



Leiden University  
Medical Center

# Outcome-based Healthcare in the Netherlands

## Niederlande: angemessene Gesundheitsversorgung

Willem Jan Bos

Dept of Nephrology, LUMC & St Antonius Hospital

Patient-centeredness and high-value care in a modern health system,  
Berlin november 22 2023



# Die wichtigste Ergebnisse in den Niederlanden

## Heute 22 november: Wahltag



# Agenda

## Overview Dutch Healthcare

- Organization
- Challenges

Top-Down: policy on “outcome driven care” in the Netherlands

Bottom-Up: Clinical examples / best-practices

Advise

# Curative Care in the Netherlands

many, independent, stakeholders

## Primary care

## Hospital care

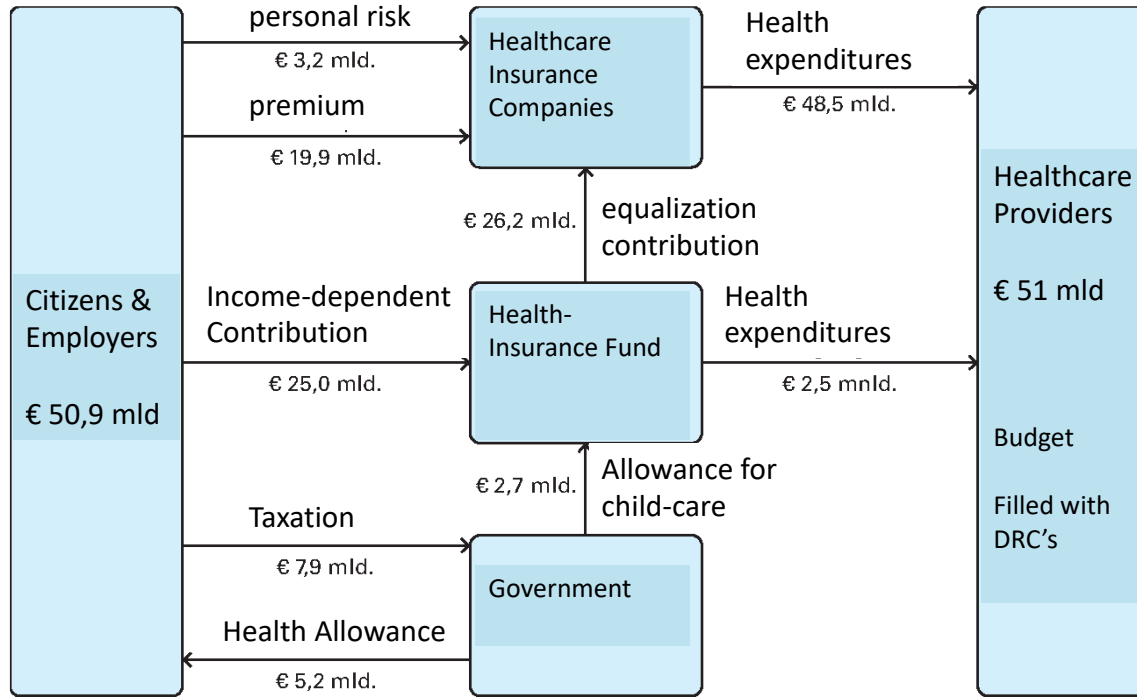
access only after referral by GP

- 8 university hospitals
- 27 teaching hospitals
- 37 regional hospitals
- focus clinics

Medical specialists all work in hospitals / clinics



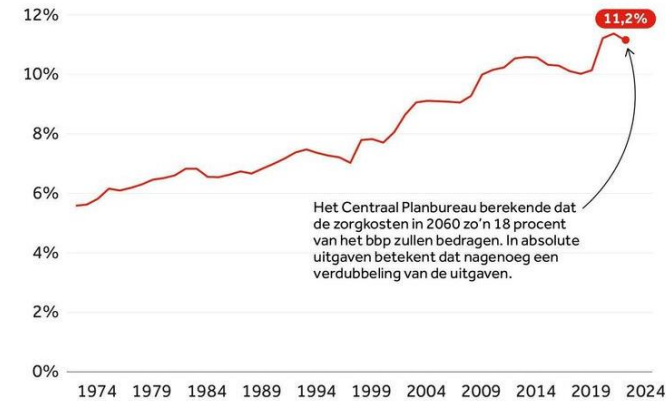
# Paying for curative care



Insurance - obligatory since 1943

Budgets for curative care, 2020.  
 Long term care excluded,  
[www.rijksfinancien.nl](http://www.rijksfinancien.nl)

