Value Based Healthcare
(in Erasmus MC)

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Desiderius ERASMUS

- Born in Rotterdam
- Humanist
- “1st” European

Rotterdam 1466 – Basel 1536
Course 18

Visibly Better
These are our aims!

**Ambition 1: Continually adding Value**

Our guiding principle for research, education, and health care is creating added value for patients

Understanding the health, diseases, and wishes of patients

Personalized medicine (individualized treatment)

Prevention

Translating knowledge into useful, innovative products and health care concepts

More information: [http://koers18.online-magazine.nl](http://koers18.online-magazine.nl)
Categories of Quality Measures Listed in the National Quality Measures Clearinghouse (NQMC).
The effect size

Benefit

Harm

Resources

necessary  appropriate  inappropriate  futile

Zero

Is All About How We See
VBHC: value based healthcare

Health Care Quality:
- Effective
- Patient centered
- Safe
- Efficient
- Timely
- Equitable

Outcomes + Experiences that matter to patients

\[ \text{€€ + energy needed to achieve the outcomes} = \text{VALUE} \]

Focus on Disease / Individual
Team based approach
Care Path / Integrated Care
Measurement of outcome & costs in every patient
Culture / Organizational change
Fee for volume → performance
Focus on the outcomes that matter most to patients

Michael Porter’s Outcome Measures Hierarchy

**Tier 1**
- Health status achieved or retained
  - Survival
  - Degree of health achieved or maintained

**Tier 2**
- Process of Recovery
  - Time to recovery and return to normal activities
    - Disutility of the care or treatment process (e.g., diagnostic errors and ineffective care, treatment-related discomfort, complications, or treatment errors)

**Tier 3**
- Sustainability of health
  - Sustainability of health/recovery and nature of recurrences
    - Long-term consequences of therapy (e.g., care-induced illnesses)
  - Recurrences
  - Care-induced Illnesses

Patient-Reported Outcomes
Patient Reported Outcome Measures

Before your operation
Questionnaire

After your operation
Questionnaire

Measure of Health
Before | After
Why PRO (patient reported outcome)

- Biomarkers fail to correspond with how patients actually feel
- Patients value biomarkers differently
- PROM’s provide a key component to understand burden of disease
- Especially important in diseases with morbidity (and low mortality)
- Starting point for improvement of therapy
- Better communication and shared decision making
- Detecting adverse effects of therapy
- PRO → PROM → PRO-PM
  - Depression – HADS - % pts wit initial HADS > 8, and < 8 at 6m
Expertiseteam voor Waardegedreven Zorg
Erasmus MC Center for Value-Based Health Care

Zorg die verder reikt

Care that goes much further
Erasmus MC Blueprint
Facilitate the teams on their journey towards VBHC

Intake
Preparation
Develop & Design
Building
Implement
Evaluate & Innovate

Change management

Expertise team VBHC
Collab. agreement
Preparation
Care path & Outcome set
Building IT configuration
Building dashboard
Facilitate benchmark

Disease team
Signing up
Preparation
Optimize path & set
Implement & measure
Continuous improvement
Benchmark & innovate

Patient participation in the sessions
Breast Cancer

EORTC QLQ-C30
EORTC QLQ-BR23
FACT-ES
EORTC QLQ-LMC21

CTCAE v4.0
EORTC QLQ-C30
EORTC QLQ-C30
BREAST-Q
BREAST-Q
Outcome measures and Supporting Information: Breast Cancer
<table>
<thead>
<tr>
<th><strong>Casemix and Therapy</strong></th>
<th><strong>Casemix and Therapy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapy plan</td>
<td>Histological type</td>
</tr>
<tr>
<td>Date of birth</td>
<td>Gene mutation status</td>
</tr>
<tr>
<td>Body Mass Index</td>
<td>Tumor grade</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Performance status</td>
</tr>
<tr>
<td>Educational level</td>
<td>Pathological TNM Stage</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>Size of invasive component of tumor</td>
</tr>
<tr>
<td>Working status</td>
<td>Number of lymphnodes resected</td>
</tr>
<tr>
<td>Smoking</td>
<td>Number of lymphnodes involved</td>
</tr>
<tr>
<td>Relationship status</td>
<td>Estrogen receptor status</td>
</tr>
<tr>
<td>Childwish</td>
<td>Progesteron receptor status</td>
</tr>
<tr>
<td>Menopausal status</td>
<td>Herz-neu receptor status</td>
</tr>
<tr>
<td>Comorbidity</td>
<td></td>
</tr>
<tr>
<td>Laterality</td>
<td></td>
</tr>
<tr>
<td>First or new primary tumor</td>
<td></td>
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</tbody>
</table>

