

Introduction to the Dutch integrated eHealth approach

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Ministry of Health – Integrated Funding Team

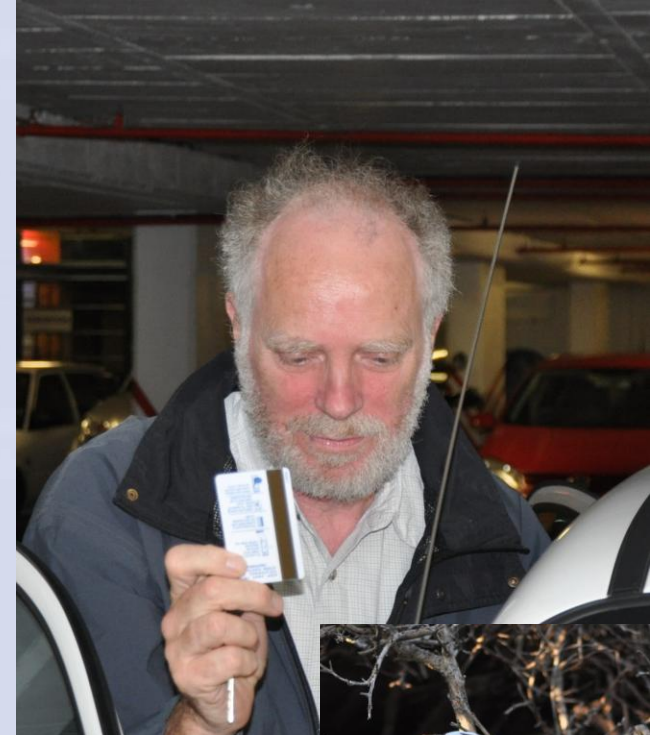


First let's think a moment for 33 brave Mineros being saved



Mission Cape Town

I am here to thank our driver



**It is good to have a goal
enjoy life !**

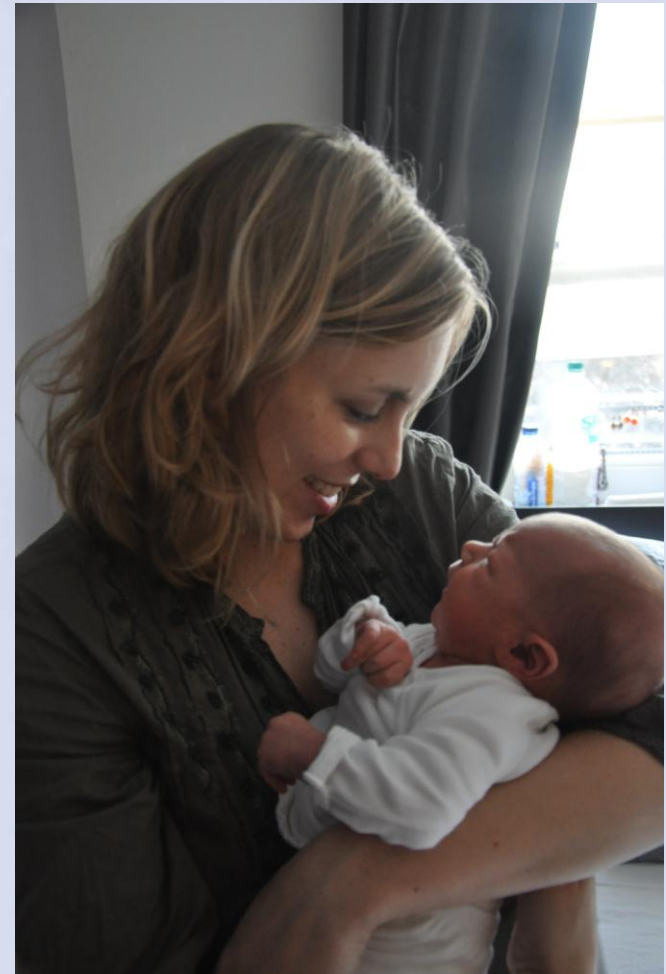
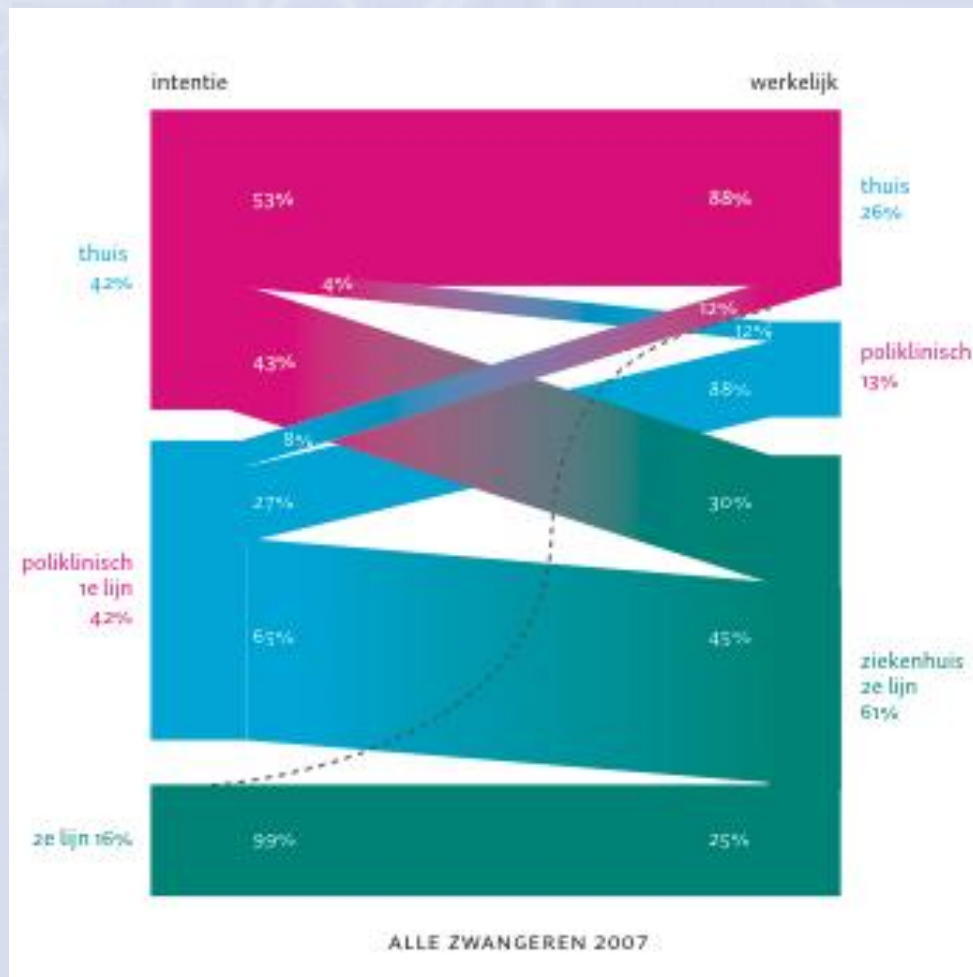


Disclaimer

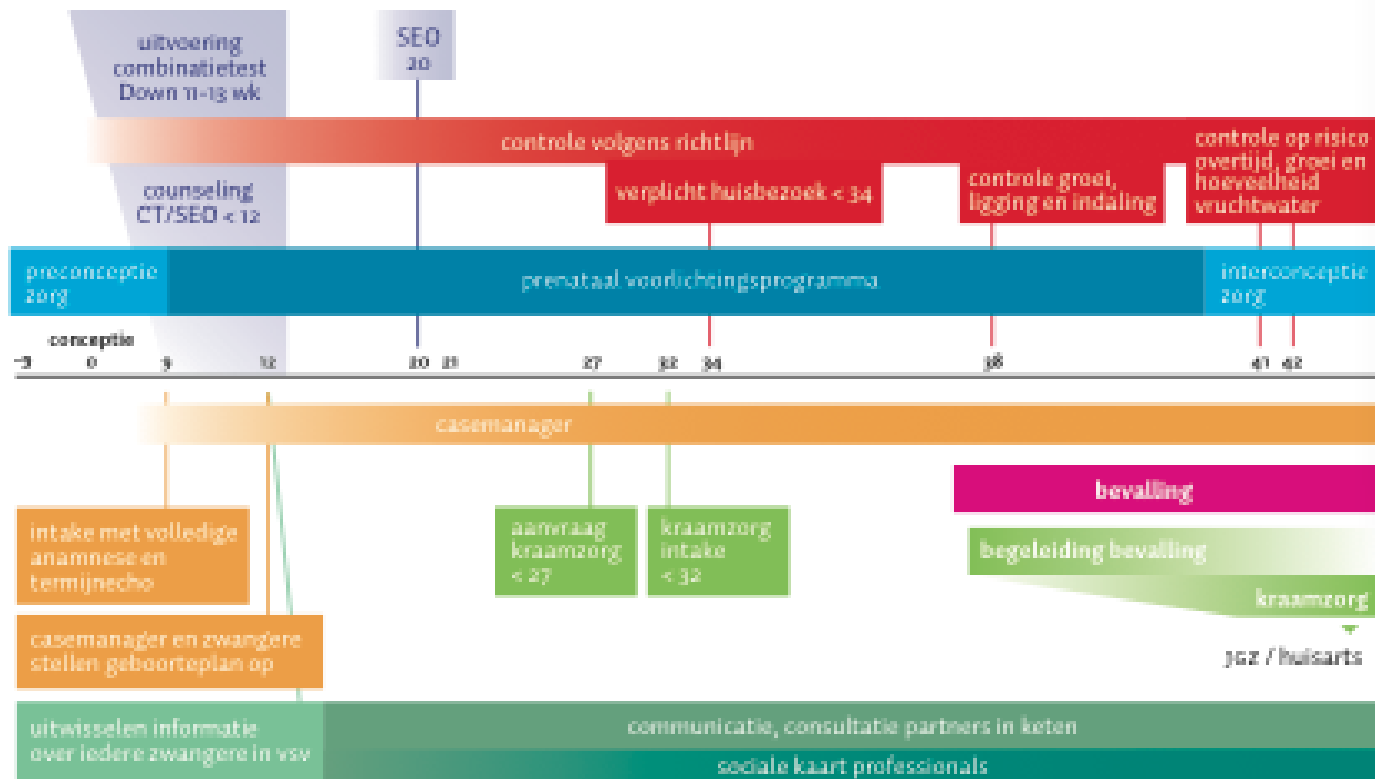
- 1984 Conference on DRG's
- Start of the DRG introduction in Denmark
- 2010 Nyborg revisited
- Start ofIntegrated Care ??

The Start of life

Safety for mother and child

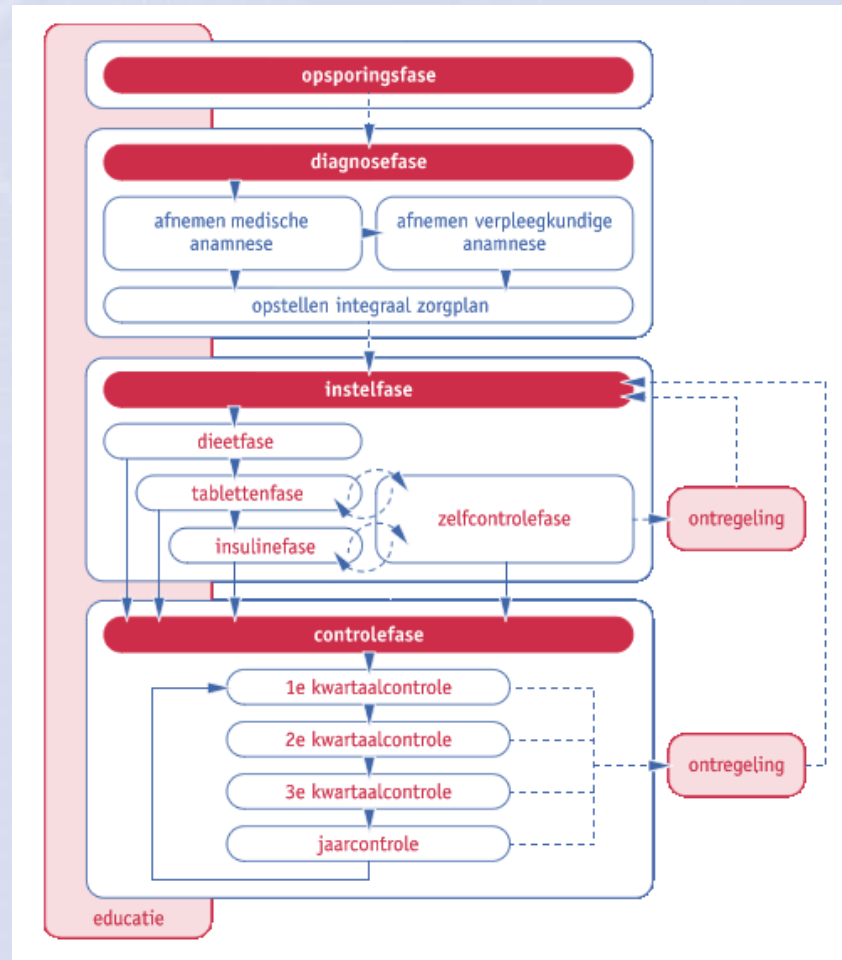


Result consensus on evidence based approach



Figuur 5 Schematisch overzicht geboorteplan, inclusief ijkmomenten

Transmural Diabetescare



A little bit of Dutch geography



1987



diabeteszorg
beter

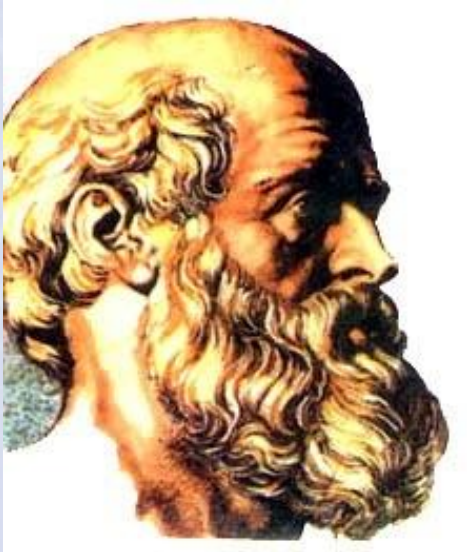
1998

To change the health care system we need more
HEROES, like Hans Brinker



eHealth Nyborg

Start of health as a science



Hippocrates



The Oath
Cases
Lumpsum Funding
Personal responsibility
Case Stories Evidence

From paper to electronic records a long saga

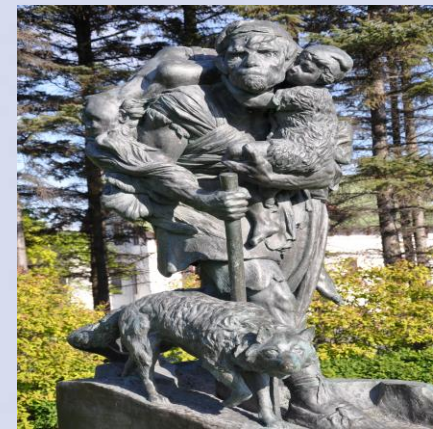
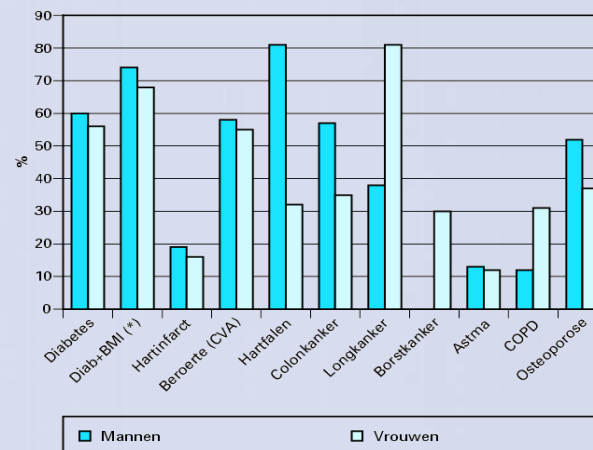
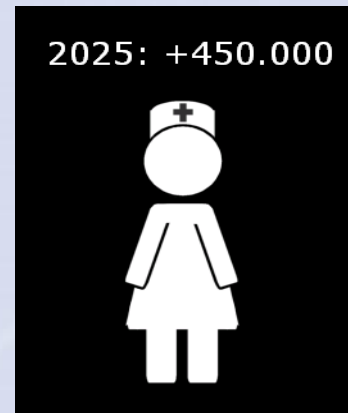


