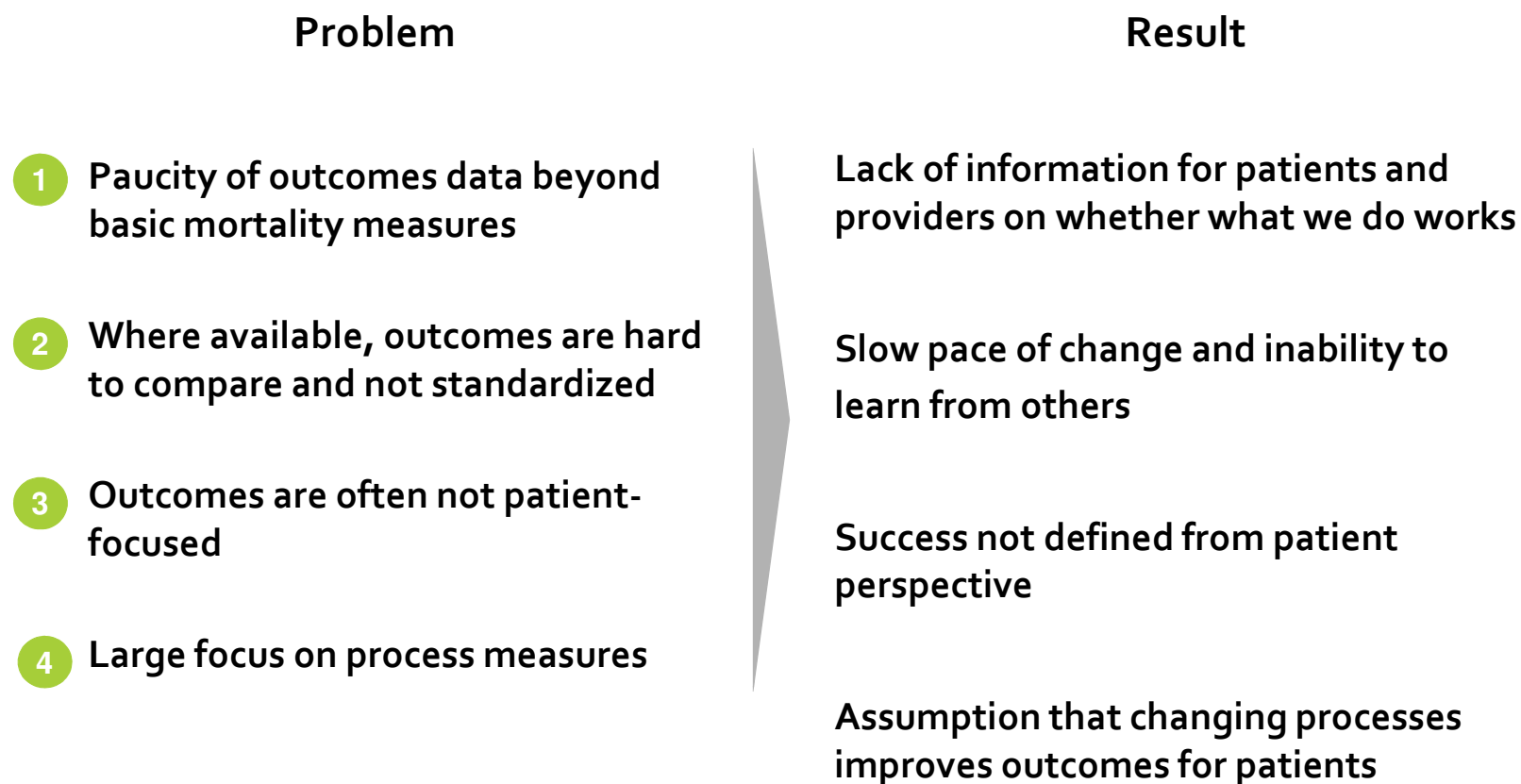
Payers will **negotiate contracts based on results** and encourage innovation to achieve those results



Suppliers will **market their products on value**, showing improved outcomes relative to costs

## The lack of outcome measurements that represent what truly matters most to patients is a global barrier to driving health care improvement

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# New standards are needed to measure what patients really care about