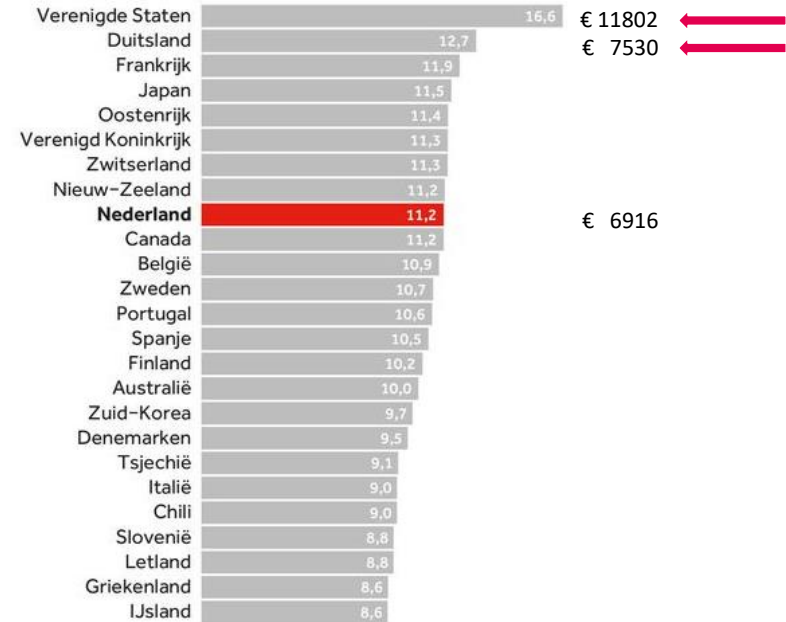
# Increasing healthcare budget



data: OESO

## Healthcare budget

As percentage of GNP, and € per inhabitant



data: OESO

# 2022: New Challenge: staffing healthcare in the future

1980: 1 : 12



2020: 2 : 12



2060: 4 : 12



# National agenda 2017-2022 - Top-down

## “Outcome Driven Care”

2017: Federation Medical Specialist – specialist 2025

- Value Based Healthcare
- Positive Health

2017: Coalition Agreement 2017

- Based on Value Based Healthcare



2018: Agreement of all Stakeholders in Healthcare - “Outcome driven Care”

1. Outcome Information – coördination Federation Medical Specialists
2. Shared Decision Making – Patient Federation
3. Payment Models – Healt-Insurance Netherlands
4. ICT – Ministry of Health
5. Implementation – Dutch Hospital Council
6. Coördination scientific evaluation: Federation University Medical Centers

2022: Integral health agreement





# Personal Engagement

## Minister of Health



**Bruno Bruins** • 1st

Minister voor Medische Zorg en Sport at Ministerie van Volksgezondheid, ...  
1w

Afgelopen vrijdag mocht ik meekijken tijdens het spreekuur van dr. **Willem Jan Bos**, internist-nefroloog in het **St. Antonius Ziekenhuis** in Nieuwegein. Juist bij chronische nierschade is het van belang dat de patiënt goed kan afwegen of dialyse bij hem of haar past en op welke manier: thuis of in het ziekenhuis? Erg goed om te zien dat Willem Jan uitgebreid met zijn patiënten de opties en behandeluitkomsten bespreekt en de tijd neemt om te luisteren wat voor hén van belang is.

Dat zijn niet altijd makkelijke gesprekken. Maar zo voelt de patiënt zich wel eigenaar van de gekozen behandeling. Uit de gesprekken bleek dat patiënten zekerder zijn over hun keuze en meer tevredenheid ervaren over de behandeling. Ik vind dat elke patiënt recht heeft op 'samen beslissen'. Daarom heb ik dat vanaf 1 januari 2020 verankerd in de Wet op de Geneeskundige Behandelovereenkomst (Uitkomstgerichte Zorg 2018-2022).

Shared Decision Making



535 • 29 Comments

# 2022 “Integral Health Agreement”

Agreement of all stakeholders in healthcare

## Aims:

- Reducing increasing demand for manpower
- Contain costs – no net budget increase in 4 years
- Improve patient-centeredness – “fitting care”

## Means:

- Investment in transition: € 2 Billion
- Hospital and regional initiatives



“Merging quality registries”

“Doing the right things,  
doing things right”

Personalizing Care  
“Fitting care – Passende zorg”

Founded in 2017 to accelerate implementation VBHC

> 1500 members: patients, professionals, administrators, policy makers and business community

Sponsored by government

## 1. Creating Knowledge in working groups –

- 11 active, 7 finished

## 2. Spreading knowledge

- meetings - specific topics  
- visiting good examples
- products



**OUR PRODUCTS\***

Linnean  
initiatief

GETTING STARTED WITH VALUE BASED HEALTH CARE

Kennisbank: Van meten naar aantoonbaar verbeteren

QuickScan: Hoe waardegedreven werkt jouw team?