Keep people Healthy and Active

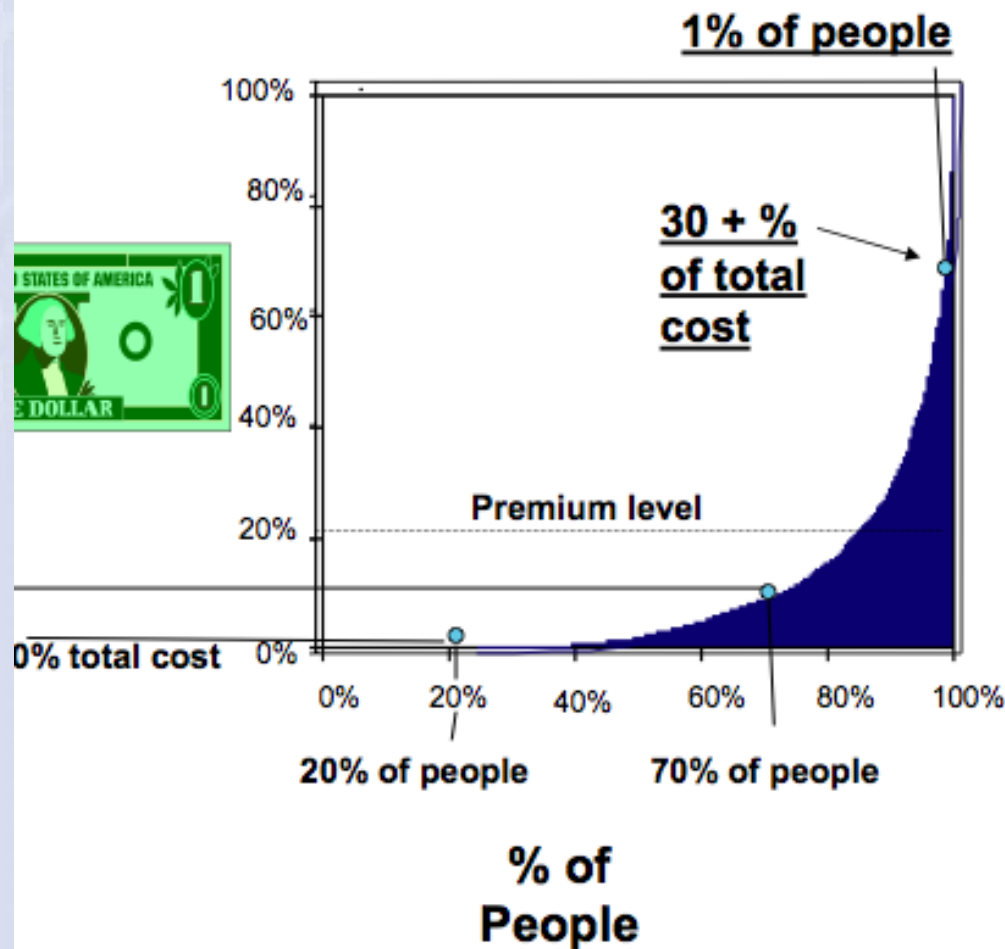


Rijksoverheid


Towards a sustainable system Challenges



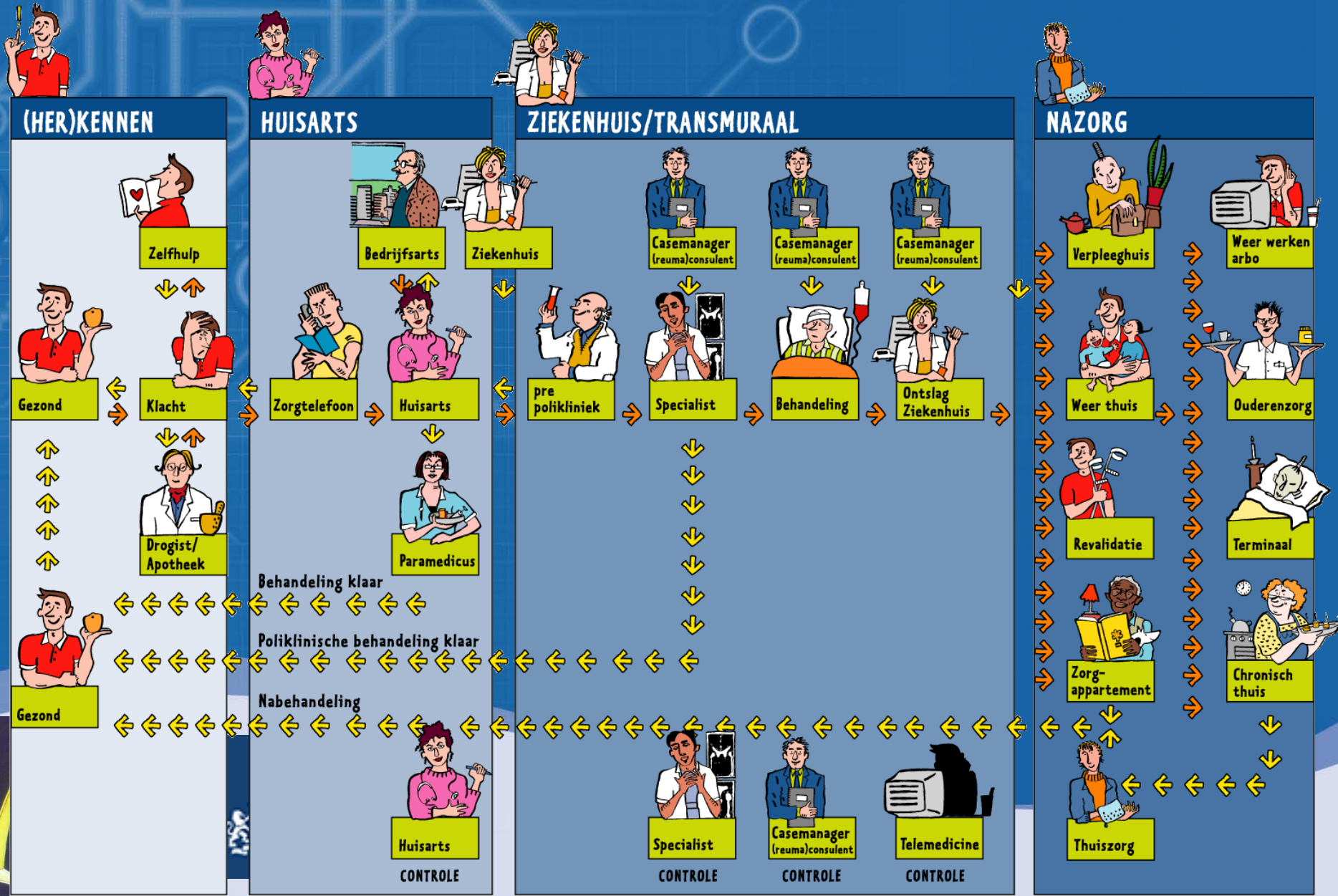
Chronic Disease Costs > 70%

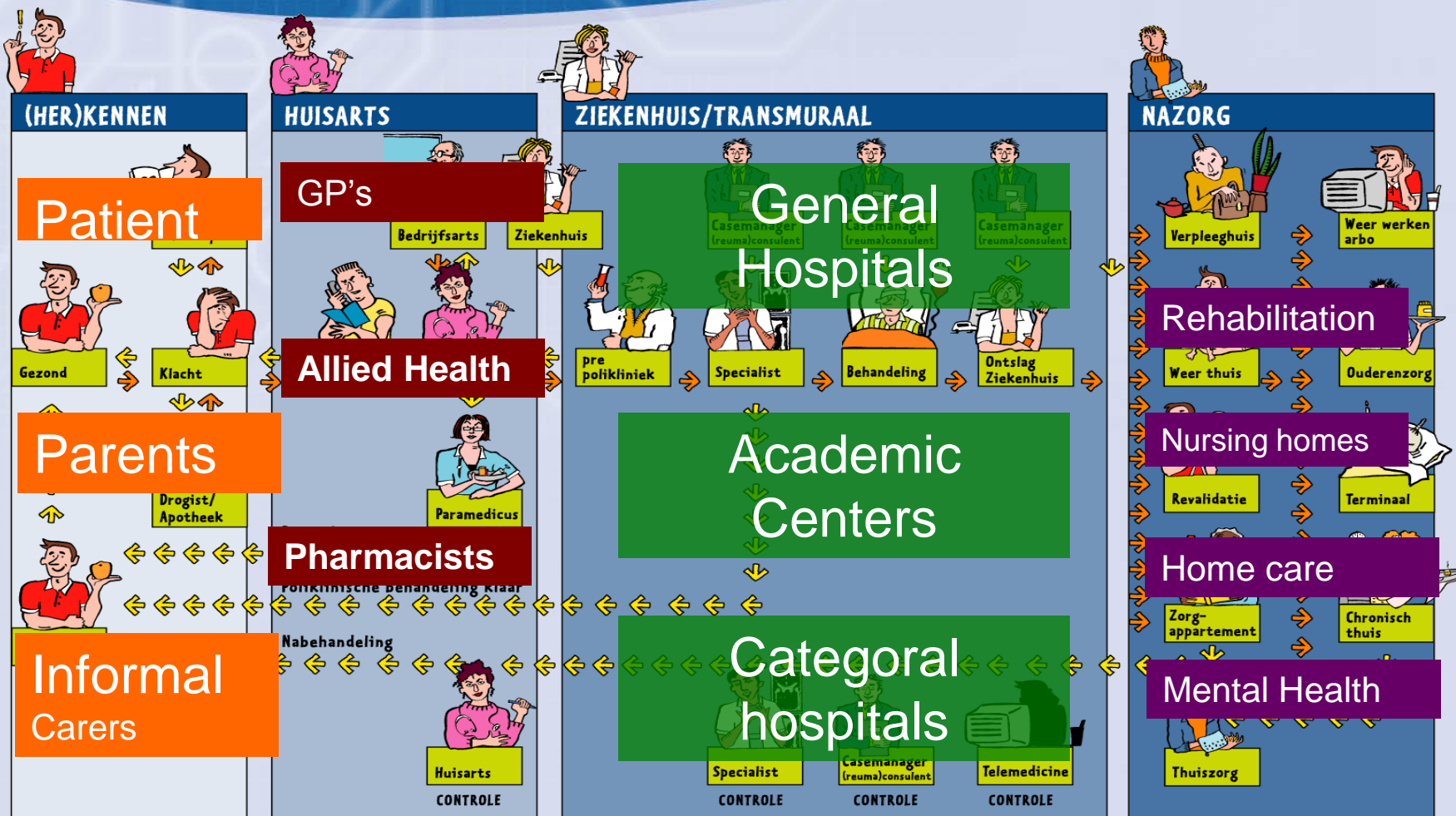


Diabetes
Heart Failure
Coronary Artery Disease
Depression
Chronic Pain
Cancer
Asthma and COPD
Dementia
Falls
Obesity
...
CO-MORBIDITIES



The Care and Cure Continuum





The paradigm shift

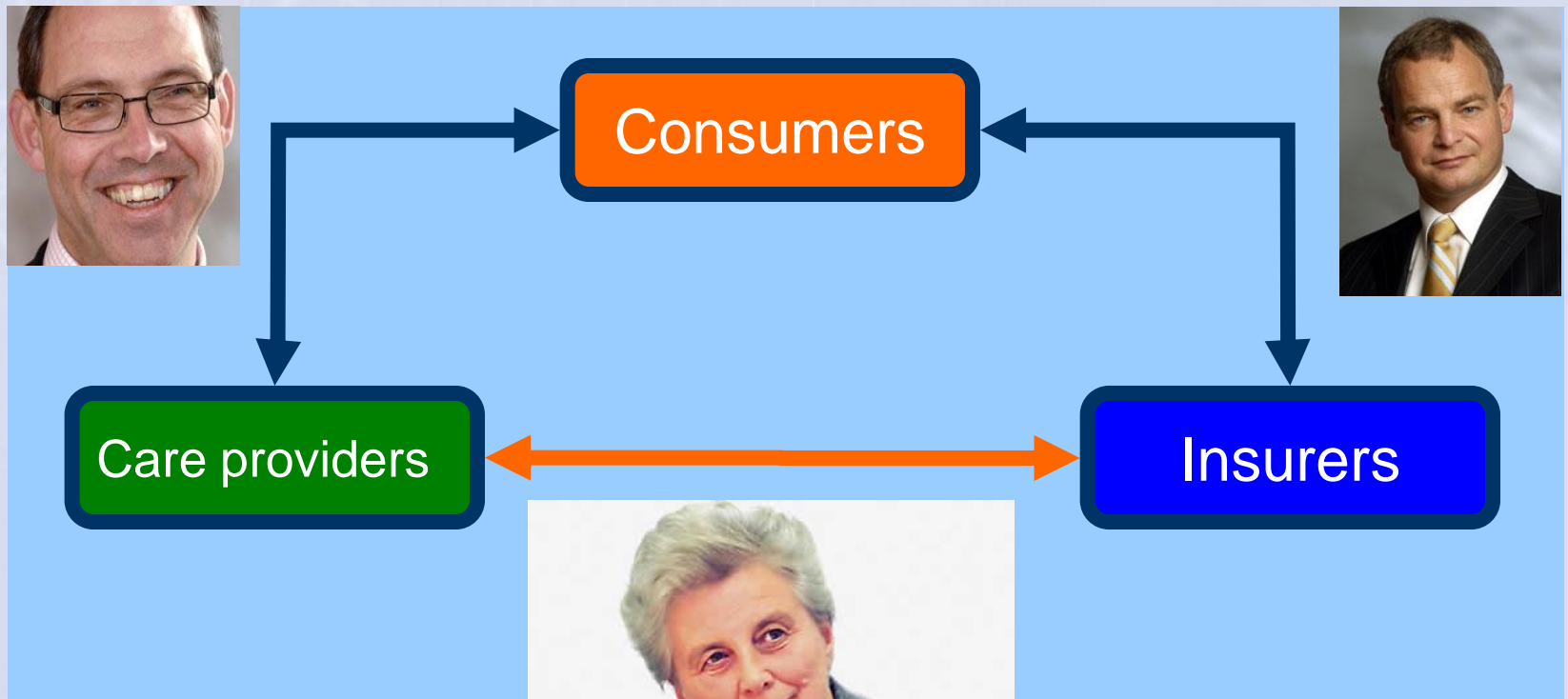
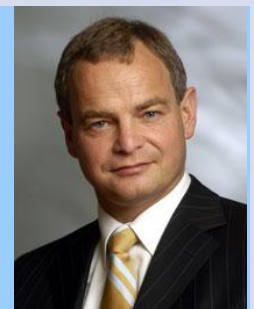
From Supply to Demand