Stroke example

## Moving from here

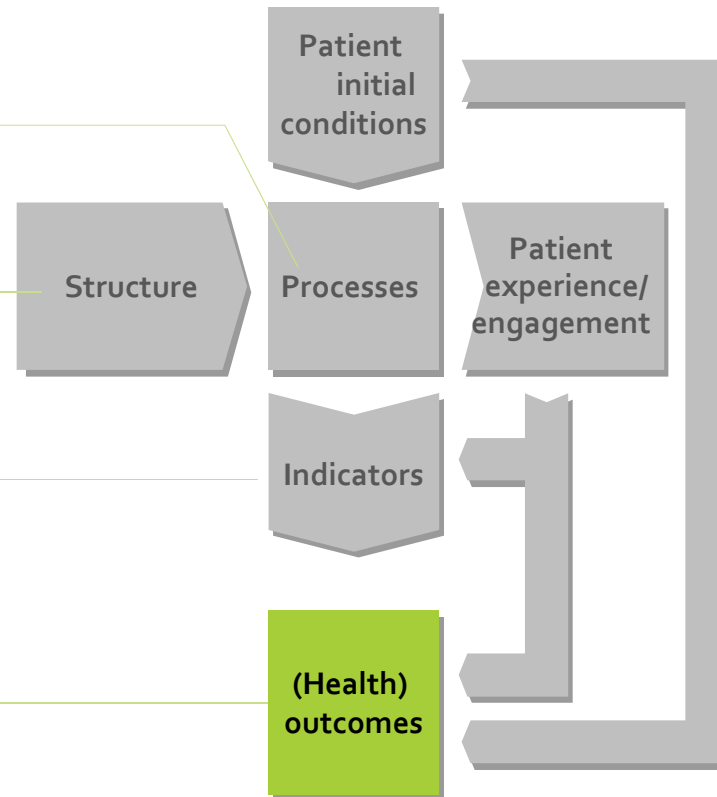
e.g. Time to treatment

e.g., Staff certification,  
facilities standards,  
stroke unit

e.g. MRI, Lab results

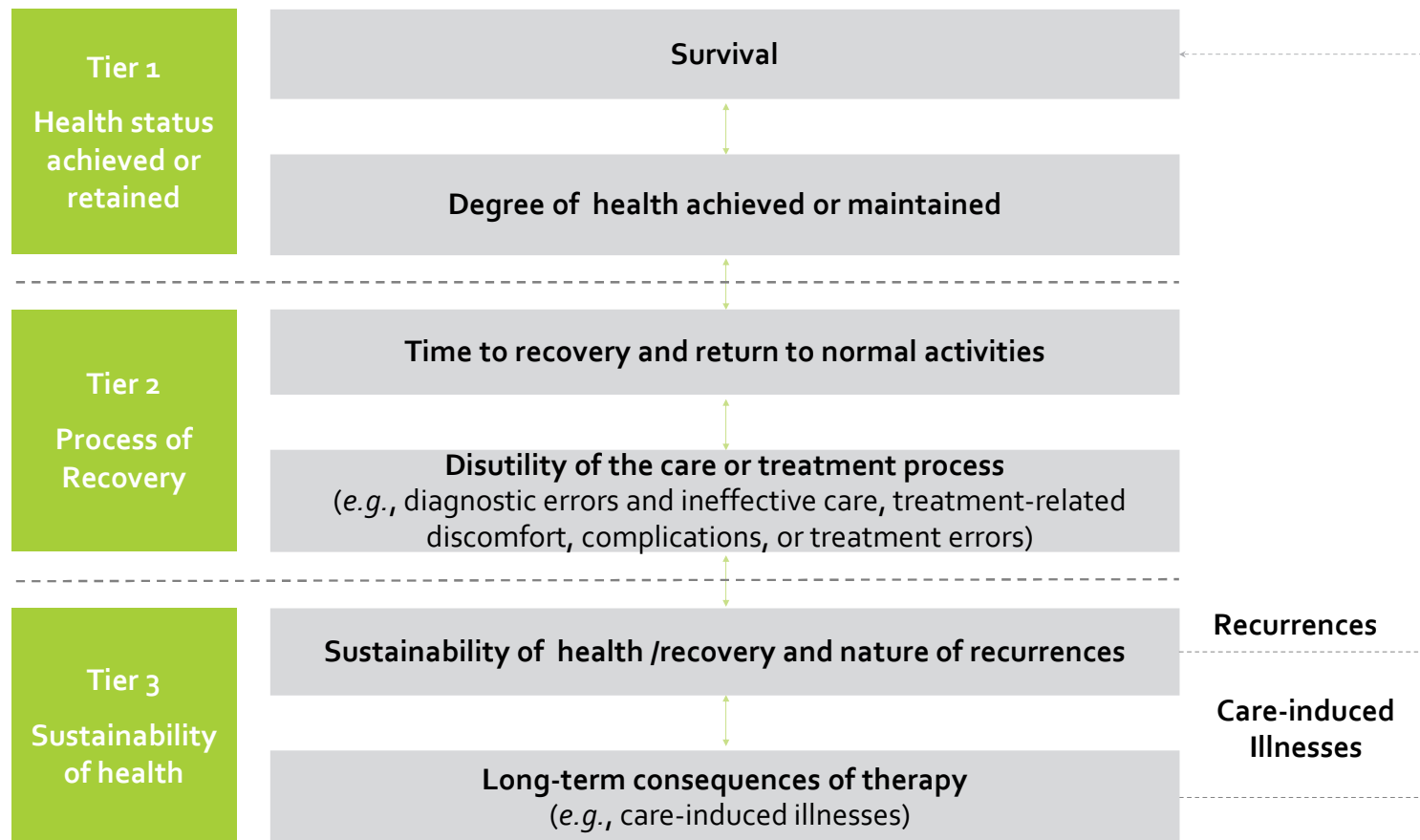
## To here

Survival  
Feeding  
Fatigue  
Social participation  
Ability to work  
(...)



# ICHOM Standard Sets focus on the outcomes that matter most to patients

## Michael Porter's Outcome Measures Hierarchy



Source: Porter, M. "What is value in health care?" NEJM, 2010.



# ICHOM is setting the global outcome standard

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## 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 implementing them?

- **12 national registries** and approximately **60 organizations across the globe** have already aligned or have expressed intent to measure outcomes according to ICHOM Standard Sets
- Includes Stanford, Partners, MD Anderson, Mayo, Erasmus, and many others

## 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)

# ICHOM was formed to drive the industry towards value-based health care by defining global outcome standards

## Where we 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
- Idealistic and ambitious goals
- Global focus
- Engages diverse stakeholders

## Our mission

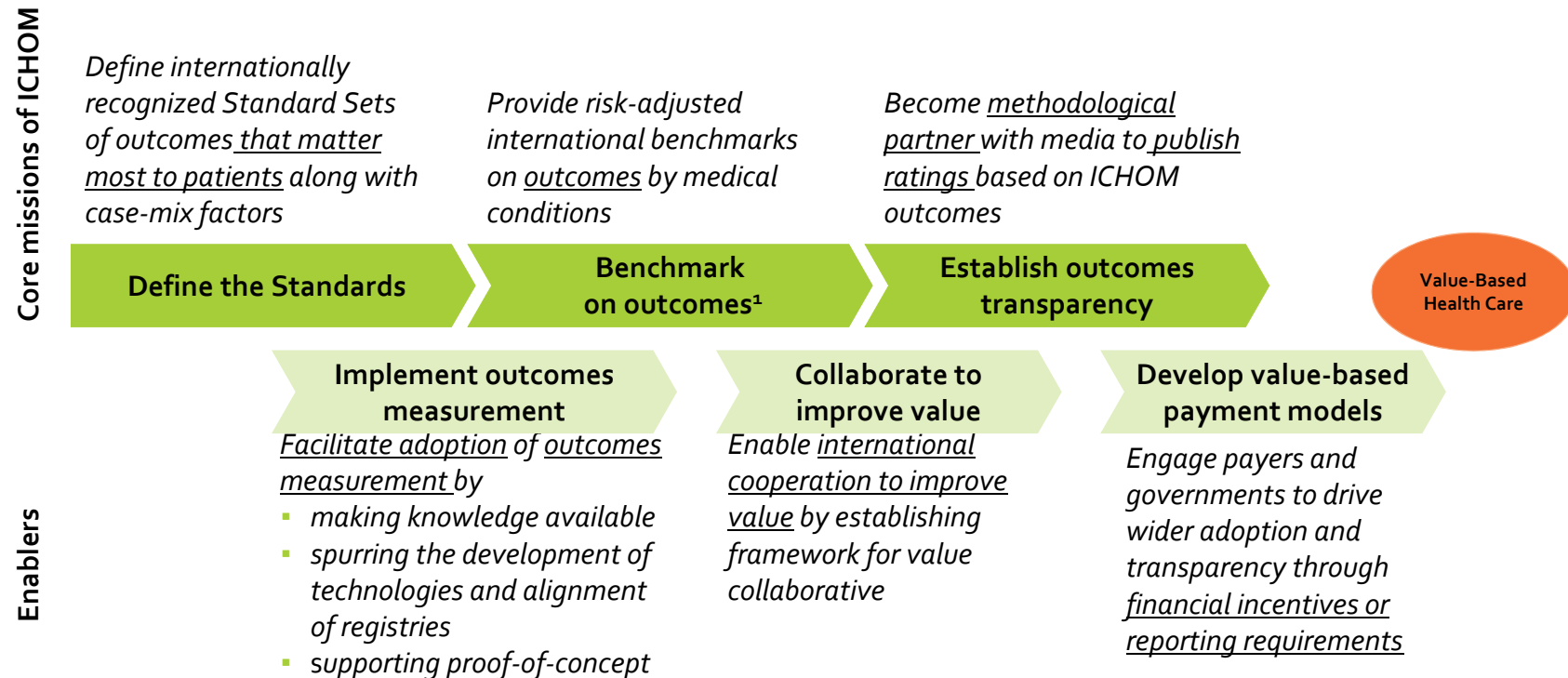


### Our mission

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

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

# ICHOM's strategic agenda in enabling value-based health care



1. We are exploring the inclusion of resources data in benchmarks but the methodology is to be determined

# Standard Set progress

We have already developed 12 standard sets



2015 wave covers  
9 additional conditions

1. Breast cancer
2. Dementia
3. Older people
4. Heart failure
5. Pregnancy and childbirth
6. Colorectal cancer
7. Overactive bladder
8. Craniofacial microsomia
9. Inflammatory bowel disease