Leidraad: Aan de slag met waardegedreven zorg

Handreiking: In zeven stappen naar een waardegedreven zorg dashboard

Waardegedreven zorg: een voordeelrijke basis in de opbrengst van zorgprofessionals

Het menu van generieke PROMs Actoren

onderzoeks agenda PROMs Actoren

Waardegedreven zorg met uitkomsten en kosten

PREMs

Handreiking Archetypen Aandoeningsgerichte Organisaties

Op weg naar uitkomstgerichte besteding van zorgbudgets

Data & IT: Een behoeve van Samen Besluiten

Wat werkt in de implementatie van waardegedreven zorg en waarom?

\*Download for free at (Note: all but one are in Dutch)

# Standard Outcome sets

- National quality registries
- ICHOM
  - including patient centered outcomes
- Program “outcome driven care – UGZ”
  - national outcome-sets for 50 diseases

**Nefrovisie**

Richtlijnen • Registratie • Visitatie



Verberne et al, Am J Kidney Dis 2019

# Implementation of outcomeset takes time

## Example kidney disease

2018

		Patients						
		Domains	Subdomains	Pre-RRT	HD	PD	Tx	CC
Outcomes	Burden of care	Survival		Collected in 2018	Collected in 2018	Collected in 2018		
		Hospitalization						
		Cardiovascular events						
	Health & Wellbeing	Tier-1 Essential	HRQoL					
			Pain					
			Fatigue					
			Physical function					
			Depression					
			Daily activity					
	Treatment specific	Tier-2 Important	Renal function / eGFR					
			Vascular access survival		Collected in 2018			
			PD modality survival			Collected in 2018		
			Malignancy				Collected in 2018	
			Kidney allograft function				Collected in 2018	
			Kidney allograft survival				Collected in 2018	
			Acute rejection				Collected in 2018	
			Albuminuria	Collected in 2018				
			Bacteraemia		Collected in 2018			
Peritonitis			Collected in 2018					

- Collected in 2018
- ICHOM core set 2019

2023

		Patients						
		Domains	Subdomains	Pre-RRT	HD	PD	Tx	CC
Outcomes	Burden of care	Survival		Overlap 2018	Overlap 2018	Overlap 2018	UGZ / Plan Nefrovisie - CKD 4 - 5	
		Hospitalization						
		Cardiovascular events					UGZ / Plan Nefrovisie - CKD 4 - 5	
	Health & Wellbeing	Tier-1 Essential	HRQoL		PROM's dial./Tx	PROM's dial./Tx	PROM's dial./Tx	UGZ / Plan Nefrovisie - CKD 4 - 5
			Pain		PROM's dial./Tx	PROM's dial./Tx	PROM's dial./Tx	UGZ / Plan Nefrovisie - CKD 4 - 5
			Fatigue		PROM's dial./Tx	PROM's dial./Tx	PROM's dial./Tx	UGZ / Plan Nefrovisie - CKD 4 - 5
			Physical function		PROM's dial./Tx	PROM's dial./Tx	PROM's dial./Tx	UGZ / Plan Nefrovisie - CKD 4 - 5
			Depression		PROM's dial./Tx	PROM's dial./Tx	PROM's dial./Tx	UGZ / Plan Nefrovisie - CKD 4 - 5
			Daily activity		PROM's dial./Tx	PROM's dial./Tx	PROM's dial./Tx	UGZ / Plan Nefrovisie - CKD 4 - 5
	Treatment specific	Tier-2 Important	Renal function / eGFR					UGZ / Plan Nefrovisie - CKD 4 - 5
			Vascular access survival		Overlap 2018			
			PD modality survival			Overlap 2018		
			Malignancy				Overlap 2018	
			Kidney allograft function				Overlap 2018	
			Kidney allograft survival				Overlap 2018	
			Acute rejection					Collected in 2018
			Albuminuria	UGZ / Plan Nefrovisie - CKD 4 - 5				Collected in 2018
			Bacteraemia		Collected in 2018		Collected in 2018	Collected in 2018
Peritonitis			Overlap 2018					