It needs out of box thinking



Health Care Ministers system reformers



eHealth Nyborg

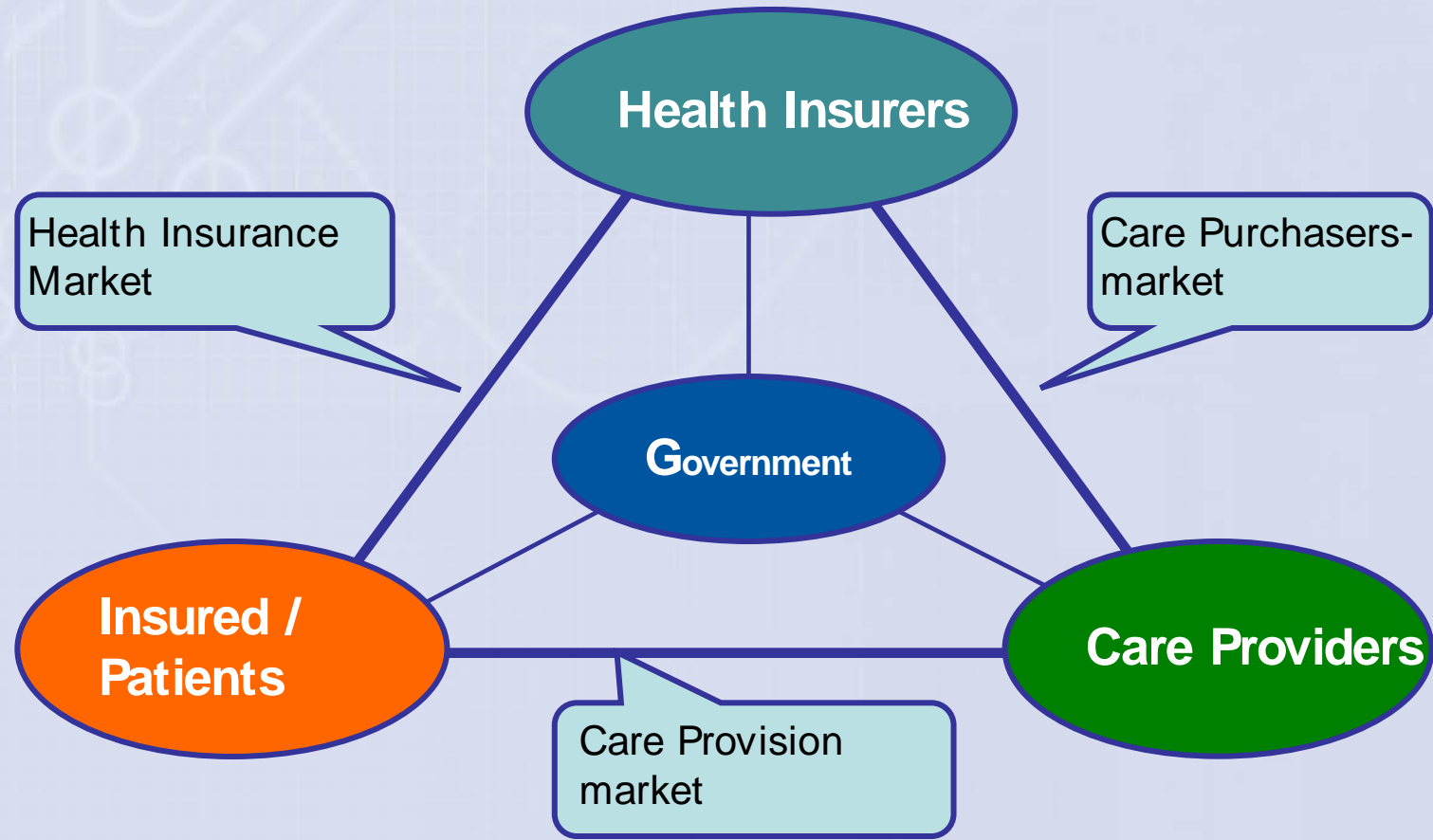
First step

Creation of legal framework for change



Rijksoverheid

The new Health Markets



Hospitals

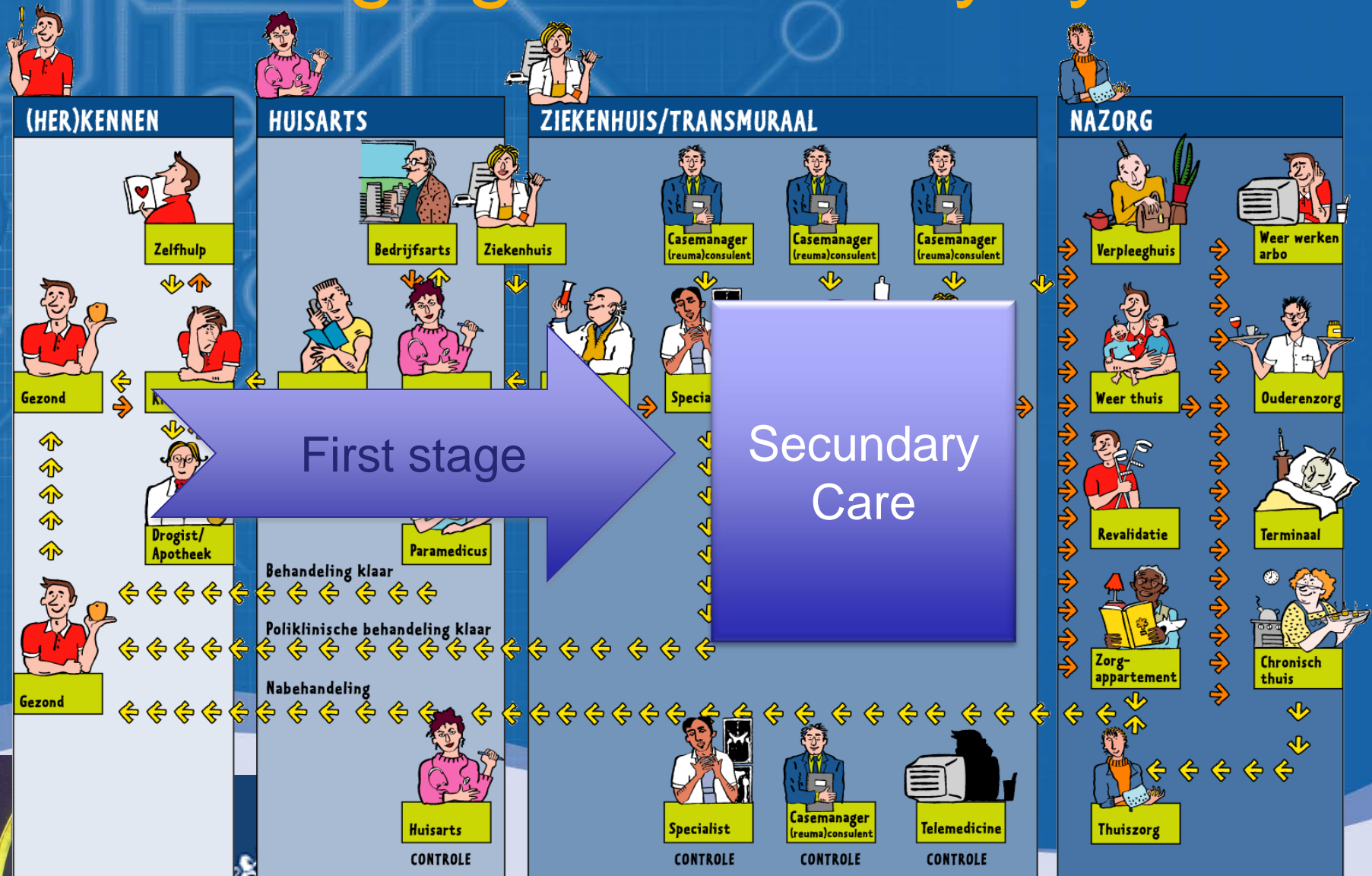
From Budget to Contracting

From supply to demand

Transparency

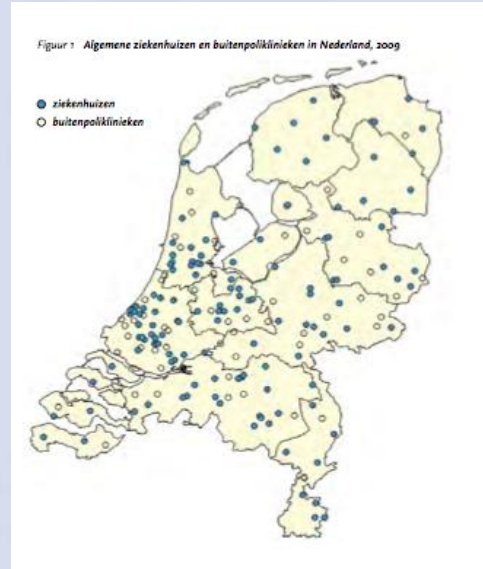


Changing the delivery system



Main Objectives DBC system

- Transparency of the care delivery
 - Who does what and what's the price;
- Pay for Performance
 - Doctors
 - Hospitals
- Introduction of a Market approach to health care: more competition price / quality



The DBC Care Process Approach



Health
Issue



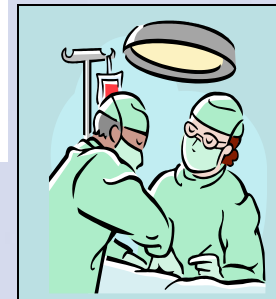
Intake



Diagnos
tics



Diagnose

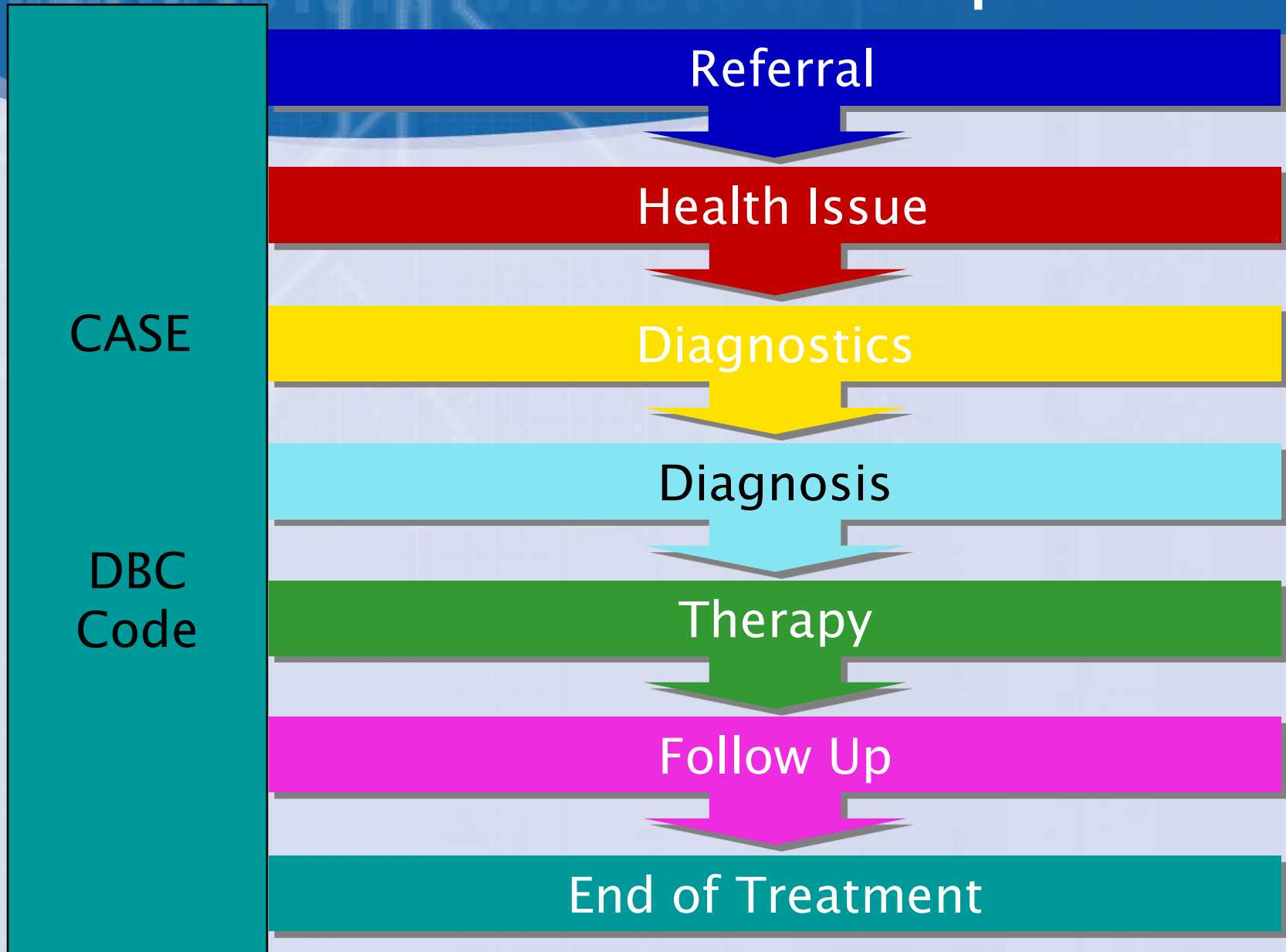


Therapy



Healthy

DBC encounter independent



DBC Linking resources to Care

Referral



First
contact

RECORD

Health Issue

Diagnosis

Therapy

DBC code

Last
contact

First
contact

Follow up
contact

Admission

Beddays

Lab

Radiology

Drugs

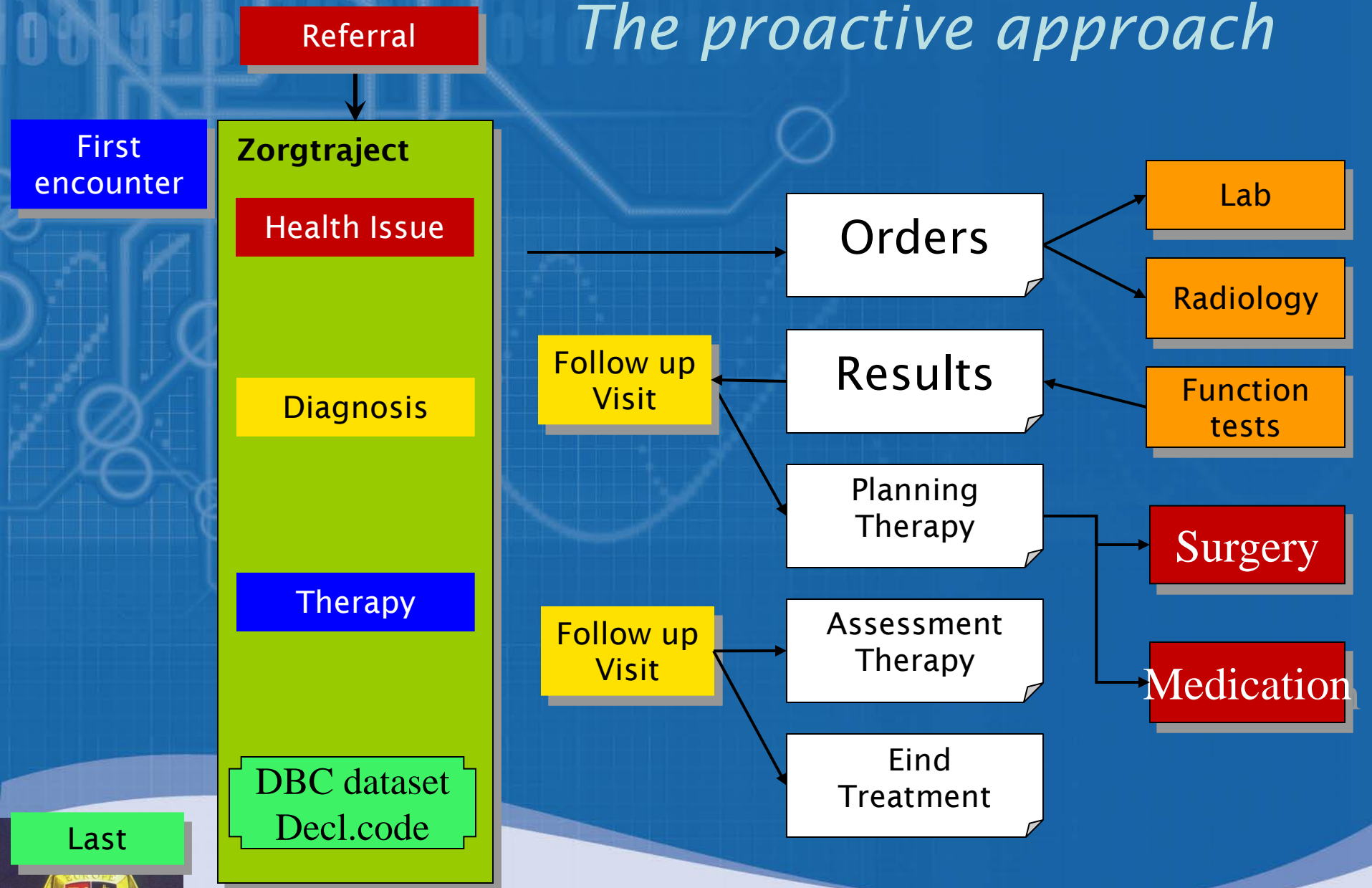
Surgery

Devices

The DBC and IT

- Cost and workload homogeneous product
- Based on Clinical Parameters
 - Health Issue
 - Diagnosis / Medical Condition
 - Applied Therapy
- Product for the full or partial cycle of care
 - Most hospital treatment cycles are less than one year
- Requires a health issue oriented dataset.
- A registration which did NOT exist in 2000 !!