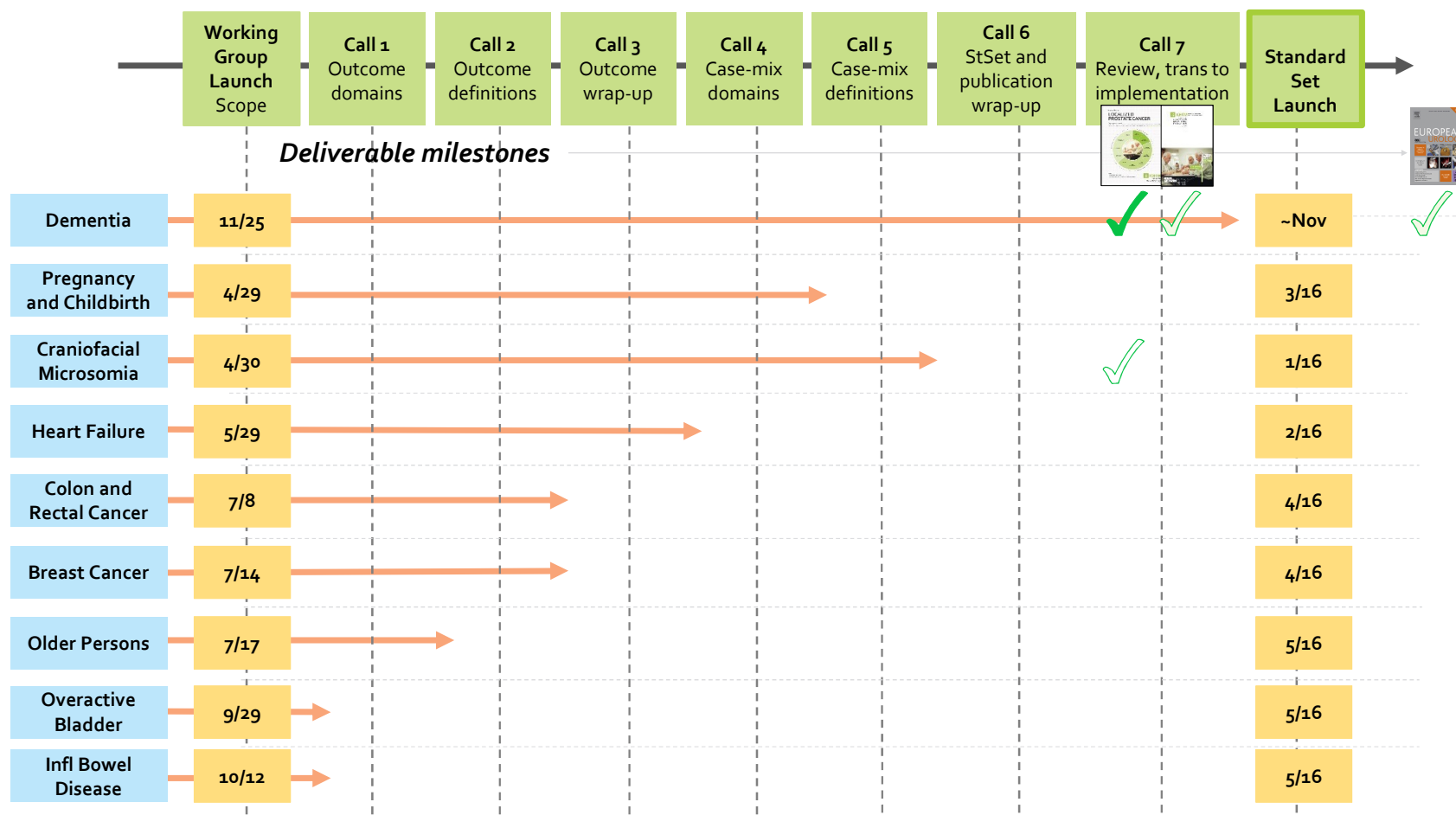
For 2016, ongoing  
discussions around:

1. End stage renal failure
2. Oral health
3. Brain tumors
4. Drug and al. addiction
5. Complex medical and social needs
6. Bipolar disorder
7. Burns
8. Melanoma
9. Head and neck cancer
10. Pediatric oncology (condition(s) TBD)
11. Rheumatoid arthritis
12. Liver transplantation
13. Cong. hand malform.
14. Chronic rhinosinusitis
15. Cong. hemolytic anem.
16. Rotator cuff disease
17. Malaria

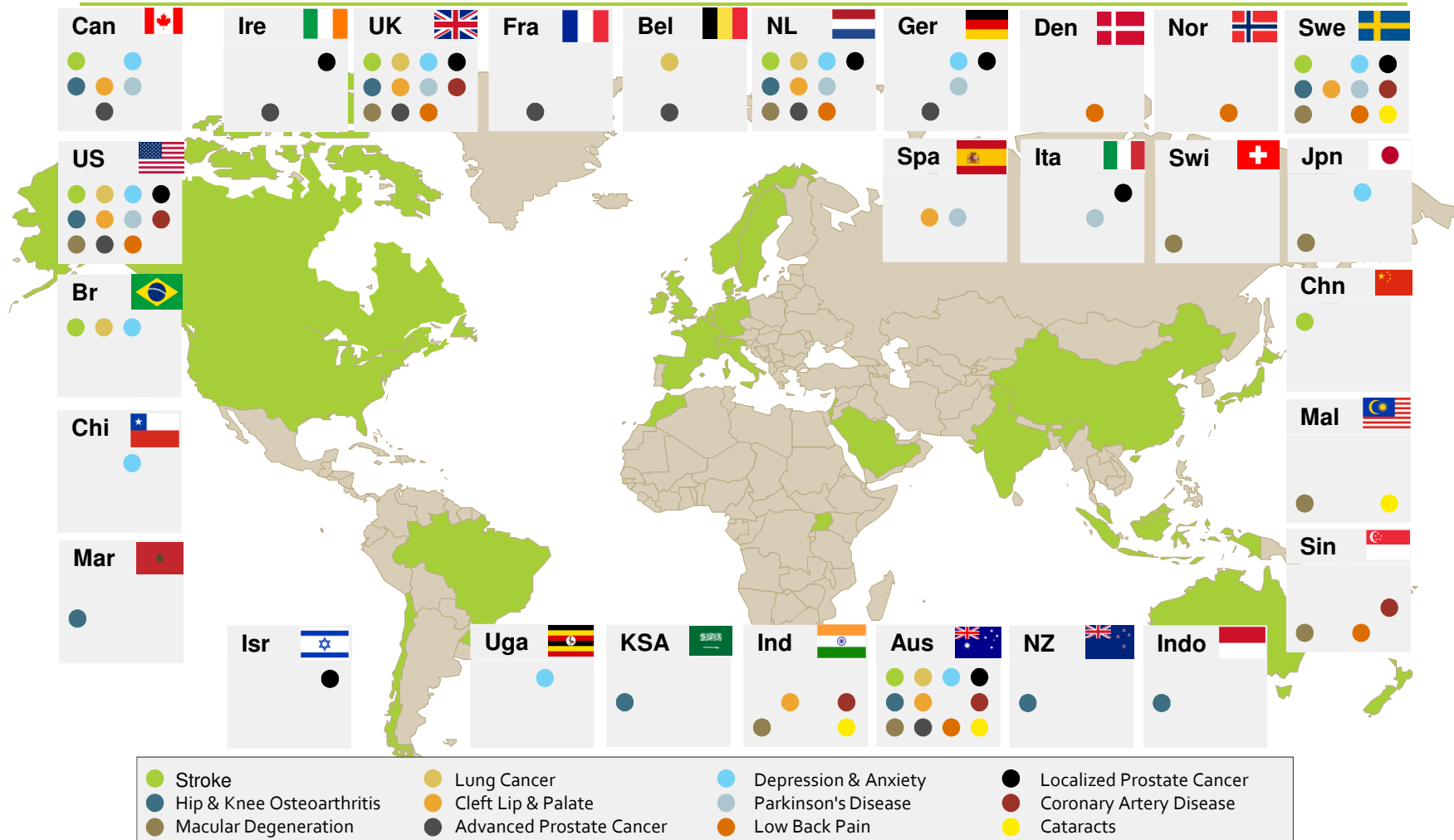
*Numbers not representing prioritization/ likelihood*

