Clinical Quality Development and the Emergence of the EHCR

Prof. Dr. Marc Berg, MD

Plexus Medical Group, Amsterdam
Erasmus University, Rotterdam

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PLEXUS MEDICAL GROUP

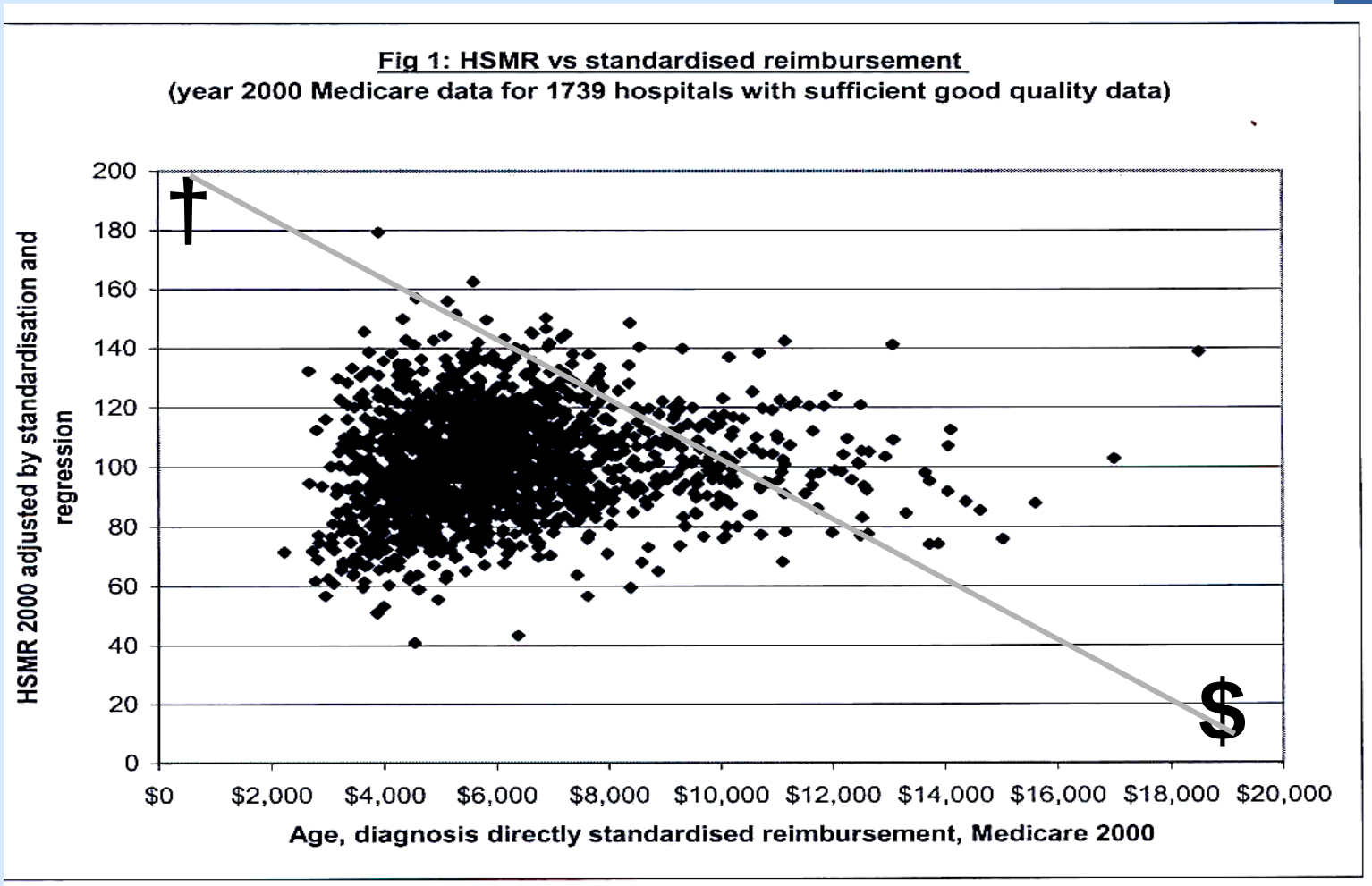
- **EPR in 15 years?**

- **… *that's fast!***

WHY ARE WE HERE?