The proactive approach



Rijksoverheid

Introduction DBCs in steps

Since 1994 : The preparation

- Conceptual development of the DBC system and the adoption of the stakeholders

2000-2004 Fase 1: DBC-experiments

- Introduction of the DBC “ registration” in hospitals by clinicians. Creating Care profiles / cost studies / IT systems
- Preliminary negotiations (price/volume) on limited number of DBC-groups.

2005 Fase 2: DBC financing

- The existing FB system is maintained, but financed for all hospitals by DBCs. With an A-segment (fixed) and B-segment (contracts).

2008 start Fase 3: Integral DBC for performance funding

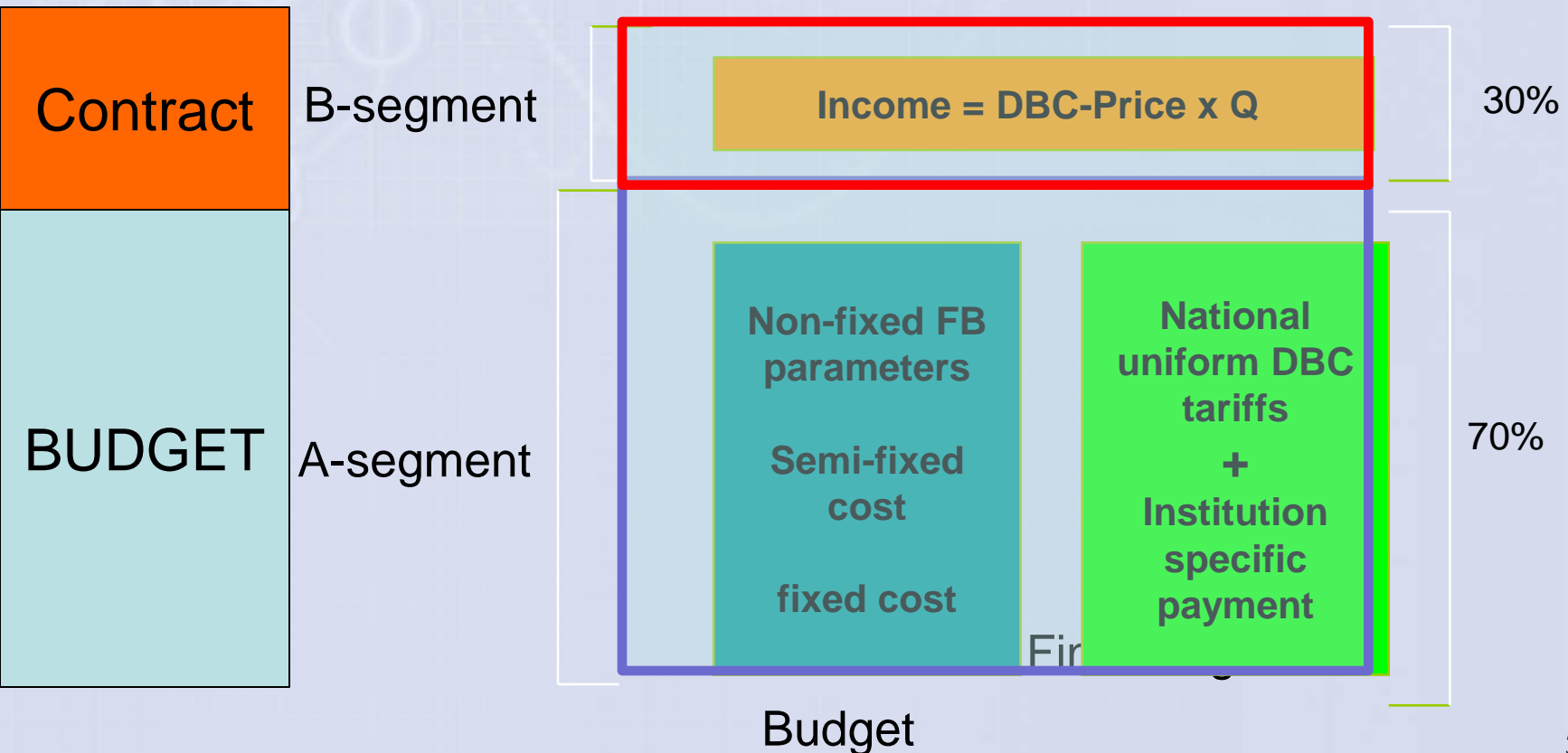
- End to the Lump sum safety net for the clinicians, B-segment 30% , national hourly tariff for clinicians.

2012 Introduction DBC version 2

Mixed Hospital funding 2005 -2012

Transitional phase:

from a **budgeting system** to a performance based
contracting system

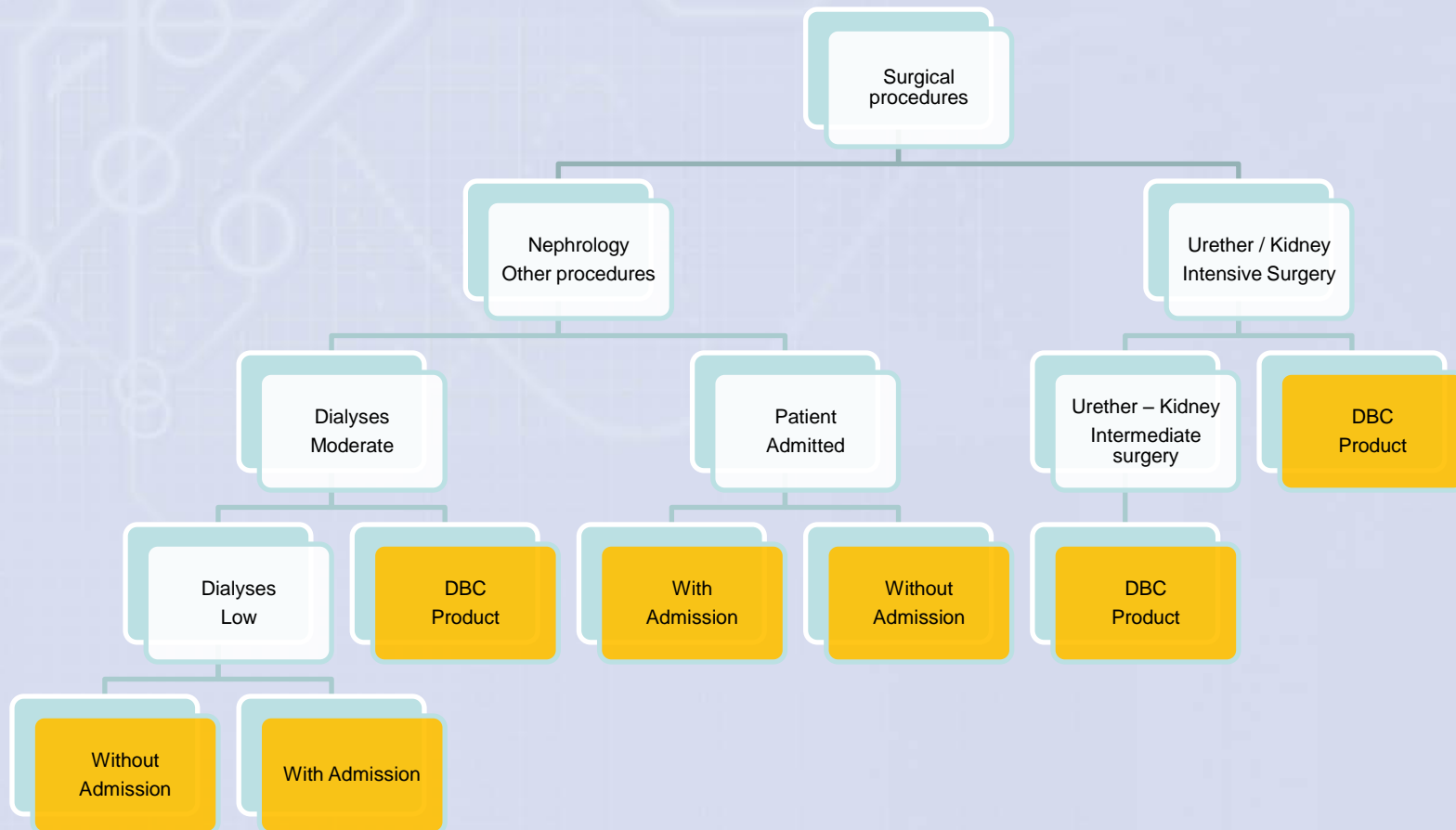


Effects of the new approach

- **CHANGE**
 - Changing relations between all parties involved
 - Hospitals and Physicians
 - Hospitals and Insurers
 - Insurers and Patients
 - Conclusion : debate is on Content Process and Outcome
- **Implementation problems**
 - The hospitals have a mixed funding Budget and DBC
 - Problems with Data collection
 - Understanding the system

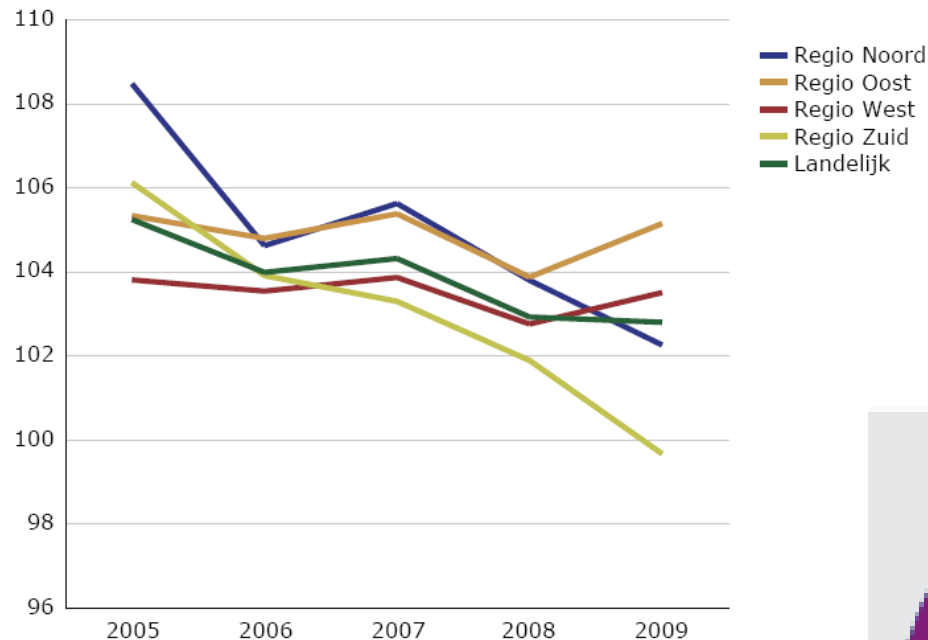
DBC version 2

DBC ICD10 based Grouper

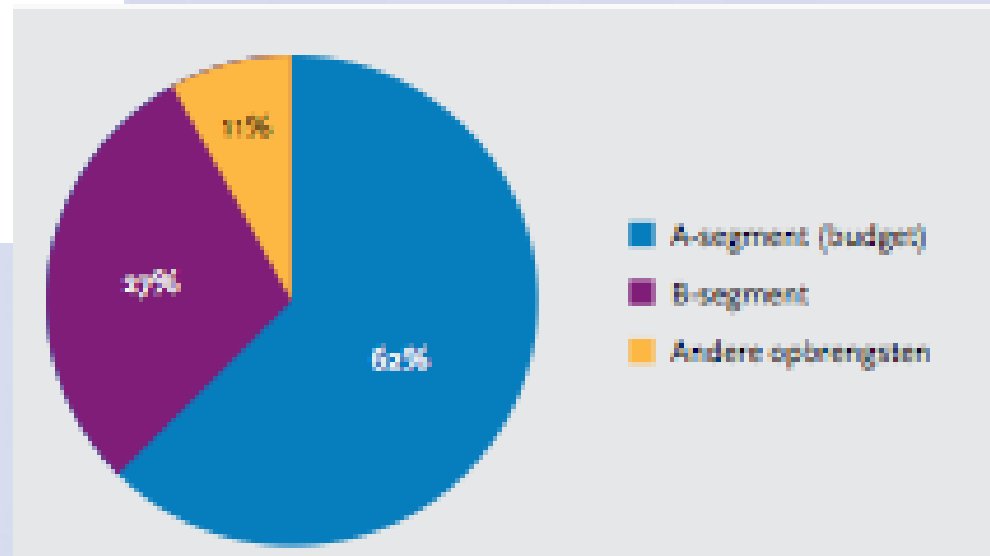
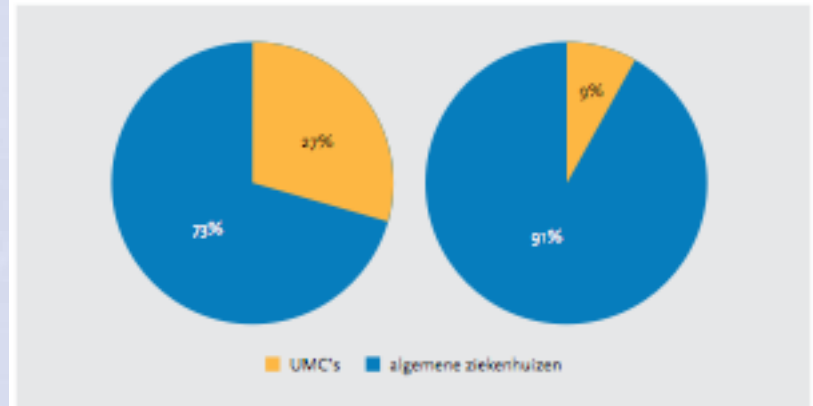


Contract Prices down Revenue

Figuur 7.1a Reëel prijsniveau contractprijzen per regio tranche 2005



Figuur 78 A-segment budget (L) en B-segment omzet (R) voor UMC's en algemene ziekenhuizen (aandeel in totaal)



The Dutch DBC Funding results

More market and transparency

Patients can choose

Process of CHANGE !