# All 2015 Working Groups have launched and are making steady progress

- ✓ Draft complete
- ✓ Final available online



# ICHOM Working Group members from 28 countries



# Global demand to measure and compare outcomes is impressive



Every week, institutions reach out to ICHOM expressing interest in measuring Standard Sets at their institution

# ICHOM is currently developing a global benchmarking program and supporting infrastructure

## Objectives of the Global Comparisons project

Pool health outcomes data from 10-15 leading provider organizations – 2 conditions for pilot

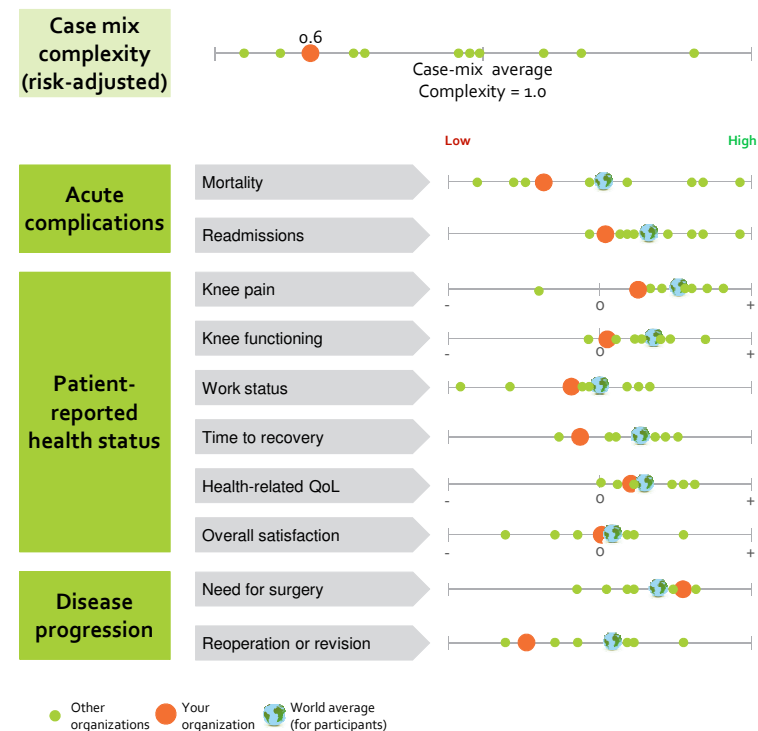
Risk-adjust raw data and organize comparisons on key indicators

- Particular focus on patient-reported outcomes

Provide individual – and confidential – reporting to participating organizations

Identify the “best-in-class” and publish about their performance

## Sample output – Hip and Knee





## And a broader set of health systems see the need to move in this direction

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"We know [very little] about whether, where, and how health services achieve the outcomes that patients are looking for. **We want health ministers today and in the future to do something about this.**"

- *From "Strengthening International Comparison of Health System Performance Issues Paper"  
May 2015*

# KI and Stockholm County Council (SCC) - joint strategic programme 4D

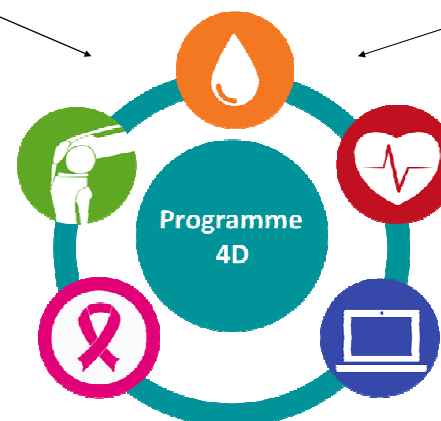


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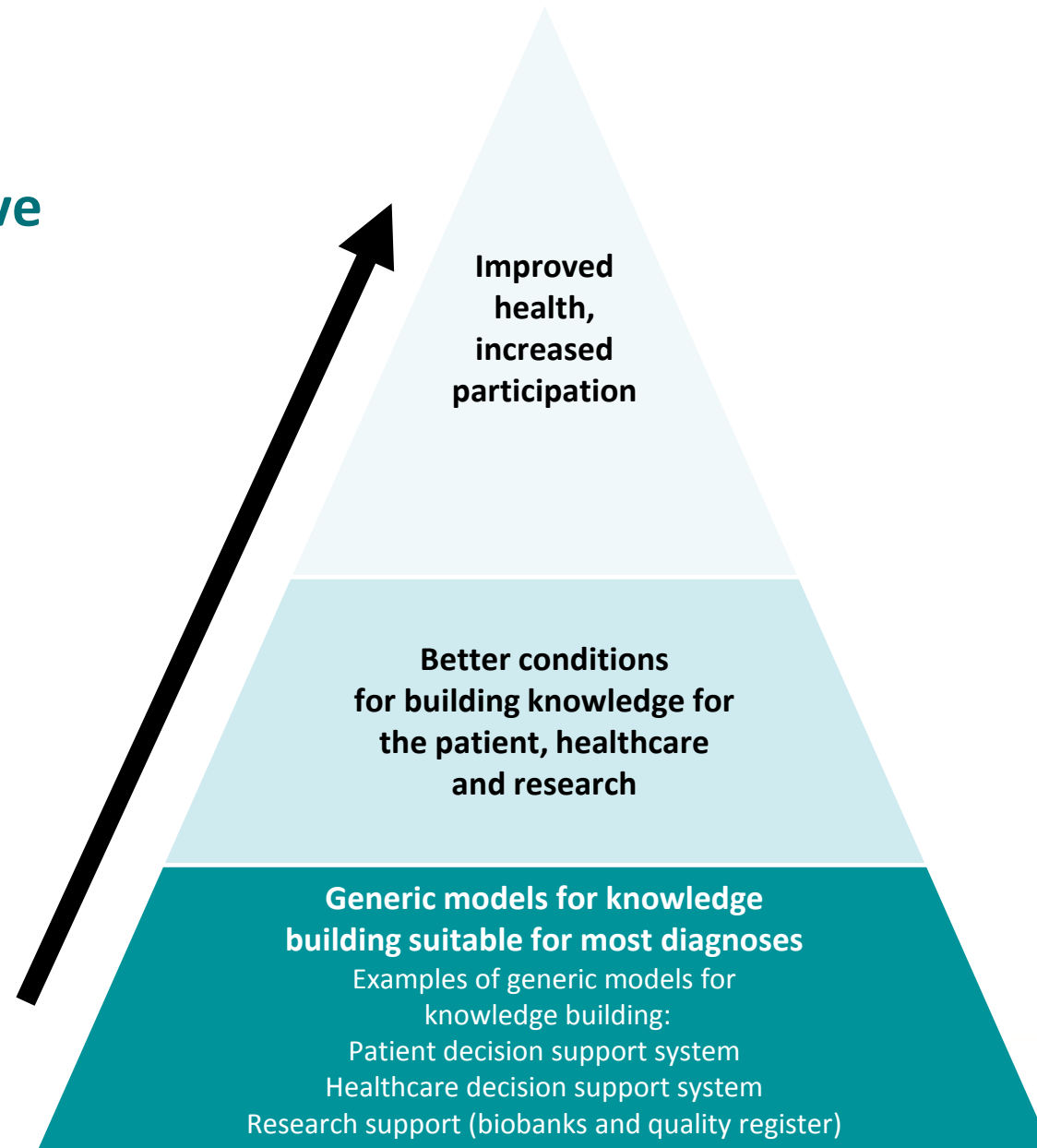