Hospital Mortality vs Costs: USA

Factor 4



Factor 6

Brian Jarman, UK

The Cost of Poor Quality: The Business Case

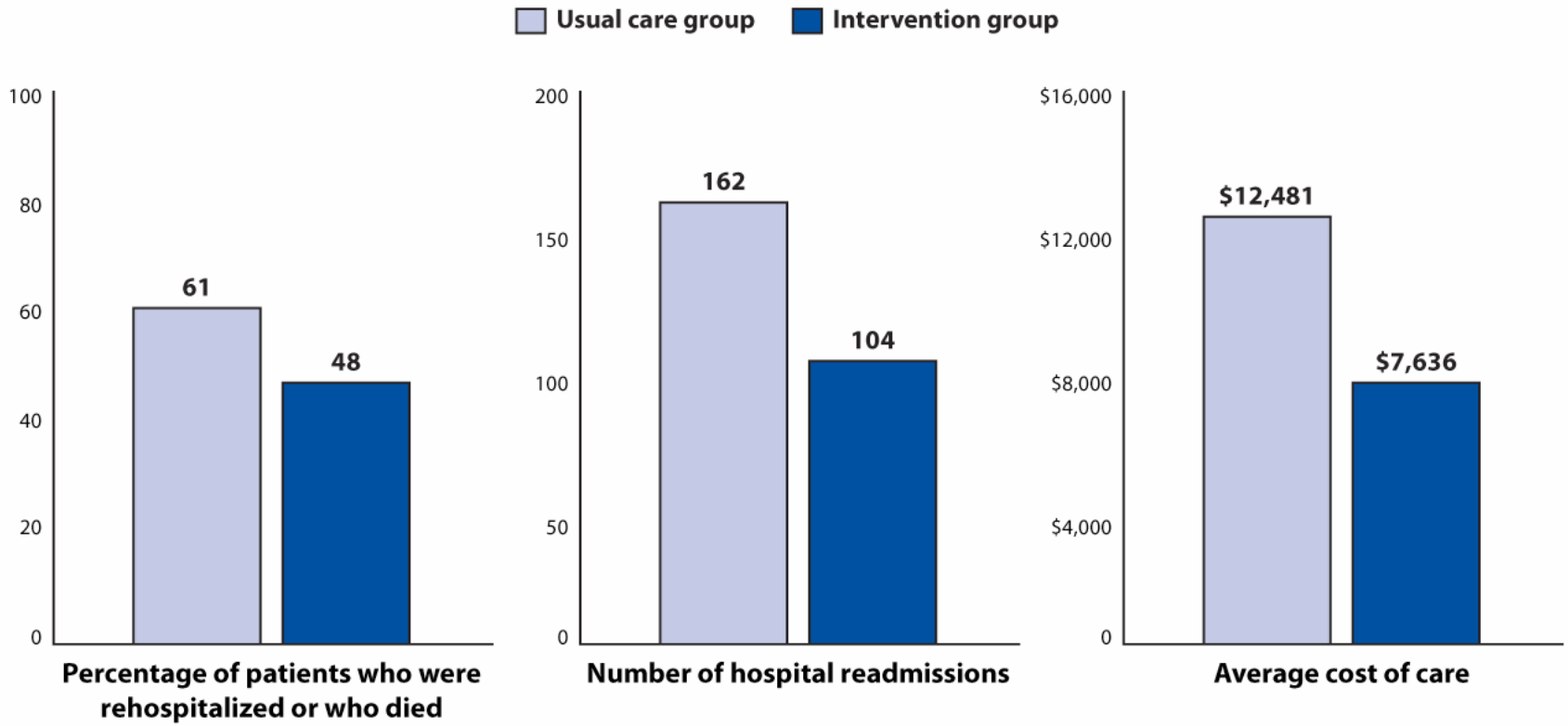
Juran Report on US Health Care

- **'Cost of Poor Quality':**
  - healthcare error rates are orders of magnitude higher than in other industries
  - poor quality care accounts for 35-45% of HC expenditures (585 Billion in 2000)
- **Most costly:**
  - medication misuse
  - hospital overuse
  - preventable hospital-acquired infections
  - poor disease management: diabetes, depression, HF, vaccination, etc.

Reducing Rehospitalization for Congestive Heart Failure

Elderly patients hospitalized for heart failure were less likely to be readmitted to the hospital or to die and had lower health care costs overall when they received transitional care from an advanced practice nurse who provided needs assessment, care planning, patient education, and therapeutic support through discharge planning and home follow-up visits.