Funding drives the change process

Information becomes a production factor



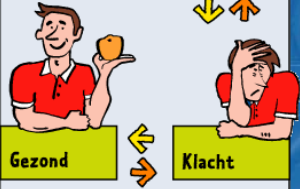
Changing the delivery system

Second stage

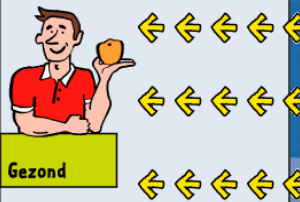
Integrated Disease Management

(HER)KENNEN

Zelfhulp



Drogist/
Apotheek



HUISARTS

ZIEKENHUIS/TRANSMURAAL

NAZORG

Huisarts

CONTROLE

Specialist

CONTROLE

Casemanager
(reuma)consulent

CONTROLE

Telemedicine

CONTROLE

Thuiszorg

CONTROLE

kenhuis

Casemanager
(reuma)consulent

Casemanager
(reuma)consulent

Casemanager
(reuma)consulent

pre

Specialist

Behandeling

Ontslag
Ziekenhuis

Verpleeghuis

Weer werken
arbo

Weer thuis

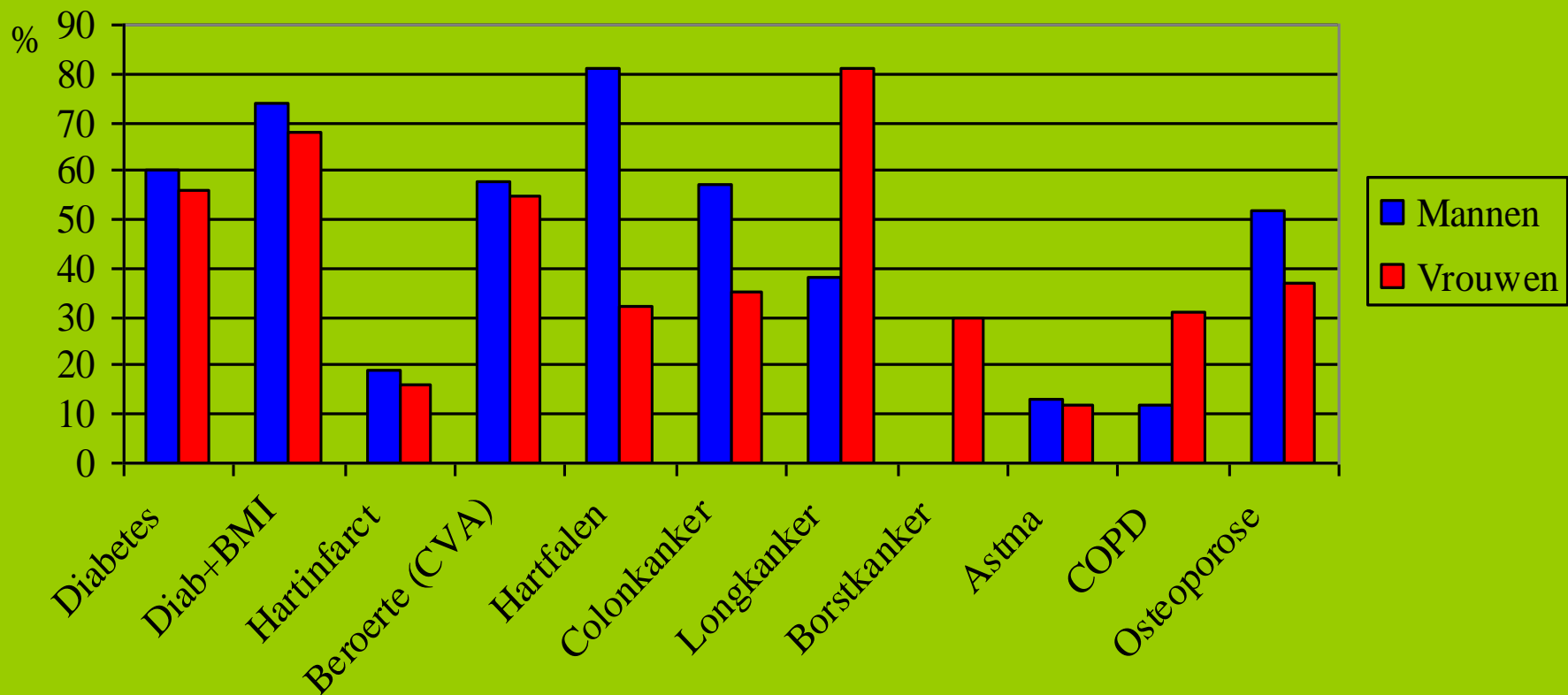
Ouderenzorg

Revalidatie

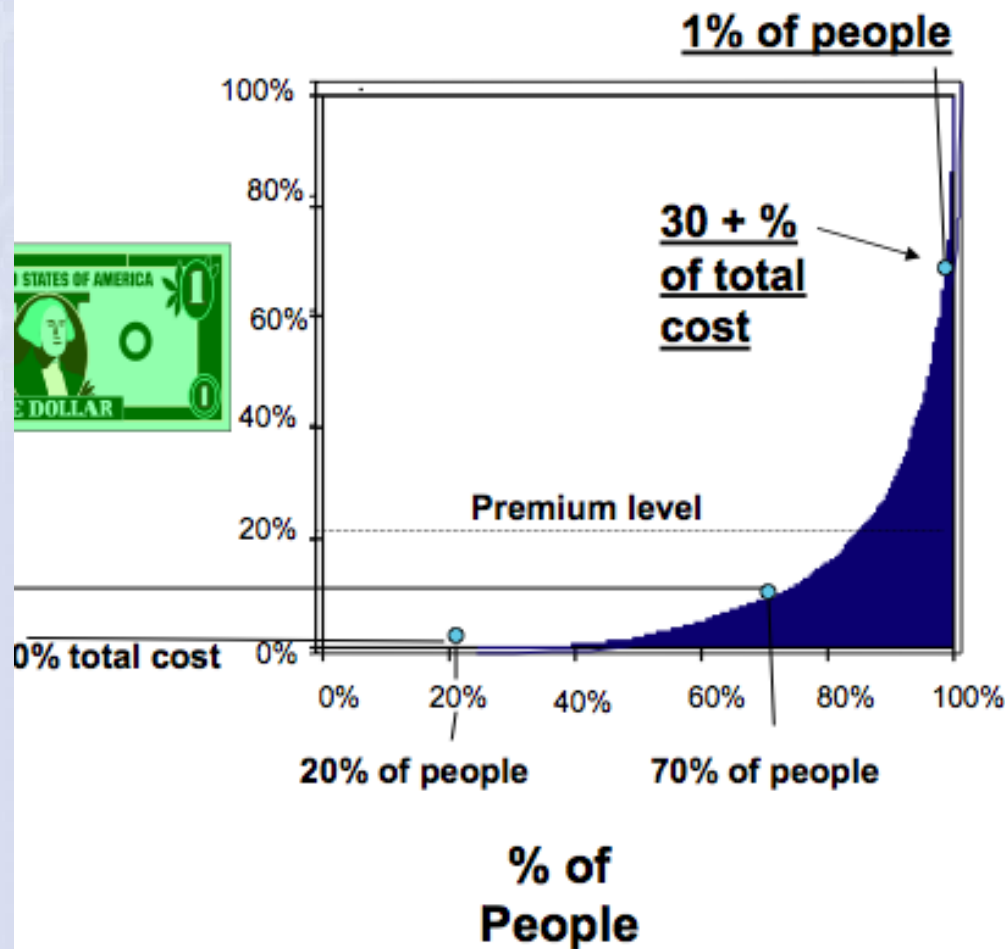
Terminaal

Zorg-
appartement


Chronisch
thuis



Chronic Disease Costs > 70%



Diabetes
Heart Failure
Coronary Artery
Disease
Depression
Chronic Pain
Cancer
Asthma and COPD
Dementia
Falls
Obesity
...
CO-MORBIDITIES



Major Cause of Chronic Diseases



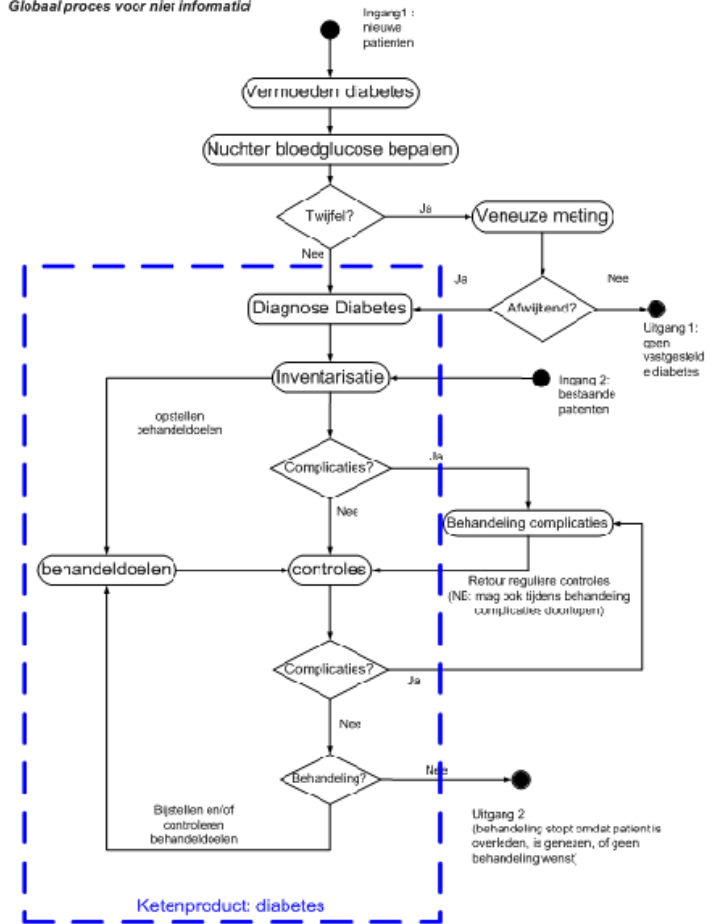
3 risk factors – tobacco use, poor diet and lack of physical activity – contribute to the **FOUR** major chronic diseases – heart disease, type 2 diabetes, lung disease and many cancers – which account for **50** per cent of deaths in the world.

Diabetes Care Standard



ndf nederlandse
diabetes
federatie

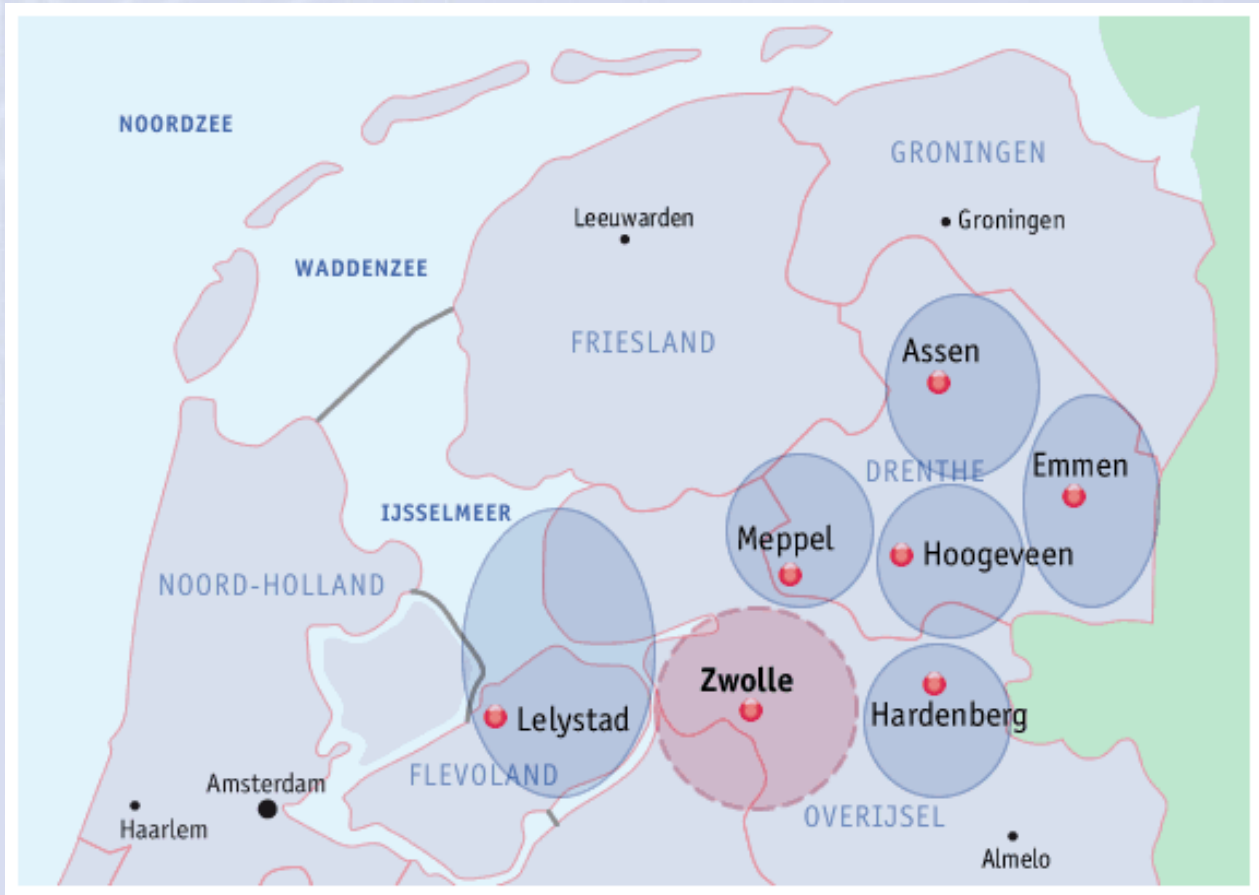
Globaal proces voor niet informatief



Problems

- Coördination structured approach
- Who is in charge ?
- Multidisciplinary collaboration
- Sharing of information
- Role of the patient
- Lifestyle changes
- Fragmented Funding

Application limited

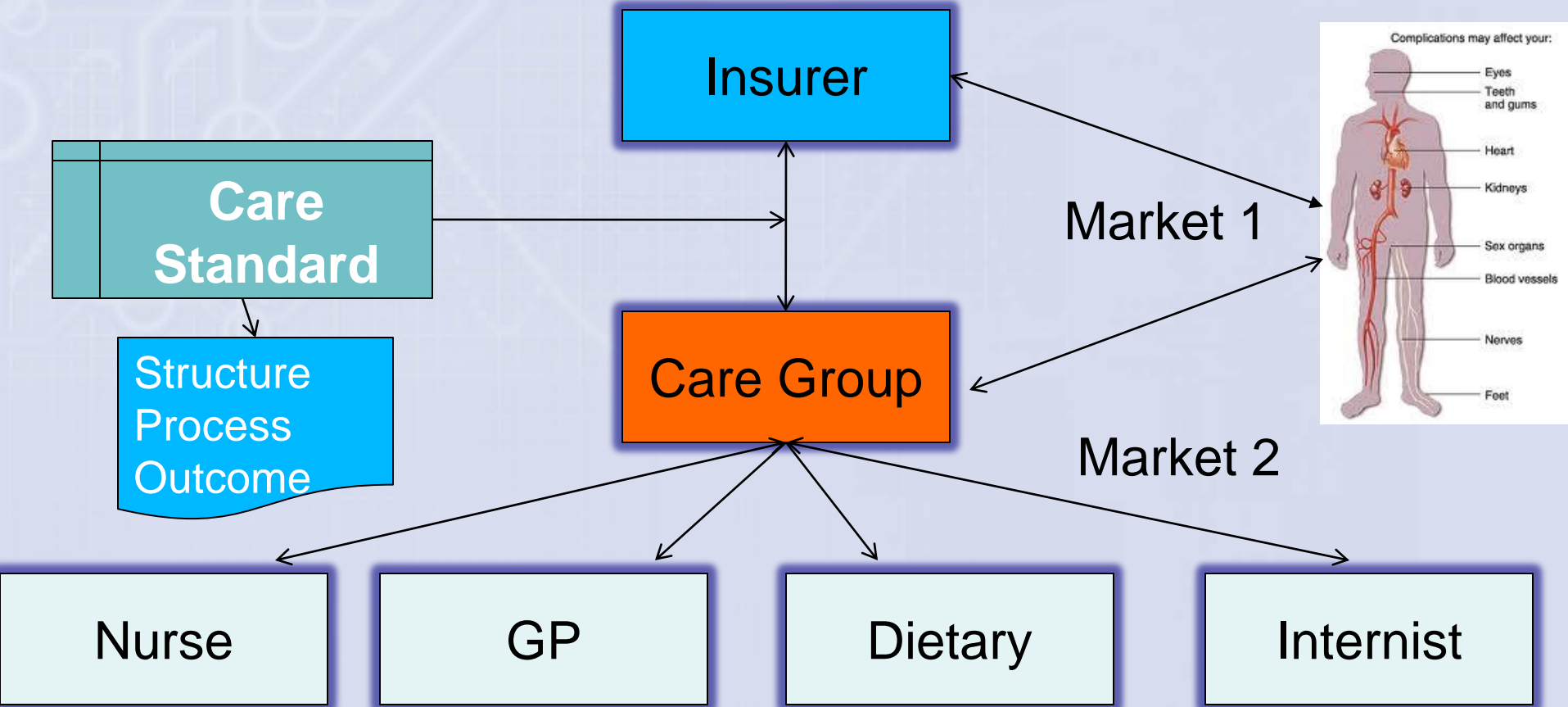


eHealth Nyborg

Hypothesis ZonMw project 2006

- Base the care on the Carestandard Diabetes
- Introduce Accountable Entity
- Contract Diabetes Care as Integral Careproduct
- Focus on Outcome
- Individual Treatment plan
- Central Careprovider
- Patiënt actively involved