Stockholms läns  
landsting

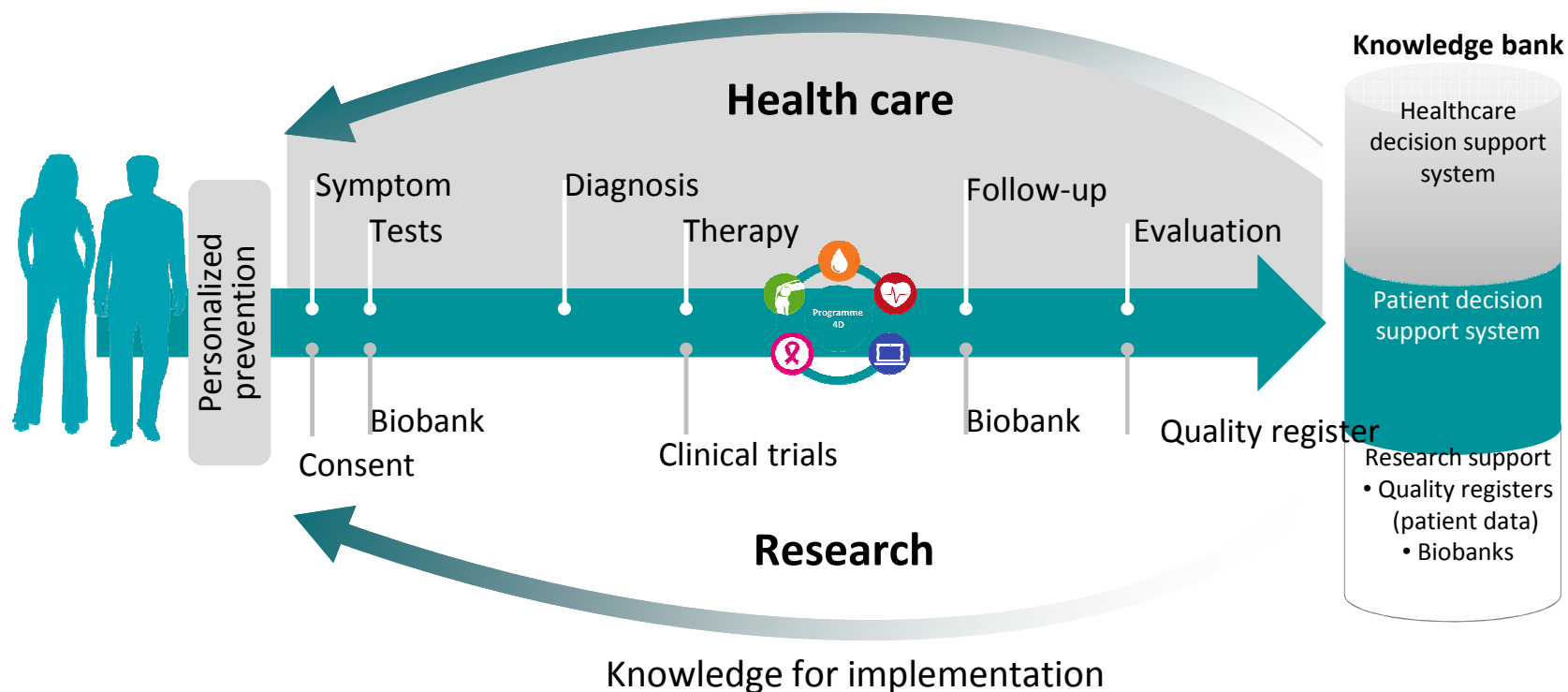
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## 4D Aim and objective



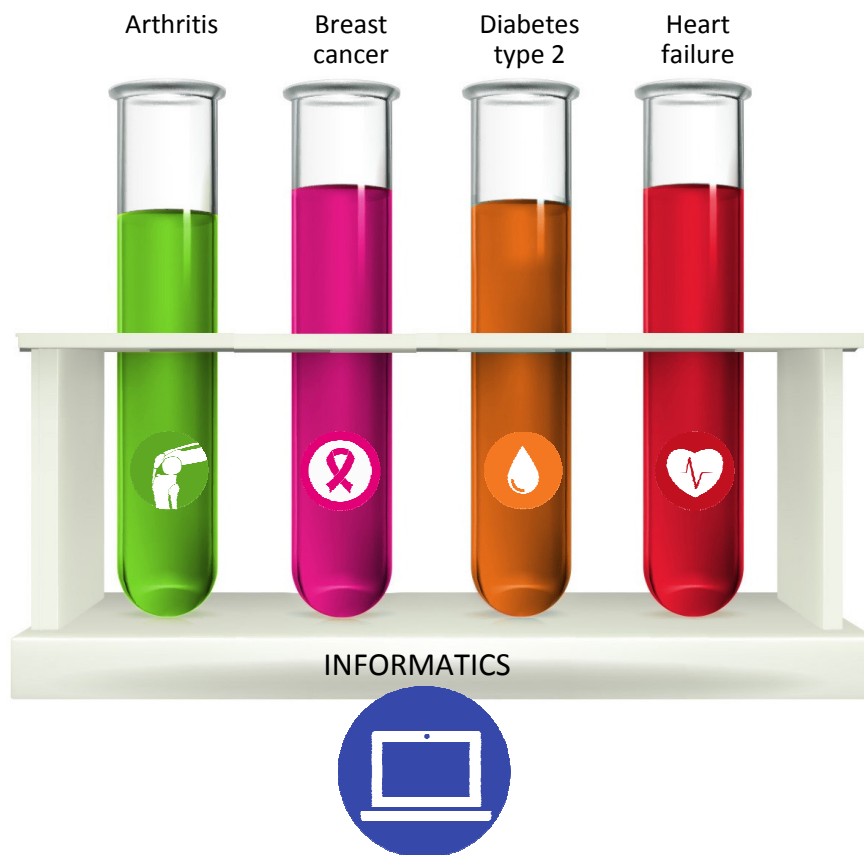
## Knowledge building – patient, health care and research



Systematic data collection and analysis enables knowledge building

## Four diagnoses in Programme 4D

Informatics – fifth project and enabler



- Informatics as an enabler for the patients, health care and research knowledge building
- Close collaboration with Stockholm's Medical Biobank

Programme 4D is a collaboration between



Stockholms läns  
landsting

Stockholm County Council

## Programme 4D – five projects and their sub-projects

### 4D ARTHRITIS

- E-health, decision support for patients, care providers and research
- New work processes and forms for collaboration
- Biobank sampling in routine healthcare
- New description system
- Industry collaboration
- Communication

### 4D DIABETES TYPE 2

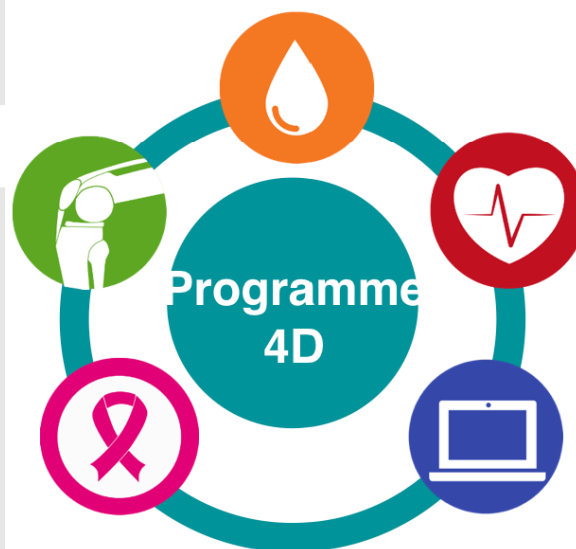
- Enhanced primary care process
- More effective screening and improved prevention
- Established biobank for prediabetes and diabetes type 2

### 4D HEART FAILURE

- Cardiac clinics and communication
- Biobank
- Access to ECG and heart ultrasound across regions
- Decision support and SVD (structured healthcare data project)
- E-health and patient involvement