Resource use among congestive heart failure patients ages 65+ treated at six Philadelphia hospitals during 1997–2001 who were randomly assigned to receive a three-month transitional care intervention or usual care



Source: Medical records and patient interviews (N = 239) (Naylor et al. 2004).

THE COST OF POOR QUALITY

I am sorry. Your disease and our organisation just do not match.

Vision: ‘bridging the quality chasm’

‘Delivering top quality care’

Optimally patient-centered

*Effective & **safe***

Learning organisation

Efficient

WHY ARE WE HERE?

A little history: the link between IT and Quality

- **1950s: Computer will rapidly improve doctor's decision making!**

- **1990: Dick and Steen report**
  'Health care in dire need of a central nervous system: EPR by year 2000'

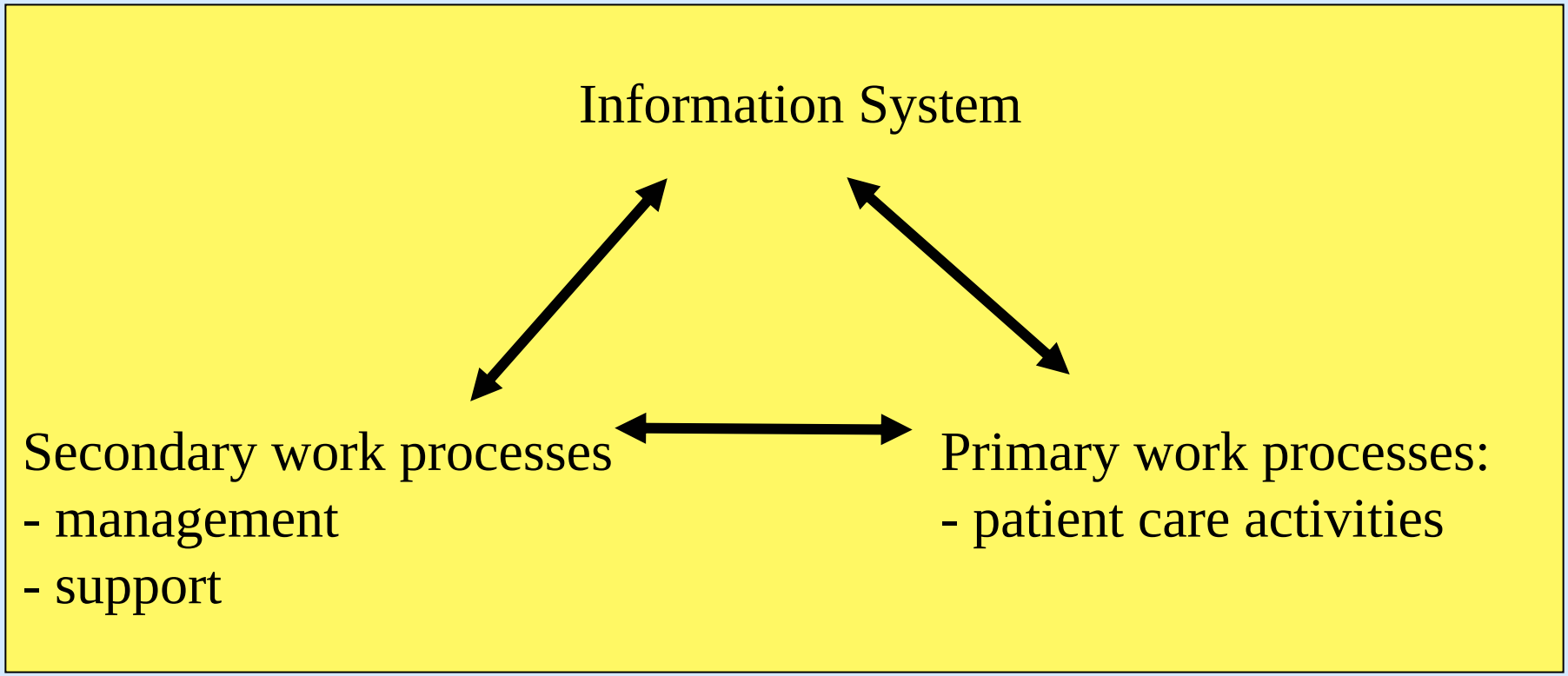
- **End of 90s: disappointment set in, health ICT just wasn't delivering**

- **Internet bubble crashed – projects and subsidies and research groups withered away…**

Why the disappointment?