The chronic care market(s)



Care Standard is KEY

- Developed by **Care Providers** and **Patients**
- Based on Guidelines / Protocols / Lifestyle
- Defines **what** Good Chronic Care is for patient
- **Not** who should perform
- Combines Prevention and Care
- Defines Quality Performance Indicators
- Base for Task substitution
- Involvement Patient

The approach needs collaboration



Patient

GP – Primary Care

Medical specialist
Secondary Care

Result Experiment

- Care group responsible for outcome
- Focus on education and continuous learning
- Documentation of care process and outcome
- IT support still in its infancy, but good examples
- Quality improvement process stimulated
- The contracting process is new for all

Integral Funding 2010

- From experiment to Structural Funding
 - Diabetes
 - Cardio Vascular Risk Management
 - COPD
- Based on approved Care standard
- Care Group ⇔ Insurers
- Active role patient self management

Integrated Funding

Performance indicators

Process / Outcome

Quality

Price

Tariff per Patient

Includes Care, organisation and
ICT

Integraal zorgprogramma

Diagnose

- Anamnese
- Lichamelijk Onderzoek
- Laboratorium
- Functietesten

Therapie advies

- Leefstijl-
interventies
- Farmaco-
therapie
- Fysiotherapie
- Diëtetiek
- Psychologie

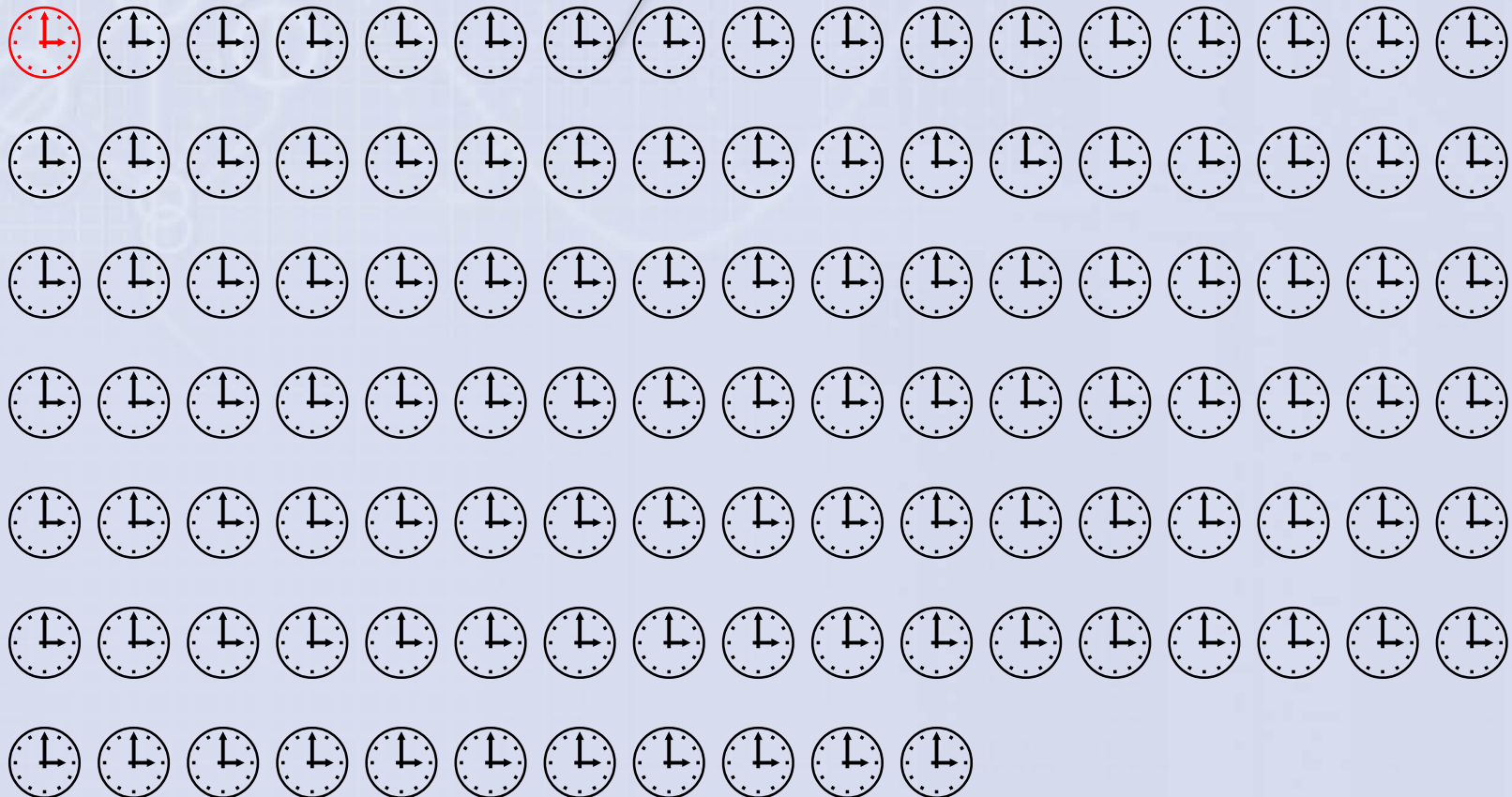
Follow- up

- Monitoring
- Zelfmanage-
ment support
- Multidiscipli-
naire samen-
werking

The core business of Chronic Care is at home

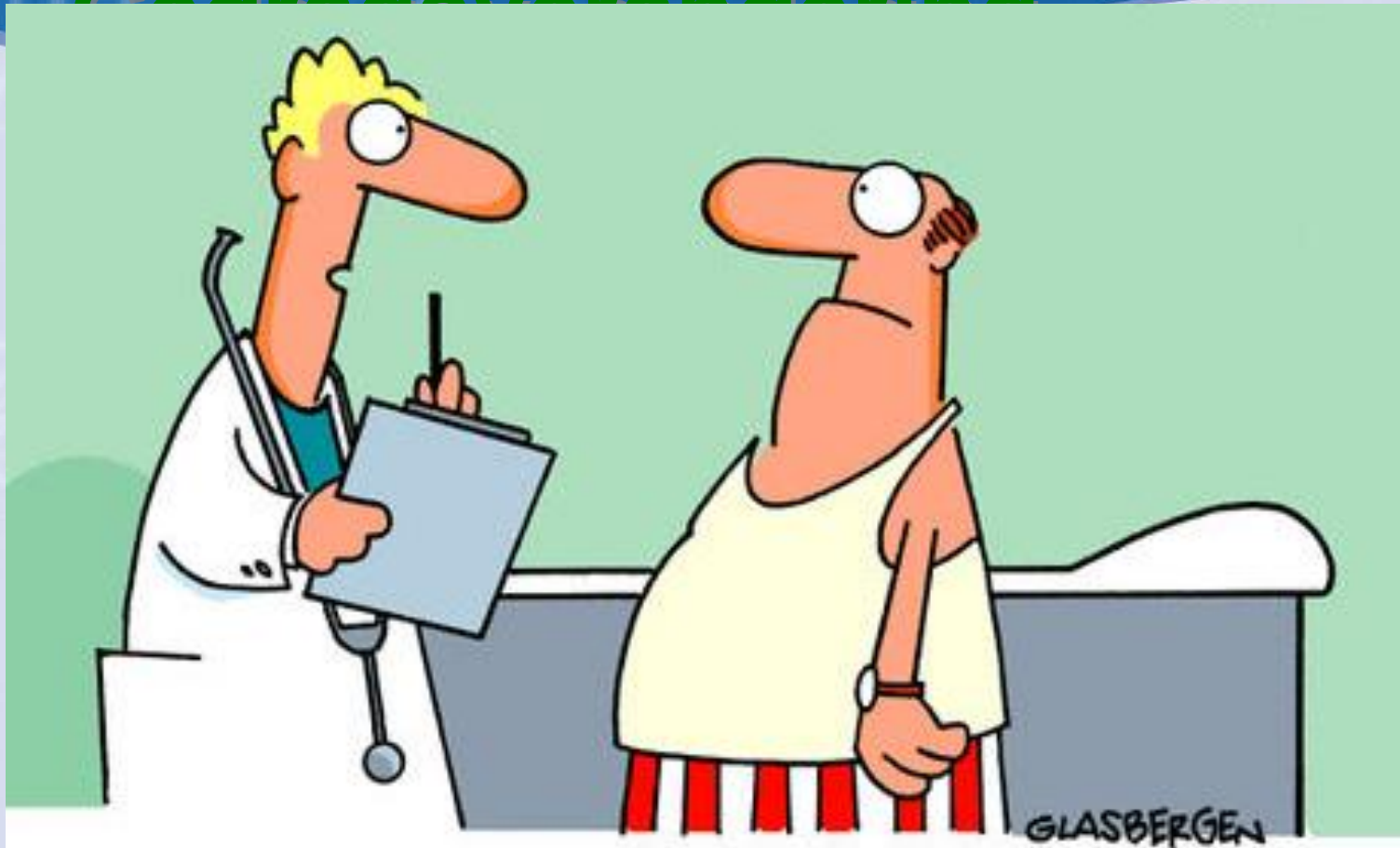
Doctors office

Selfmanagement



Zelf Management

Gezond overlevende



“What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?”