### 4D BREAST CANCER

- Development of breast cancer centres and infrastructure for clinical research and knowledge development
- "My Personal Care Plan – Cancer"
- Patient involvement in healthcare and research
- Development research coordinators
- Establish biobank
- Registration of informed consent on tablet (biobank)
- Develop learning centre



### 4D INFORMATICS

- Patient self-tests
- Online screening, living habits and form management
- Informed consent management
- Decision support
- Research portal
- Quality registries via healthcare system's service platform
- Feasibility study maintenance planning
- Feasibility study patient involvement

Programme 4D is a collaboration between



**Stockholms läns  
landsting**  
Stockholm County Council

## Examples of 4D solutions

### Screening

PTH

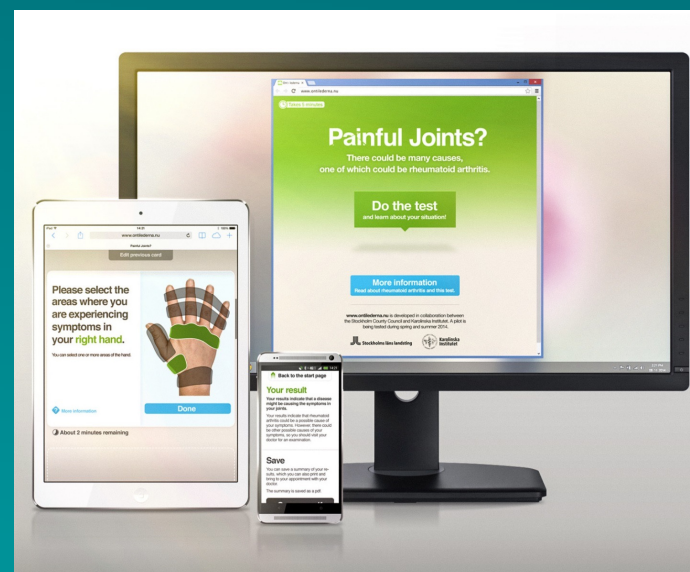
Consent

Biobanking

Research portal

### Online screening

- Patient/individual uses an online service to fill in a form that is transmitted to care provider
- Co-created together with patients, primary care physicians, nurses, physiotherapists and rheumatologists
- **=> 25 % more patients have received their diagnosis within three months from debut of symptoms**



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**Stockholms läns landsting**

Stockholm County Council

# Online screening

Fill in...

Choose care center

Choose time

Send

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Stockholm County Council



## 4D achievements so far – generalizable models

Screening

PTH

Consent

Biobanking

Research portal

### Patient's own test-handling

- Patients can create their own referrals and appointments for lab tests through online service My Healthcare Contacts
- Authorization through care providers is required
- For patients with chronic diseases
- => Won a Swedish e-health prize



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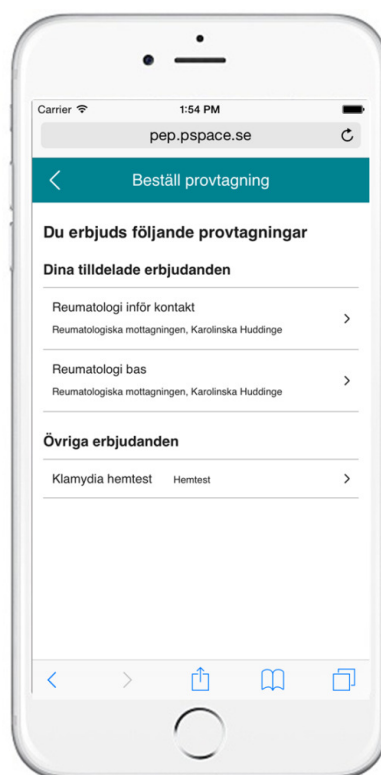
**Karolinska  
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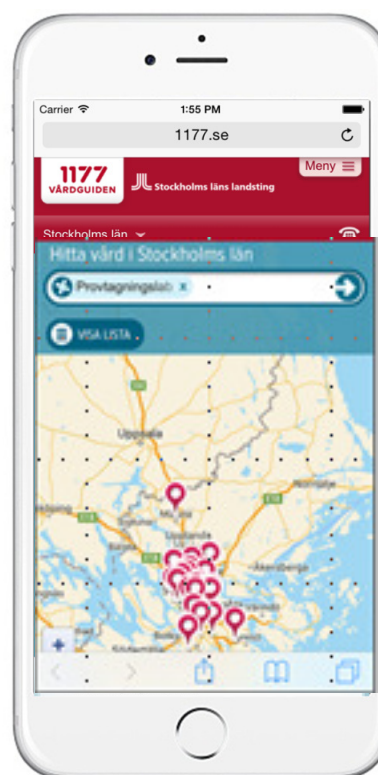
Stockholm County Council

## Patient's own lab test handling

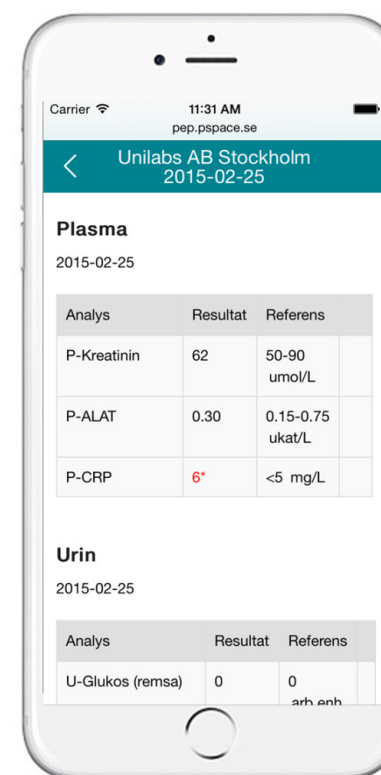
Order...



Choose lab...



See test results...



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Stockholm County Council

## 4D achievements so far – generalizable models

Screening

PTH

Consent

Biobanking

Research portal

### Consent management

- Digital collection of consent through app accessible by tablet
- Patient consent for biobank storage of samples and participation in research studies **has increased from 66% to 97% in breast cancer**



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## 4D achievements so far – generalizable models

Screening

PST

Consent

Biobanking

Research portal

### Biobanking

4D as pilots in the development of Stockholm's Medical Biobank (SMB)

- Standardized handling process, from primary to specialist care
- Samples and data available to both healthcare and research