- **We have to face the fact that the majority of ICT projects fails…**
- **… all over the board. Some countries (UK) more open than others (the Netherlands, France)…**
- **Types of failure:**
  - technical
  - financial
  - organisational
  - clinical
- ***Is primarily due to human and organisational reasons!***

The search for synergy:



Has IT so far significantly helped overcome the quality chasm?

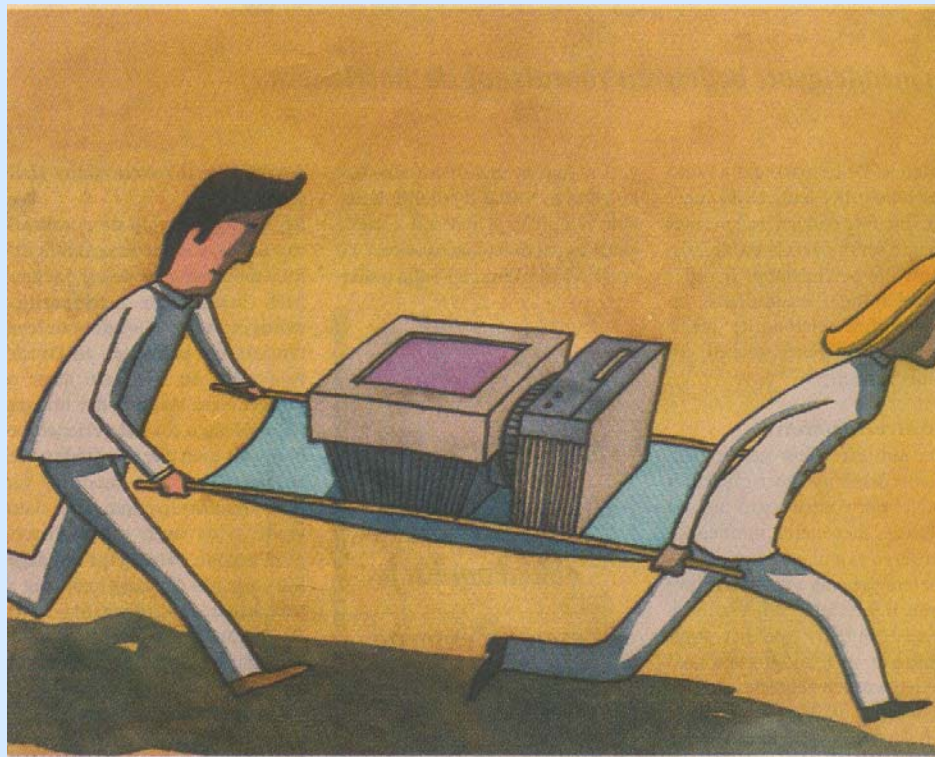
- **Not really… we tend to forget that**
- **… IT implementation is organizational development**
- **… there are no technological solutions for organizational problems**

  – *Asking the question whether Electronic Medication Systems can prevent medication errors without integrally taking its practices of use into account is like evaluating the efficacy of a drug without taking note of how and when and with what other substances the drug is taken*

WE SHOULD NOT BE FOCUSSING ON THE TREES RATHER THAN THE FOREST

CPOE is a case in point

- **CPOE set as target without proper idea of how, why, what**
  - Doing CPOE without having basic IT infrastructure is like building a roof without first building the walls
- **CPOE as separate project is meaningless…**
- **Has to be integrated in a larger program of organizational change**



Let us Not Forget the Painful Lessons!

- ***IT is probably the simplest part of the complex sociotechnical changes we want to bring….***
- ***Yet if we do not start with these complex changes, we might as well forget the IT!***
- ***The only way is the hard way…***

What is required?