Implementation Integrated Funding

1. The Rules

- Product
- Conditions, Transparency,

2. Contractual arrangements

3. The Care Program offered

4. ICT requirements

- Data
- Functions
- Accountability Reporting

Integrated Funding

First step to kill the silo's

Eerste Lijn

Ziekenhuis

**Medisch
Specialistische
Zorg**

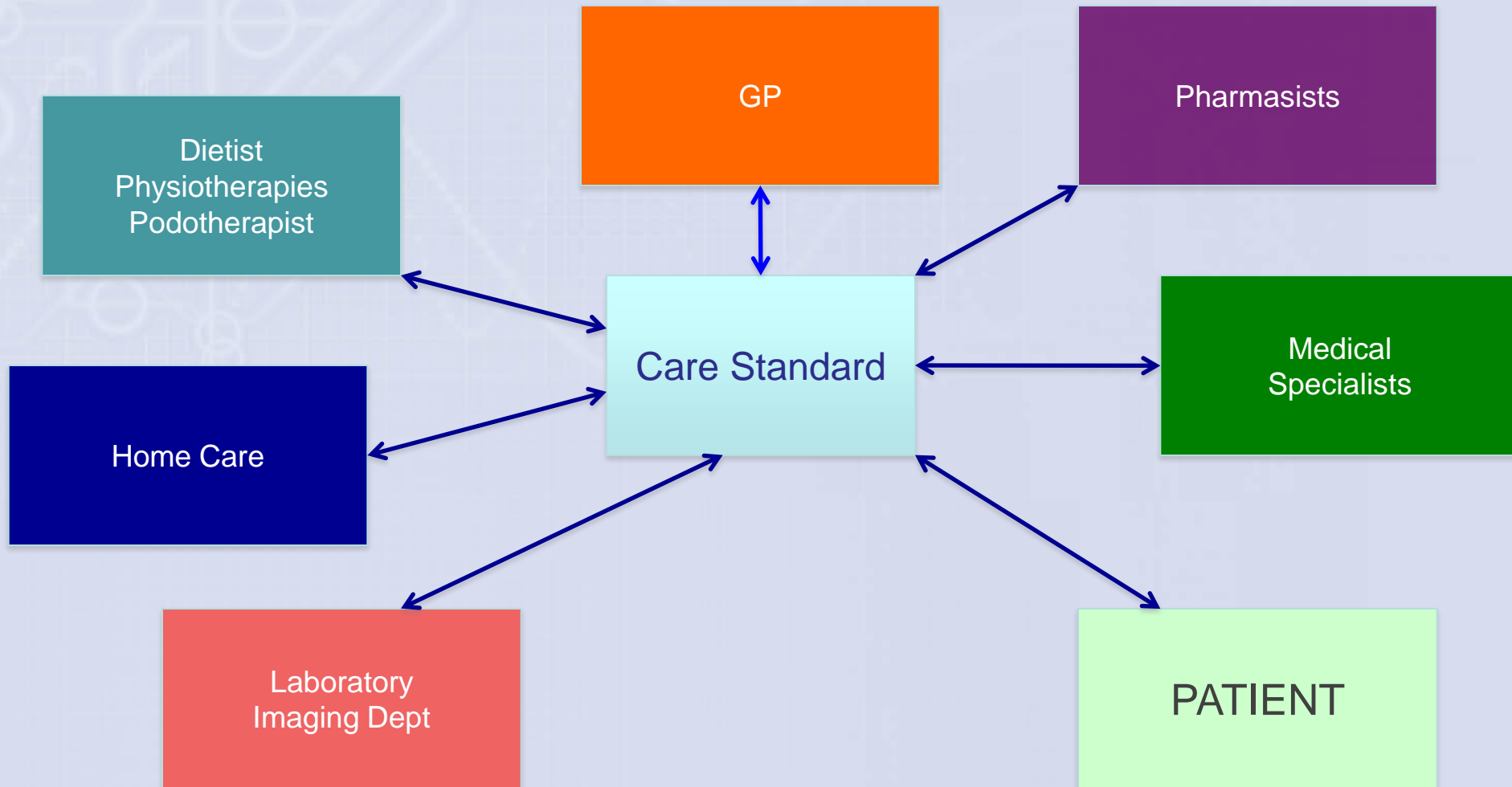
Diabeteszorg

Cardiovasc Risico Management

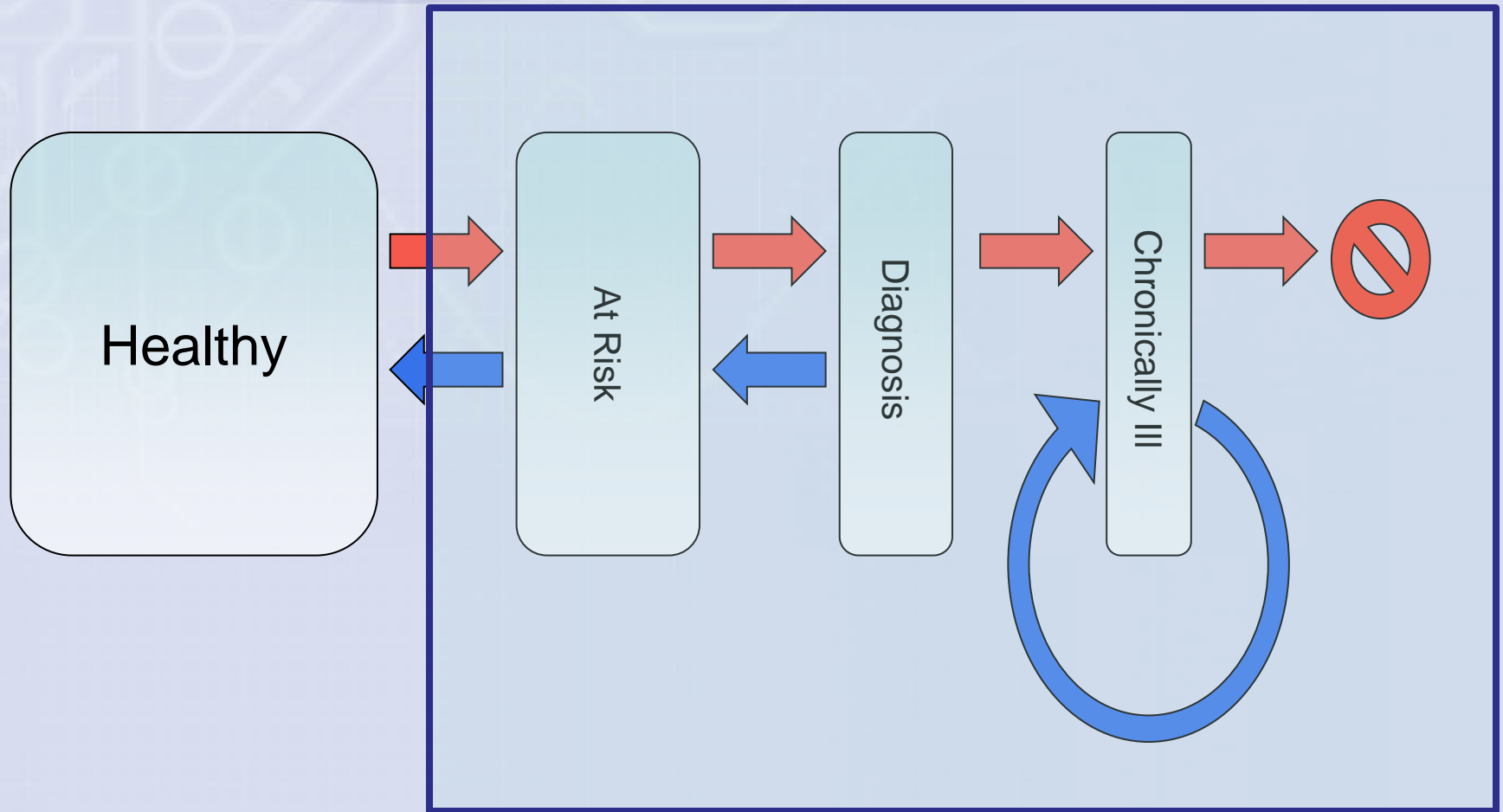
COPD

Eerste lijns zorg

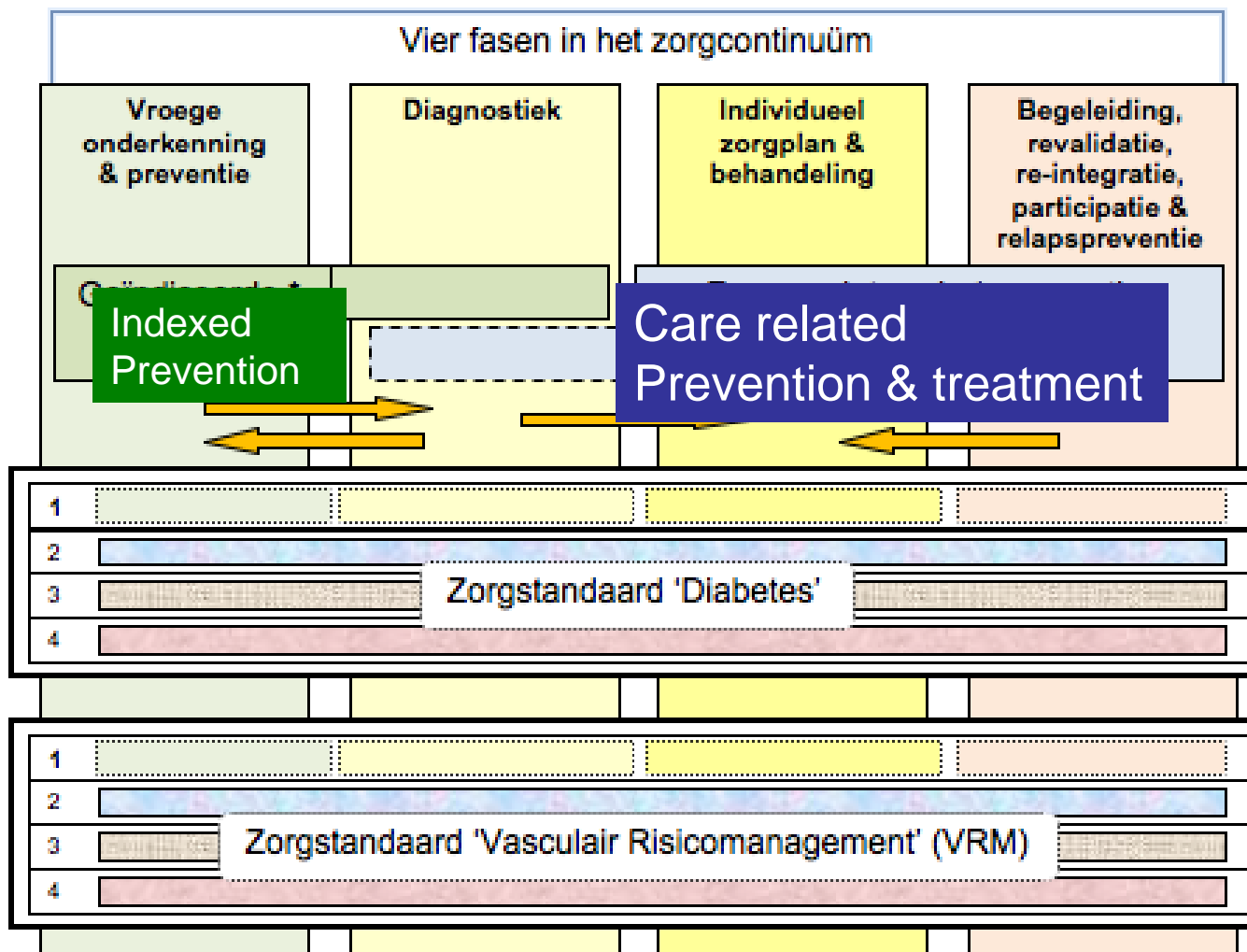
Integrated care & care standard



Focus Care Standard



Care Standard Model



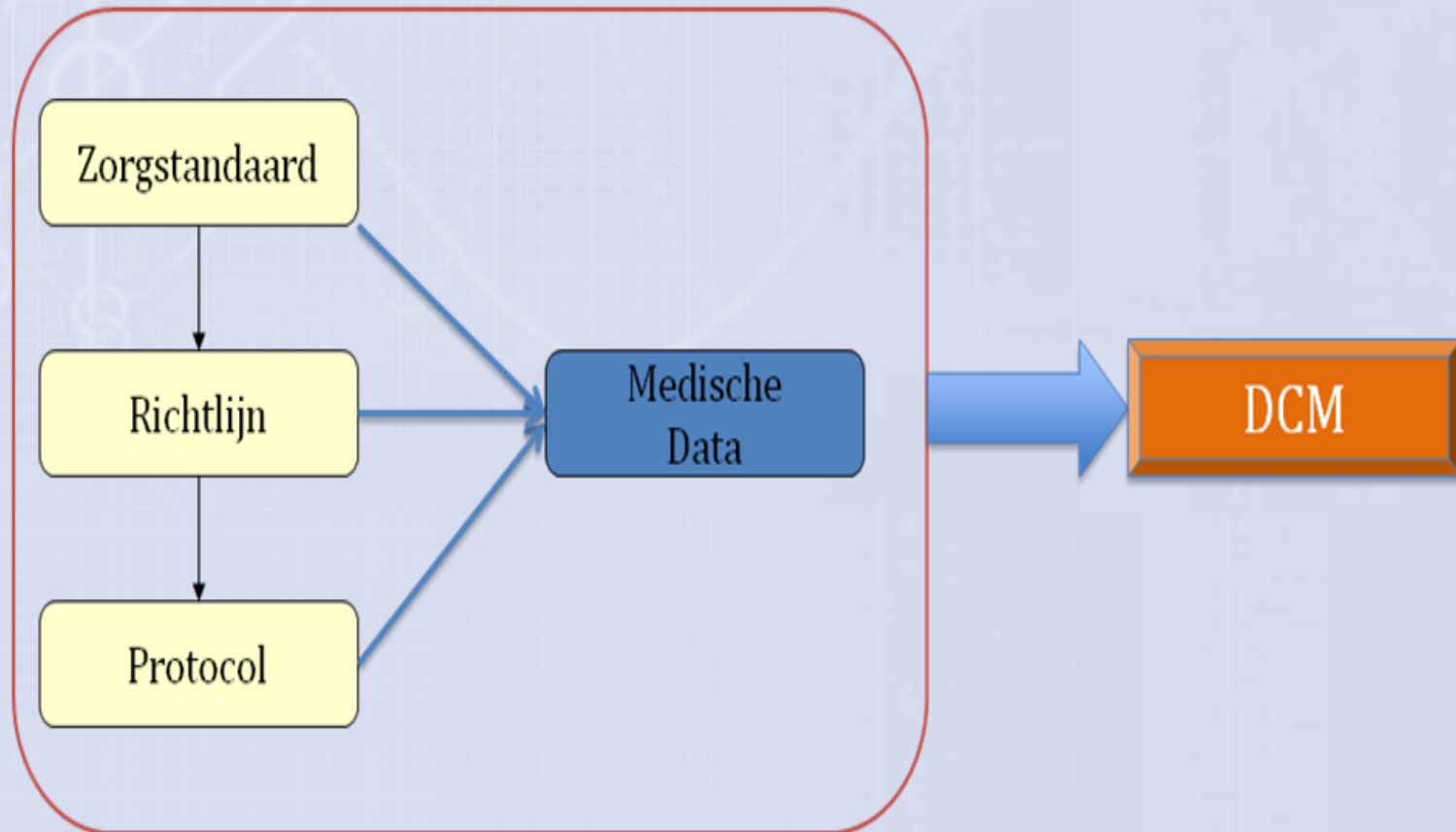
IT requirements

- Multidisciplinary team of primary (GP's, Nurses , paramedical specialist) and secondary care (medical specialist)
- Patient is part of the care team
- Individual Proactive Treatment plan
- Semantic Interoperable Data
- Cross institutional solution
- Annual Reporting Dataset by patient

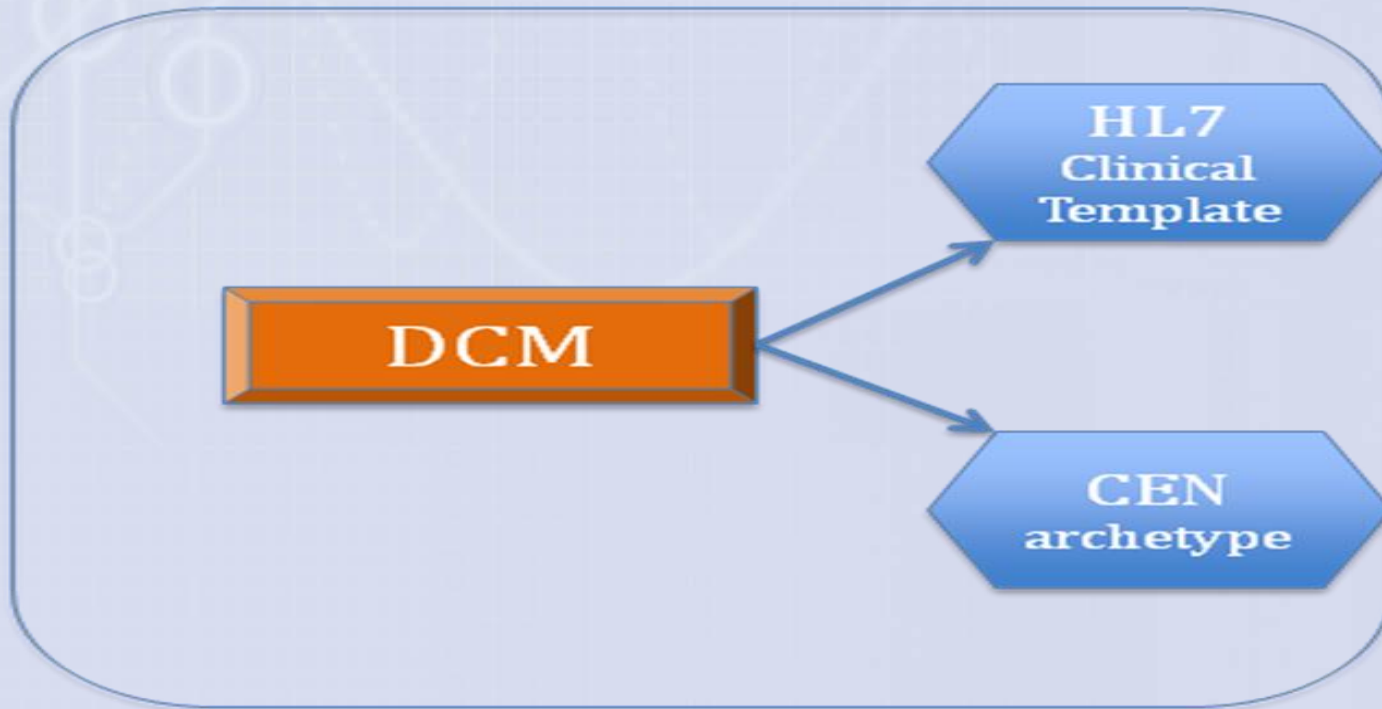
Documentation Parameters (DCM)

- Each submodule has a number of Obligate Parameters
- Document these in a Detailed Clinical Model DCM
- The DCM is the base for registration , Exchange of Data and Reporting
- DCM are part of the care standard
- DCM will be maintained nationally
- DCM have two dimensions
 - Modeling clinical content to clinical datamodel
 - Translating Clinical datamodel to implementation standards