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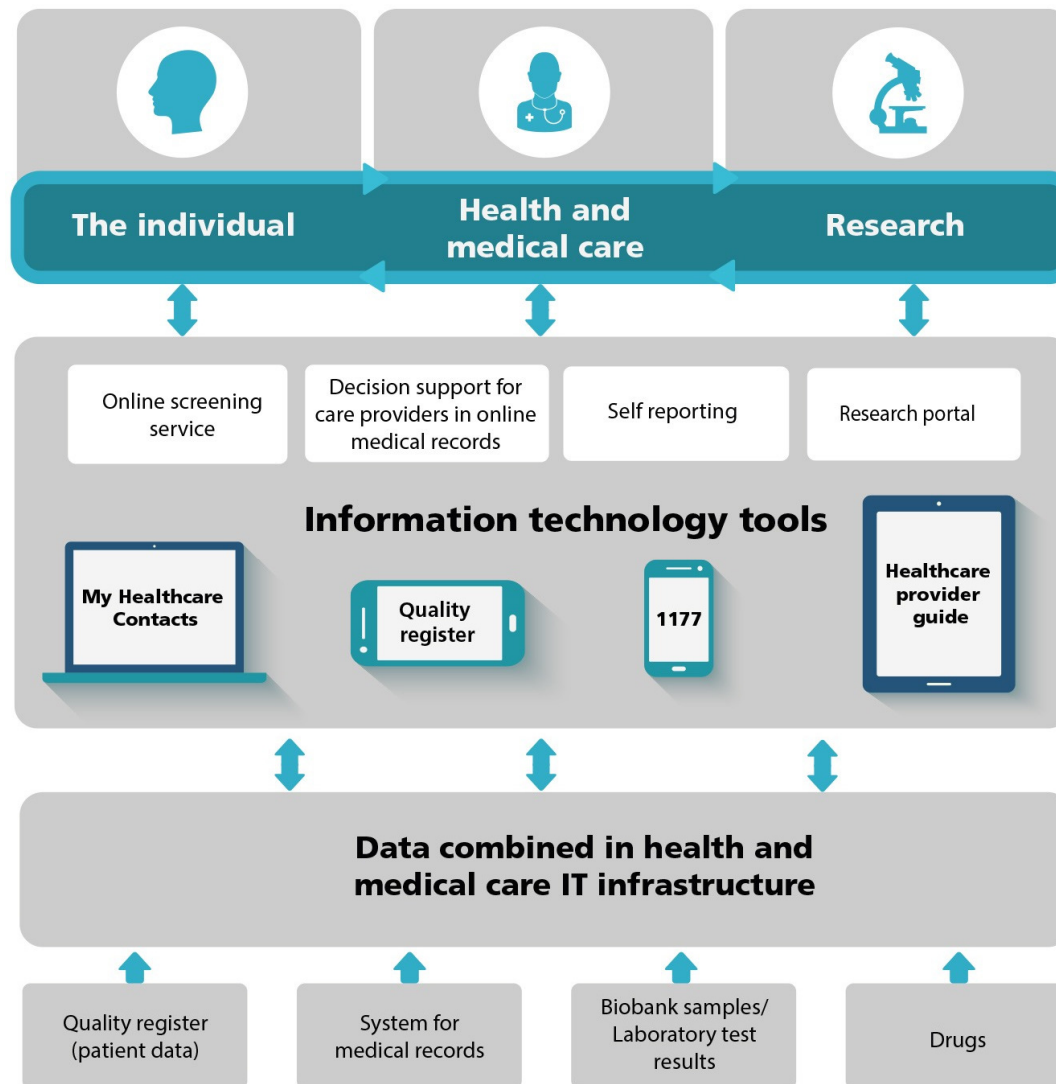


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Stockholm County Council

Digital, scalable  
solutions where  
the individual/  
patient is a  
co-producer



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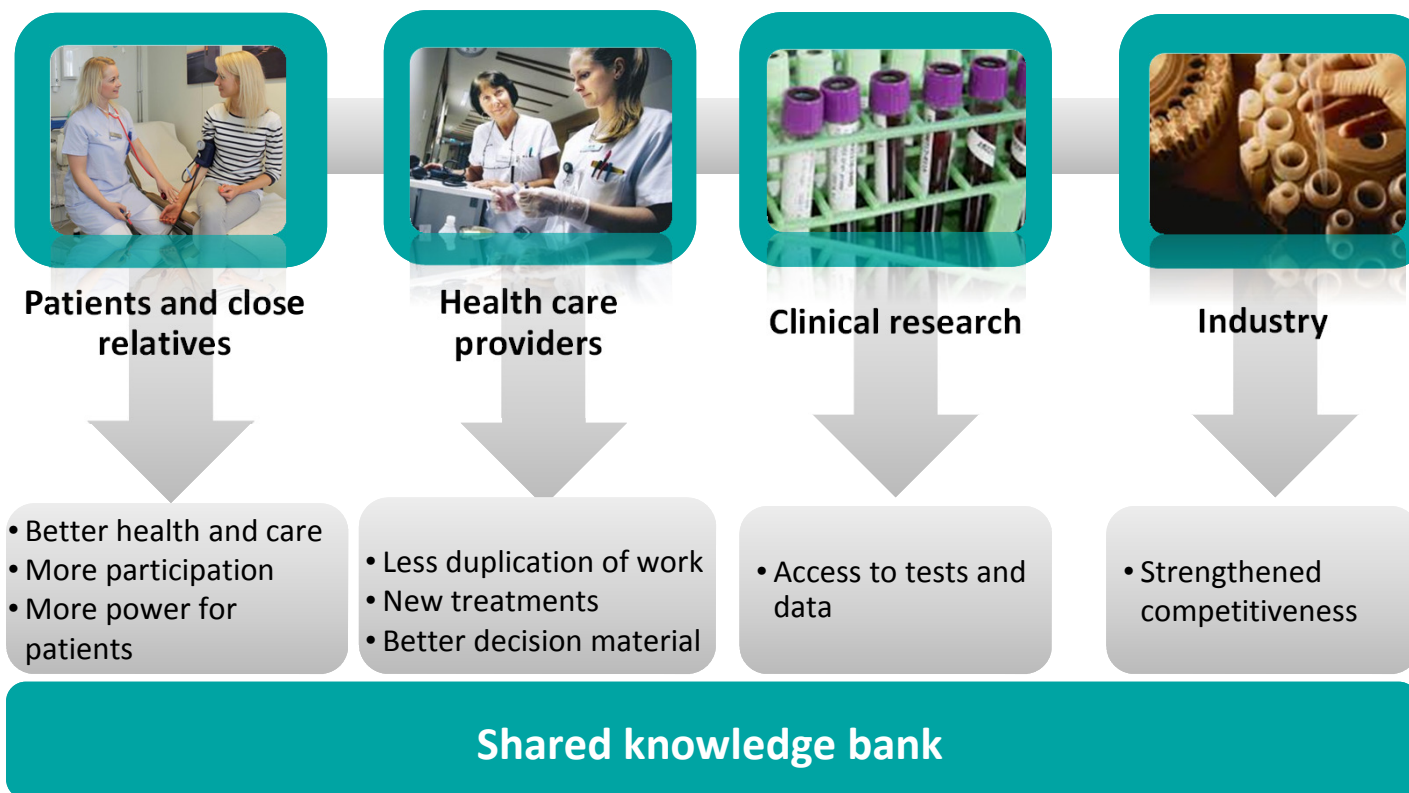
# Example - VBHC framework within Breast Cancer and Heart Failure

$$\text{Value} = \frac{\text{Health outcomes that matter to patients}}{\text{Costs of delivering the outcomes}}$$



| Porters Value Agenda                                                                | 4D Breast Cancer (BC)                                     | 4D Heart Failure (HF)                                                   |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------|
| <b>1. Organize into Integrated Practice Units (IPUs) around a medical condition</b> | 1. Being created via three BC centres at DS, K Solna, SöS | 1. Established via five HF centres at DS, K Solna & Huddinge, St G, SöS |
| <b>2. Measure outcomes and costs per patient</b>                                    |                                                           |                                                                         |
| A) Health outcomes                                                                  | A) To be developed by ICHOM, assisted by 4D BC            | A) To be developed by ICHOM, assisted by 4D HF                          |
| B) Costs                                                                            | B) To be defined at K                                     | B) To be defined by K                                                   |
| <b>3. Move to bundled payments for care cycles</b>                                  | 3. To be developed by SCC                                 | 3. To be developed by SCC                                               |
| <b>4. Integrate multi-site care delivery systems</b>                                | 4. Three BC centres                                       | 4. Five HF centres                                                      |
| <b>5. Expand geographic reach in areas of excellence</b>                            | 5.                                                        | 5.                                                                      |
| <b>6. Build an enabling information technology platform</b>                         | 6. Being developed via 4D                                 | 6. Being developed via 4D                                               |

## Value for stakeholders



# Take home 1

- Unless we make concerted efforts to handle the information delivery the health care-system will not thrive



## Take home 2

- Only a proper feedback to health care with both quality and economical data will drive the necessary change

## Take home 3

- Quality and process data is a strategic resource that should be owned by the health care provider

# Thank you

[martin.ingvar@ki.se](mailto:martin.ingvar@ki.se)



Is waste  
a problem?