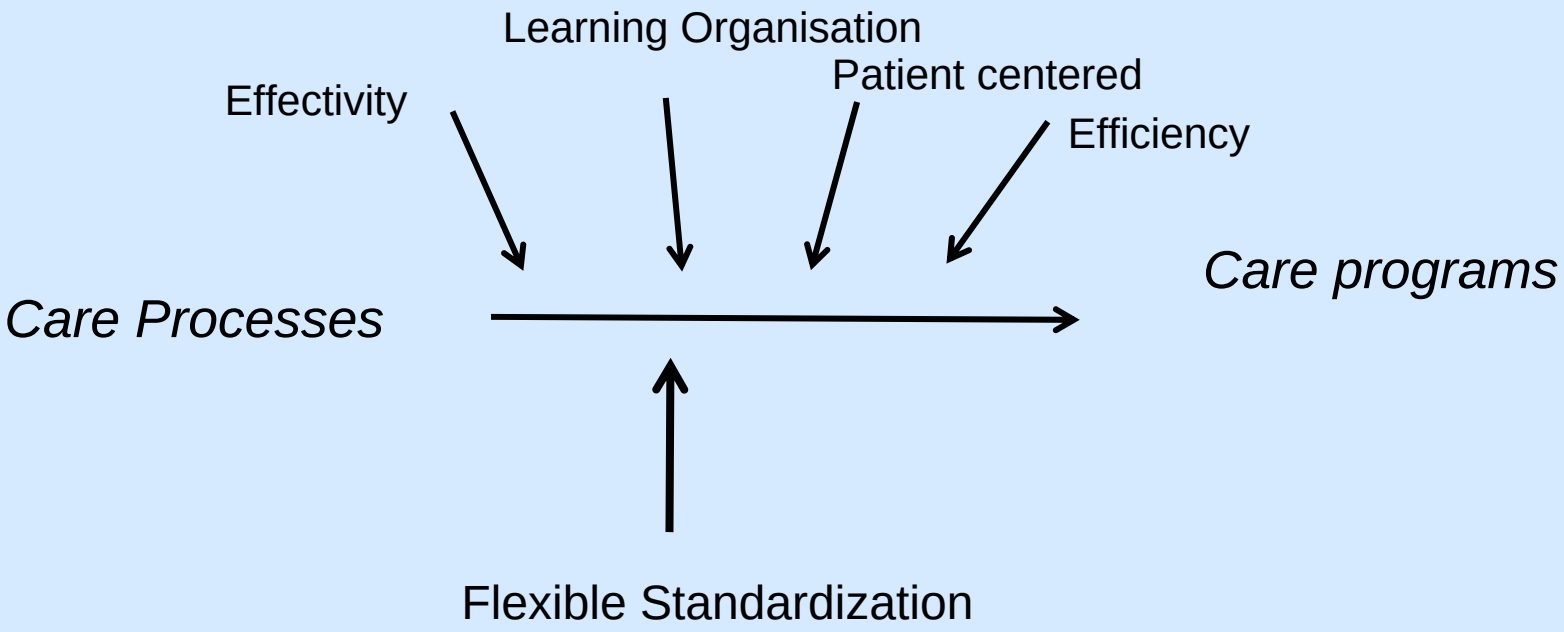
- To address Quality Chasm, we need to fundamentally integrate Quality and IT development
- Fundamental redesign of existing care processes at the level of the primary process of care…
- … while integrating professional and organizational quality

Standardization of care programs

- **Our current ‘step-by-step’ mode of delivering health care used to be the perfect way of delivering care…**
- **But has become dysfunctional:**
  - Inefficient: loss of time, unnecessary steps taken
  - Patient unfriendly: ‘search your way through the jungle’
  - Continuous battles at shop floor
  - Increases chances of errors;’ ‘much falls between the cracks’
- ***Examples:***
  - *Heart Failure Care*
    - *High readmission rates*
    - *Poor guideline compliance*
  - *Stroke Care*
    - *Long LOS, many ‘wrong beds’*
    - *Poor guideline compliance*