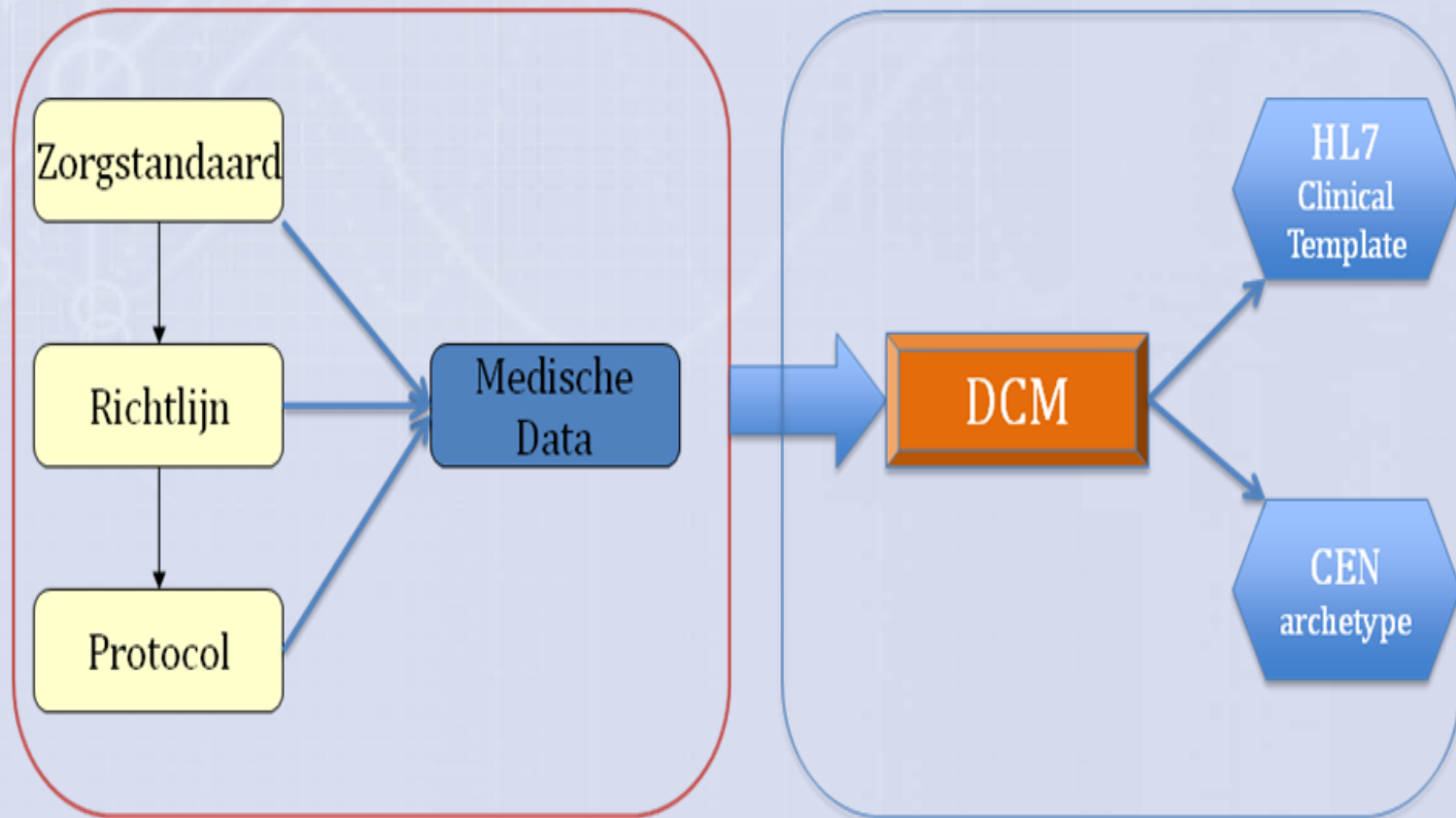
Clinical content to Information model



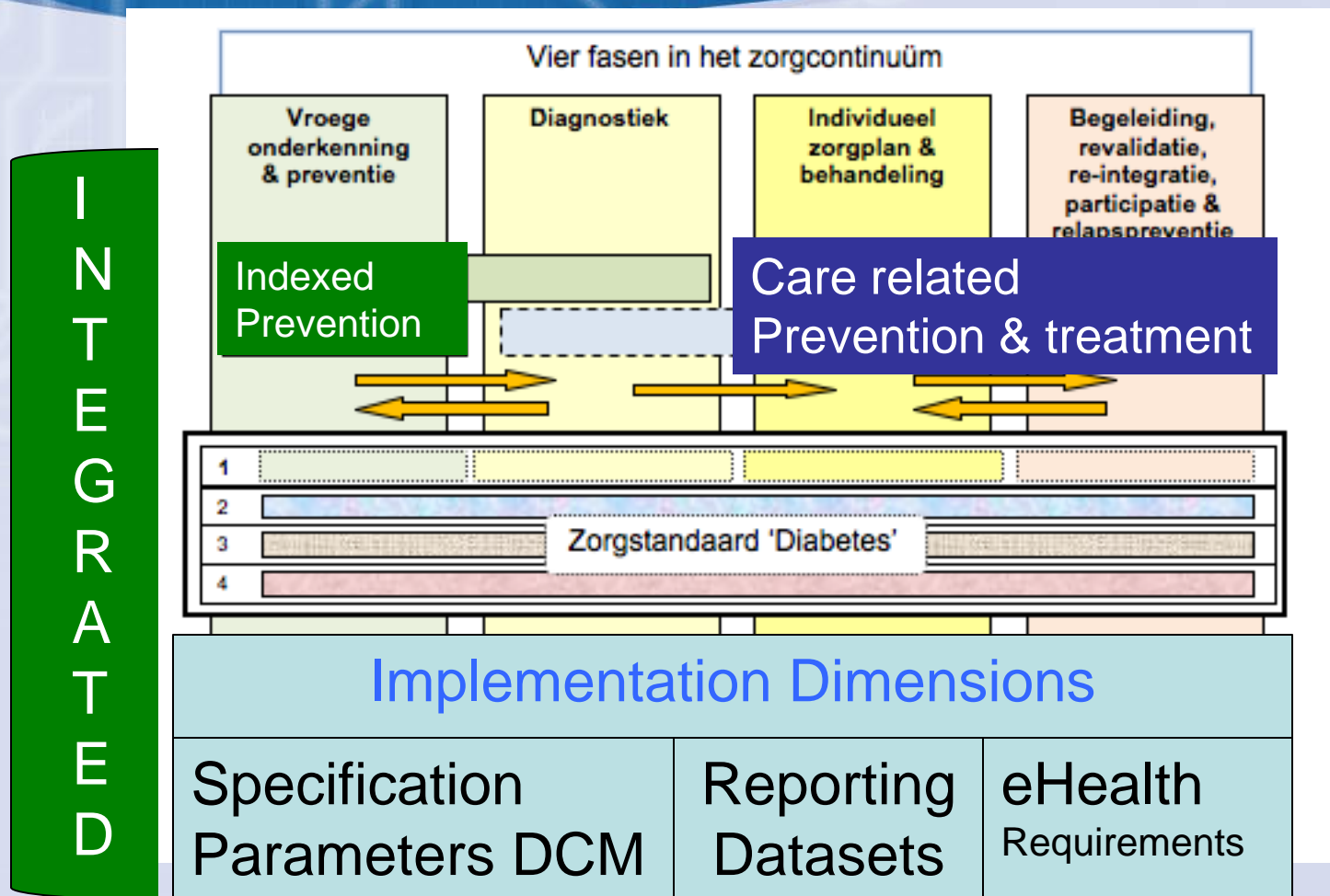
DCM to ehealth implementation



DCM links guideline to eHealth



Care Standard Model +



International dimension

COPD - suspected



[Back to NHS Choices](#) | [Healthguides pathways A-Z](#)

[More sections in this pathway](#)

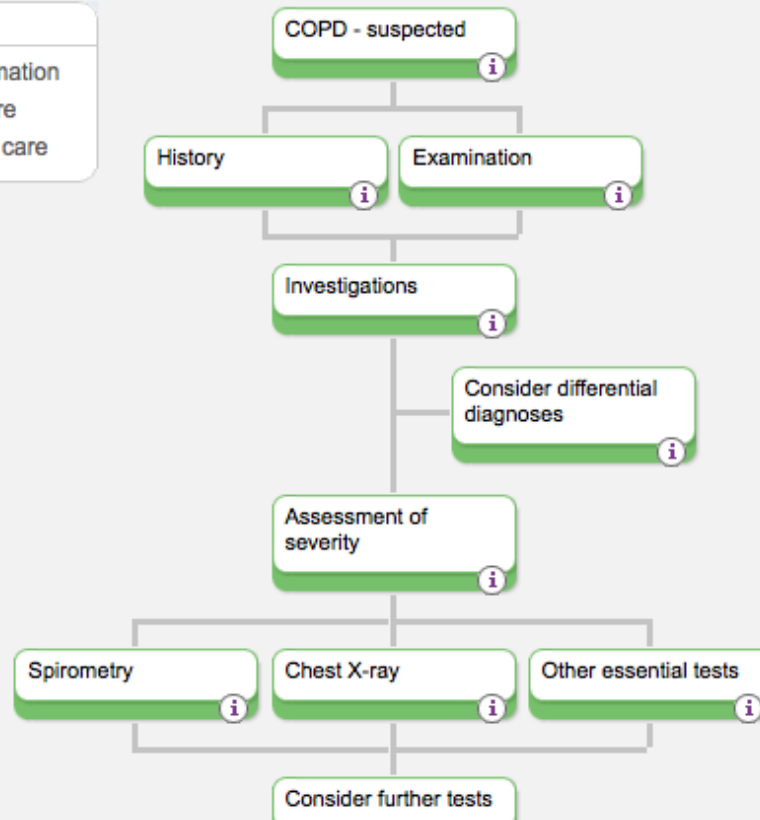


[Printable version \(PDF\)](#)

Provenance ?

Key

- More information
- Primary care
- Secondary care



Information resources
for patients and carers



Norm

Implemented

Result

Care-standard

Care-program

Personal
Health
plan

Detailed
clinical
model

Semantic
interoperability

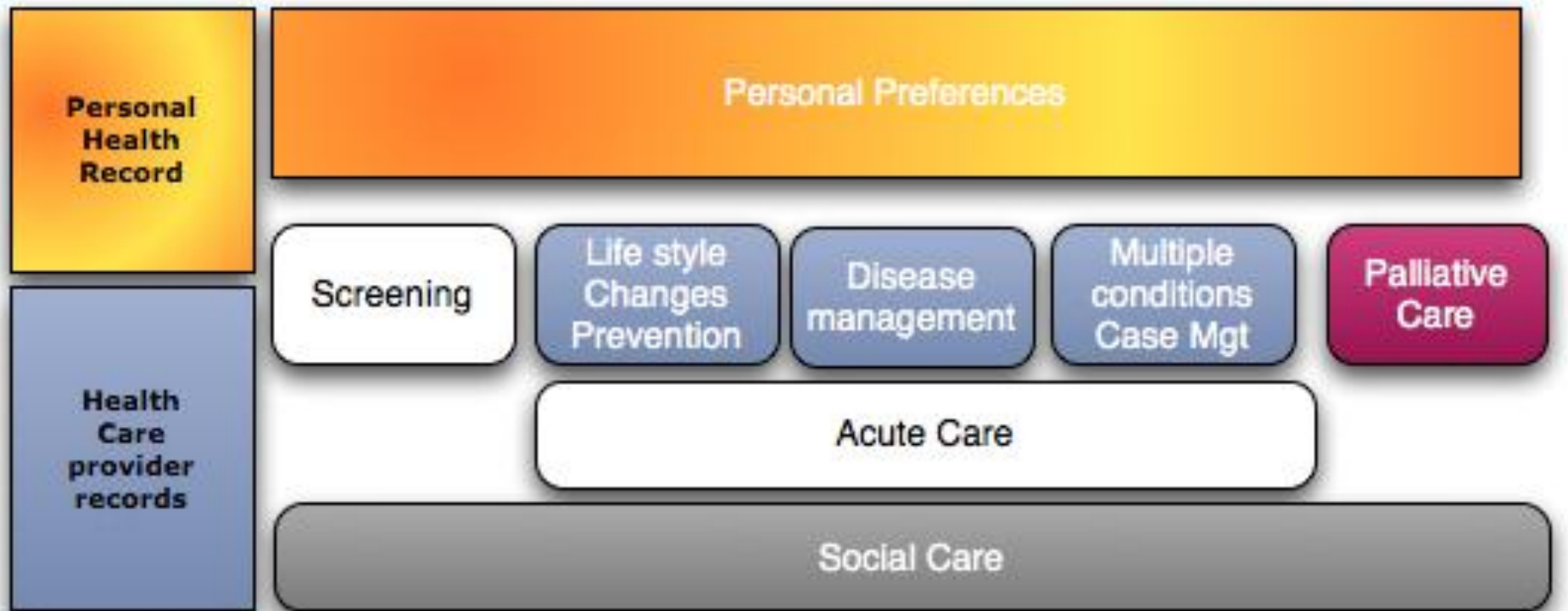
Transparency

Integrated
Outcome
indicators

Focus on
outcome

Quality

The point on the horizon



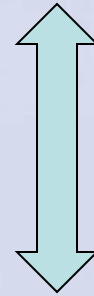
Interaction Personal Health record



Personal health record



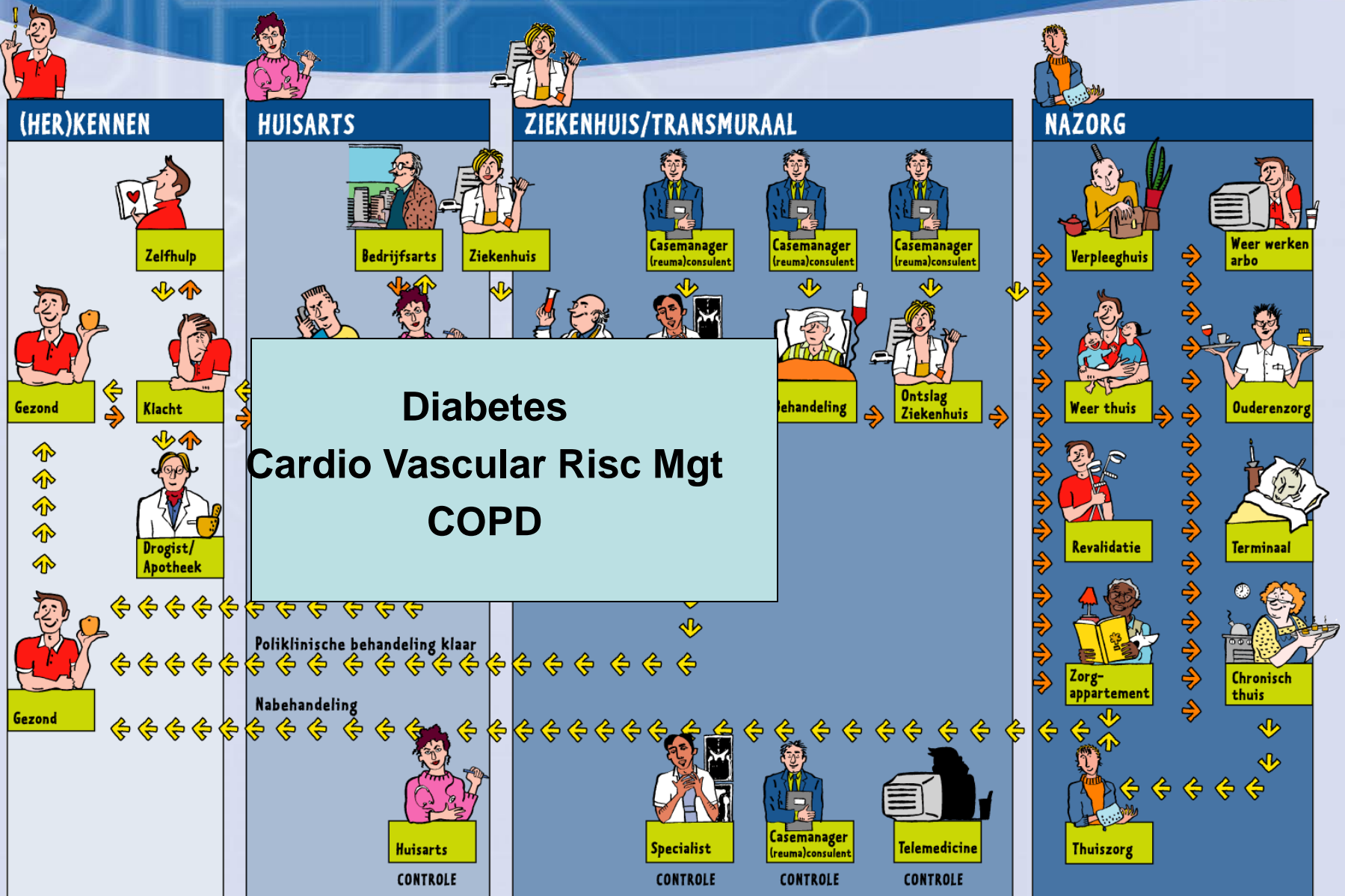
Case record



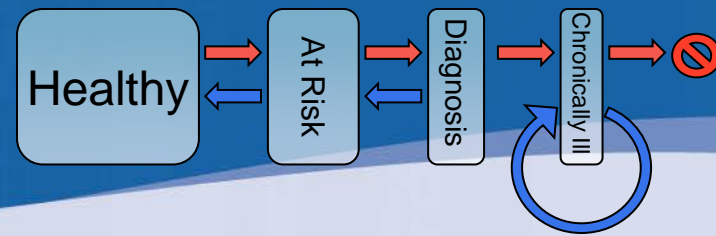
Diabetes Case record



Result the silo is broken a bit



Take Home Message



- Active involvement of Patient, individual treatment plan based on
 - Care standards (Clinicians Consumer Patients) with integrated eHealth standards
 - Using health 2.0
 - Interaction between Personal health and medical record
- Interlinking of prevention and care
- New business model focused on quality
- Challenges providers and insurers
- European Approach needed !

**It is a long journey but worth
the goal a sustainable system
for Mick and his friends**



Rijksoverheid

Follow the journey

- Next steps will be reported in MIF, Ode and MED
- Be T
- To g