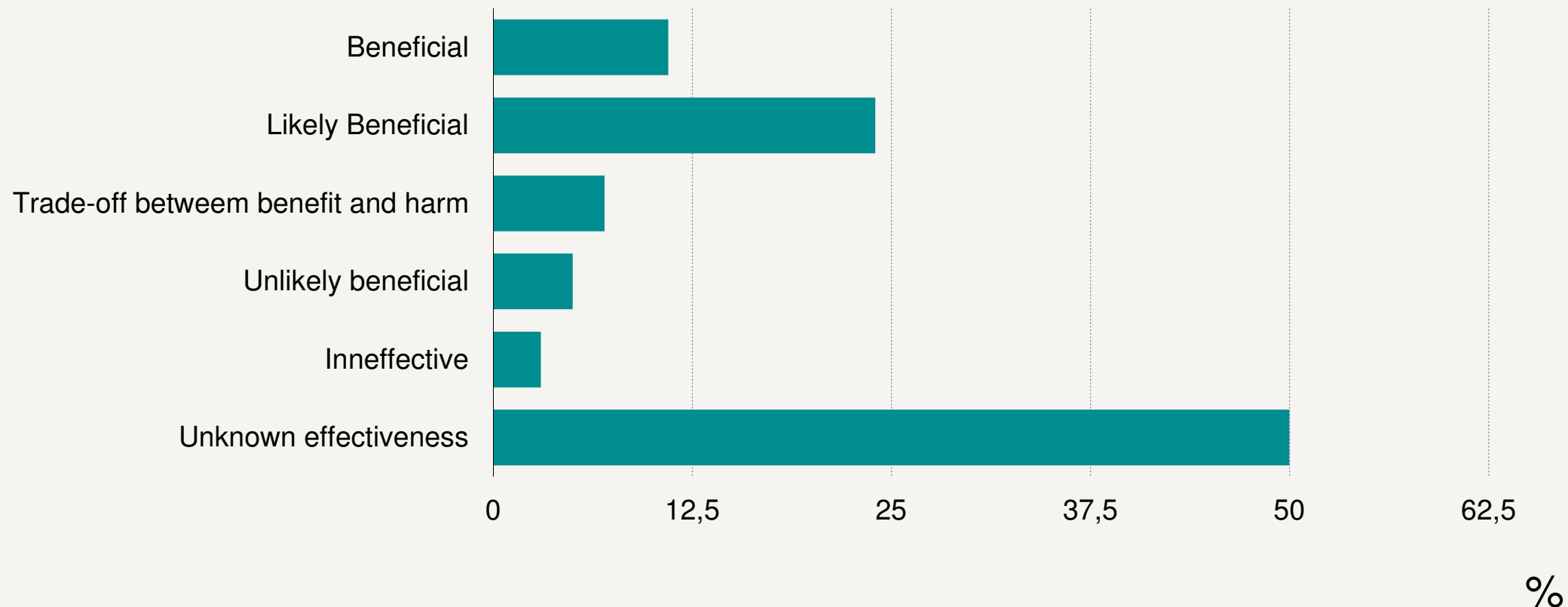
# Sources of waste (1)

- **Failures of Care Coordination:** the waste that comes when patients fall through the slats in fragmented care.
- The results are complications, hospital readmissions, declines in functional status, and increased dependency, especially for the chronically ill, for whom care coordination is essential for health and function. Interaction with socioeconomic strength.
- \$45 billion in waste in 2011 in the US
- Berwick & Hackbarth 2012

# Sources of waste (2)

- **Overtreatment:** the waste that comes from subjecting patients to care that, according to sound science and the patients' own preferences, cannot possibly help them
- Care rooted in outmoded habits, payment structure, supplydriven behaviors, and ignoring science.
- \$200 billion in waste in 2011 in the US
- Berwick & Hackbarth 2012

# Less than 50% of decisions have proven effect



BMJ Clinical Evidence: 3000 treatments evaluated against RCT available evidence



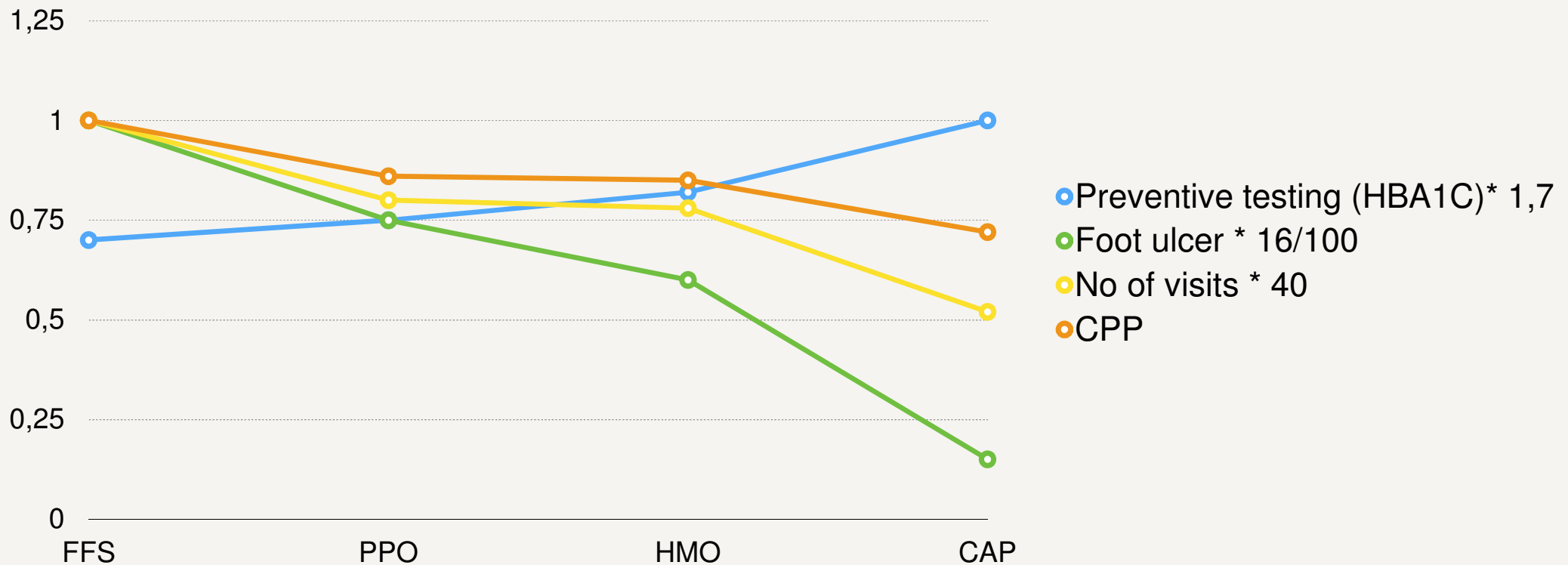
# Sources of waste (3)

- **Administrative Complexity:** the waste that comes when government, payers, and others create inefficient or misguided rules.
- \$389 billion in waste in 2011 in the US
- Berwick & Hackbarth 2012

# Sources of waste (4)

- **Pricing Failures:** the waste that comes as prices migrate far from those expected in well-functioning markets
- \$178 billion in waste in 2011 in the US
- Berwick & Hackbarth 2012

# Paying for transactions leads to more transactions instead of health gains, i.e. quantity and not quality



Source: BCG analysis

PROMS

# The Swedish system

- Single payer, many suppliers
- National health registers in dire need of consolidation
- Payment still fee for service
- Multiple EMR
- Technical interoperability available
- Poor strategy semantic interoperability