Standardization of care programs

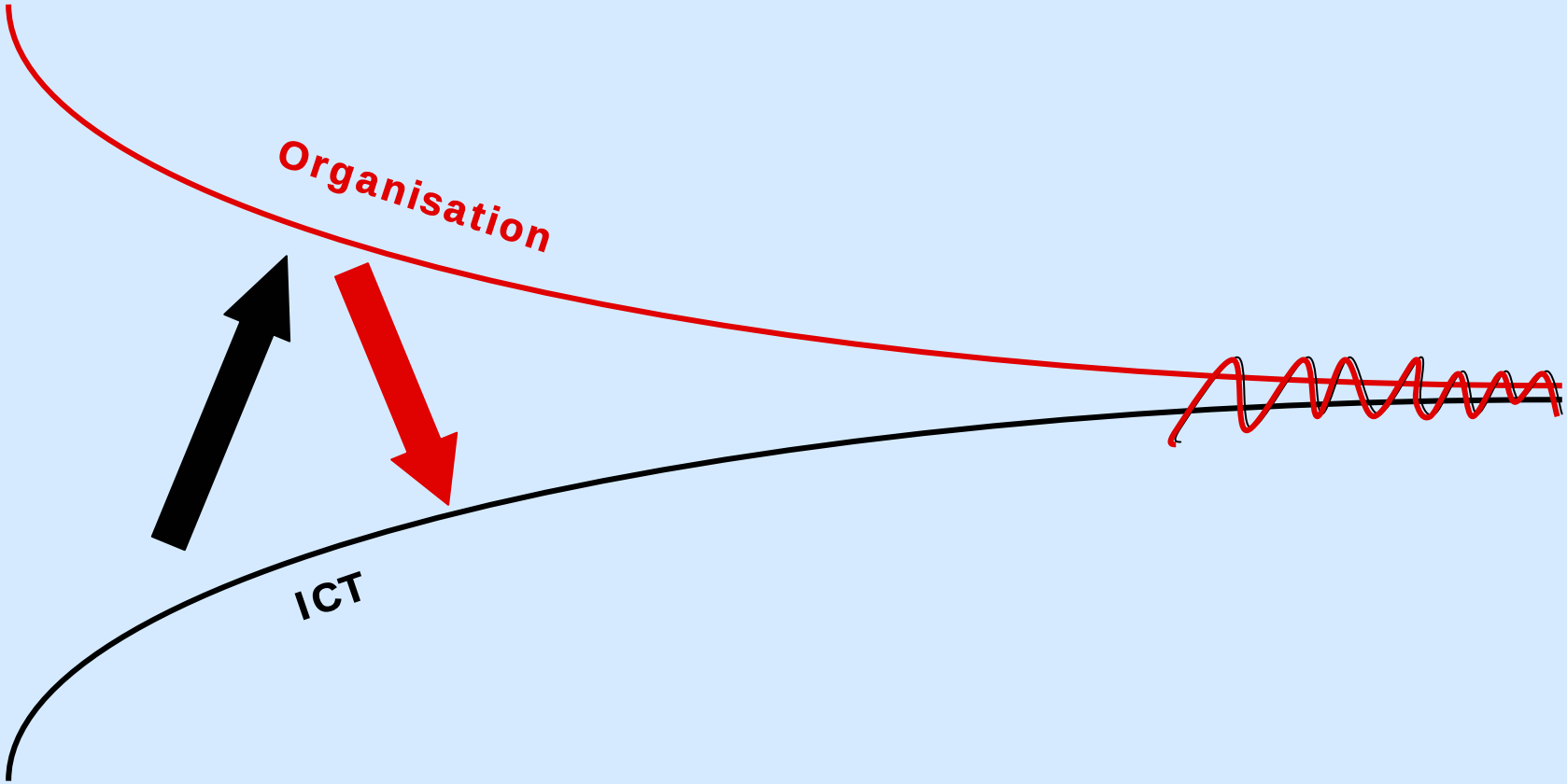
- **Restructure current processes from the light of the clinical *problem:***



Standardization of care programs

- **Standardized care programs can be developed for largest categories of patients**
  - 80% of activities can be standardized for 80%
  - No standard approach to every individual, but to *category* of patients
  - Leaves individual trajectories fully flexible
- **Embedded in working agreements (‘SOP’s), forms, IT**
- **Realize:**
  - Evidence based SOP’s
  - Reduced coordination work
  - Patient centered organization of care
  - The core ingredient of patient safety

Change process *that takes time*!