**VALUE BASED HEALTH CARE**

Care that goes way further

For specific diagnosis outcome sets: waardegedrevenzorg@erasmusmc.nl
Patient Reported Outcome Measures (PROMs) en Provider Reported Measures
PROM-learning 2,5 years

- Including **feedback** by health care professional
- Need for ‘normscores’: What is to be expected? When to intervene?
- Results are discussed in the consultation room.
Prospective data collection (since 2015) including feedback

- Benchmarking with 8 regional partner hospitals
  Summer 2018; Albert Schweitzer, Amphia, SFG and Vlietland, Ikazia, Maasstad, van Weel Bethesda, Spijkenisse Medisch Centrum)
  Dataplatform and dashboard: Dutch Hospital Data (DHD)
  (initiated by NVZ & NFU)

- International benchmarking European University Hospital Alliance;
  Dana Farber Cancer Centre, Boston; OECD

- National initiative to measure PROMs in other UMCs
Patient-Reported Outcome Measures May Add Value in Breast Cancer Surgery

M. Lagendijk, MD\textsuperscript{1}, L. S. E. van Egdom, MD\textsuperscript{1}, F. E. E. van Veen\textsuperscript{1}, E. L. Vos, MD, MSc\textsuperscript{1,2}, M. A. M. Mureau, MD, PhD\textsuperscript{3}, N. van Leeuwen, MSc\textsuperscript{2}, J. A. Hazelzet, MD, PhD\textsuperscript{2}, H. F. Lingsma, PhD, MSc\textsuperscript{2}, and L. B. Koppert, MD, PhD, MSc\textsuperscript{1}

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Care Monitor – Dashboard

Number of patients per cleft diagnosis

Summary PROMs

PROM’s

Cleft-Q Dental

Cleft-Q Eating & Drinking

Cleft-Q Face

Cleft-Q Feel
Compliance – Patients

Patient Compliance
N = 320

- better preparation and more awareness of what to discuss
- easier access and approach to psycosocial aspects of treatment
The Timeline of VBHC in Erasmus MC

2013
- Starting:
  - Head and Neck cancer

2014
- Starting:
  - Bladder cancer
  - Breast cancer
  - Stroke
  - Cleft lip & palate
  - Turner syndrome
  - Brain tumors
  - Obesity (T)

2015
- Starting:
  - Macula degeneration (T)
    - Sickle-cell disease
    - Cervical cancer
    - Pediatric thoracic surgery
    - Pediatric brain tumors
    - Obstructive Jaundice
    - Lung cancer
    - Liver tumors
    - Liver transplantations
    - Kidney transplantations
    - Familial hypercholesterolemia
    - **1st Erasmus MC and ICHOM strategic partnership**

2016
- Starting:
  - Cataract (T)
    - Craniofacial Microsoma
    - Functional bladder disorders
    - Larynx cancer
    - Peripheral vascular disease
    - Skin cancer (T)
    - Sarcoma
    - **“HBR:”A Blueprint for Measuring Health Care Outcomes”**

2017
- Starting:
  - Subarachnoid hemorrhage
    - GIST
    - **Start: Pilot Value Based Payment**
    - **First VBHC course (Erasmus Summer School)**
    - **Start: Pilot Value Based Healthcare Medical Curriculum**

2018
- Starting:
  - Pregnancy & Birth
  - Esophageal and anorectal malformations
  - Reproductive medicine: (Testicular sperm extraction and IVF)
  - Autoimmune inflammatory disease (incl. biologicals)
  - Multiple myeloma
  - Congenital hand malformations
  - Overall health
  - **2nd VBHC course (Erasmus Summer School)**

☆ = Erasmus participation in ICHOM set
Work in Progress:

- Overall Health Adult
- Overall Health Pediatric
- Hand and Wrist Conditions
- Congenital Heart Disease
- Head & Neck Oncology
- ……

http://www.ichom.org/medical-conditions
Patient as a Partner
Evidence vs Value Based Health Care

Evidence-based medicine and values-based medicine: partners in clinical education as well as in clinical practice

Ed Peile

JAMA 2014; 312: 1295-6
Patient Reported Experience Measure: Picker Principles of Person-Centred Care

- Fast access to reliable health advice
- Effective treatment delivered by trusted professionals
- Continuity of care and smooth transitions
- Involvement in decisions and respect for preferences
- Clear, comprehensible information and support for self-care
- **Involvement of and support for family and Carers**
- Emotional support, empathy and respect
- Attention to physical and environmental needs
Transforming the current system in several ways

Current system
- Focus on specialty
- Clinician based approach
- Organized in hospital
- Measurement of process and charges
- Fee-for-service payments based on volume/services
- IT systems for services and departments

New model
- Focus on individual with disease(s)
- Team based approach
- Integrated Care
- Measurement of outcome & costs in every patient
- Performance based payments
- Integrated IT platform

Adapted from Michael Porter
Improvement is teambased

http://aib.edu.au/blog/top-tips-effective-teamwork/
Towards Continuous Team-based Redesign based on Value

Disease Team
United, responsible, accountable

..clinical leadership, team collaboration, personal commitment...

Performance Data Set

- PROM’s
- PREM’s
- Clinical Outcome
- Preventable Complications
- Key Process Measures
- Finance
- Team Culture
AFTER NEARLY A DECADE OF EXPERIMENTATION WITH VALUE-BASED PAYMENT (VBP), U.S. health care payers, providers, and purchasers are confronting uneven adoption of new care guidelines, modest early results, and still-unacceptable gaps in spending and quality. In
VBHC Collaboration Erasmus MC – Zilveren Kruis

2 year follow-up for outcomes

2 year claims data (total costs)

Integrated Care:
Erasmus – Rehab – Nursing Home – Physio – Homecare

Long-term project for shared savings/risk contracting & VB bundled payment

http://www.ichom.org/medical-conditions/stroke/
Corporate entity: One
Management: Combined
Contract: Uniform
Budget: Joint

Multiple
Separate
Different
Separate

consensus
Box 2 | The FAIR Guiding Principles

To be Findable:
F1. (meta)data are assigned a globally unique and persistent identifier
F2. data are described with rich metadata (defined by R1 below)
F3. metadata clearly and explicitly include the identifier of the data it describes
F4. (meta)data are registered or indexed in a searchable resource

To be Accessible:
A1. (meta)data are retrievable by their identifier using a standardized communications protocol
A1.1 the protocol is open, free, and universally implementable
A1.2 the protocol allows for an authentication and authorization procedure, where necessary
A2. metadata are accessible, even when the data are no longer available

To be Interoperable:
I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.
I2. (meta)data use vocabularies that follow FAIR principles
I3. (meta)data include qualified references to other (meta)data

To be Reusable:
R1. metad ata are richly described with a plurality of accurate and relevant attributes
R1.1. (meta)data are released with a clear and accessible data usage license
R1.2. (meta)data are associated with detailed provenance
R1.3. (meta)data meet domain-relevant community standards

There is an urgent need to improve the infrastructure supporting the reuse of scholarly data. A diverse set of stakeholders—representing academia, industry, funding agencies, and scholarly publishers—have come together to design and jointly endorse a concise and measureable set of principles that we refer to as the FAIR Data Principles. The intent is that these may act as a guideline for those wishing to enhance the reusability of their data holdings. Distinct from peer initiatives that focus on the human
IHI Framework for Improving Joy in Work

VALUE BASED HEALTHCARE (VBHC)

Outcomes & experiences *that matter to patients*

Value =

Costs and energy needed

- Focus on disease / individual
- Team based approach
- Care Path Integrated Care
- Shared decision-making
- Measurement of outcome & costs in patient
- Culture / Organizational change
- Fee for volume → performance
Save the date
2019 Conference, Rotterdam
2-3 May
More information to follow soon
Value Based Healthcare, from theory to implementation [ESP76]

August, 26-30 2019 every day 13-16hr