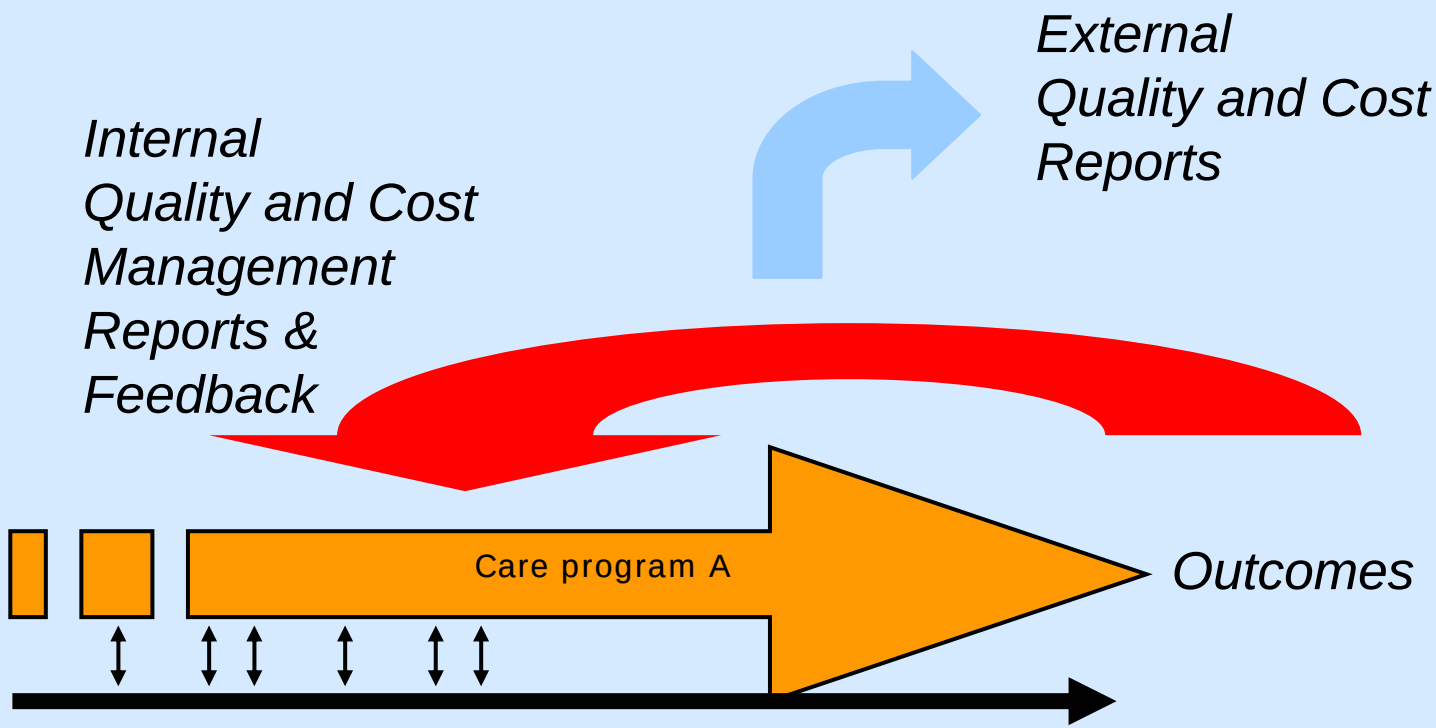


Process supporting ICT: Future EHCR

- **Integrated guidelines that guide without overly constraining**
  - Order-communication
    - With Order-sets
  - Workflow
    - Based on steps and task delegation within care programs
  - ‘Smart EPRs’
    - Reminders, alerts, taken from the care program’s underlying guidelines
  - Triage supporting systems
    - support triage through the care program’s underlying guidelines
  - Datawarehouse systems:
    - Crucial voor measurement infrastructure, and ‘real-time’ coding
  - Protocol-driven booking systems

Process supporting IT

- ***This can only succeed when standardizing care programs….***
- ***… and this subsequently affords the integration of the individual steps in the care program***
- **Crucial, then, for EPR, DWH, order / entry:**
  - Which fields standardized?
  - Which decision rules built in?
  - How to design DWH?
- ***All these questions are answered by through the care programs selected, and the monitoring data that those care programs require***


External
Quality and Cost
Reports
Internal
Quality and Cost
Management
Reports &
Feedback
Care program A
Outcomes

To sum up

- **We do IT to *improve* health care quality and efficiency…**
- **… but we can only achieve that aim when we are able to see IT as only a small part of a larger process of organizational change**
  - Flexible standardization of health care work
  - Turning health care practices into ‘learning organizations’
- **To gradually align organizational and IT abilities is a never ending process….**

If you succeed within 15 years,

you'll be the first!