- Overlap 2018
- PROM's dial./Tx
- UGZ / Plan Nefrovisie - CKD 4 - 5

- Next steps 2024:
- registration CKD4-5
  - registration of conservative care
  - PROM's in pre-dialysis care

# Quality registries of scientific societies

## Bottom Up with Top Down Assistance

### Data on specific patient groups

Organized by professional organizations

Used as feedback to hospitals,

Benchmarking

Quality visitation

Sharing best practices

Administrative burden

### National Policies to improve effectiveness

- Collaboration – merging all quality registries
- Obligatory informed consent: New law – opt out option for patients
- Government support for IT for automatic collection

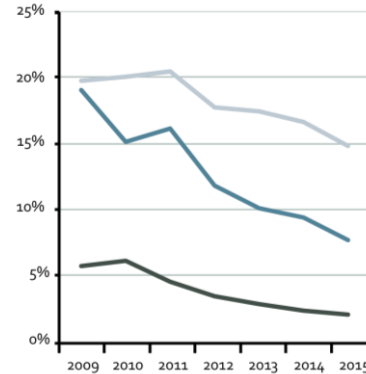
Percentage homedialysis (home-HD en PD)



# Quality registries of scientific societies

## Successful improvement

- DICA - Colon surgery – 50 % reduction perioperative moratlity



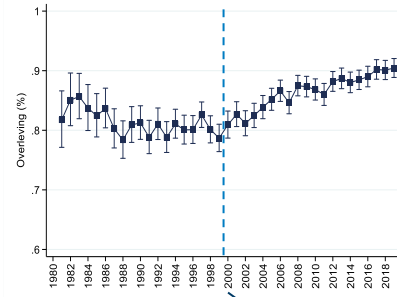
Complication

Irradical Resection

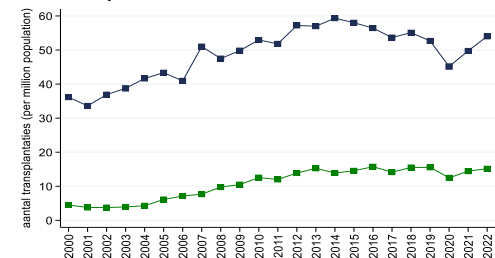
Death

- Nefrodata - Nephrology
  - Dialysis survival from 80 to 90% /yr
  - 80 % increase of kidney transplants

Dialysis – 1 yr survival

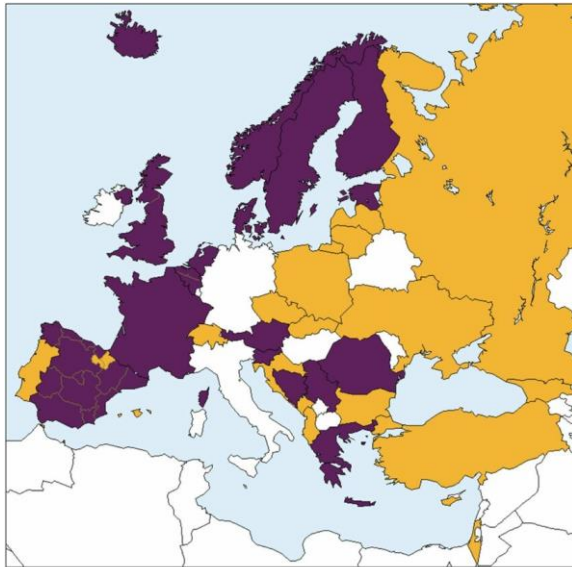


Number Kidney Transplants per million inhabitants



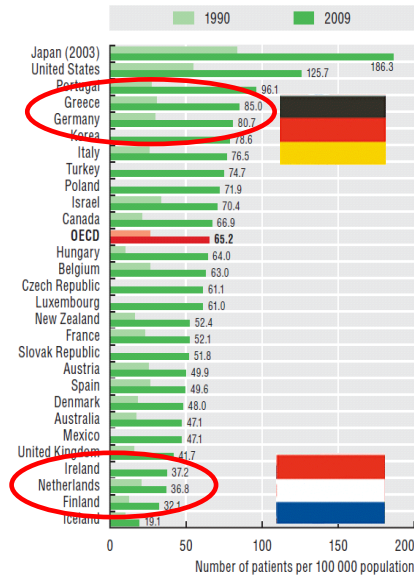
# International Comparison

## Dialysis – Transplantation – Registries

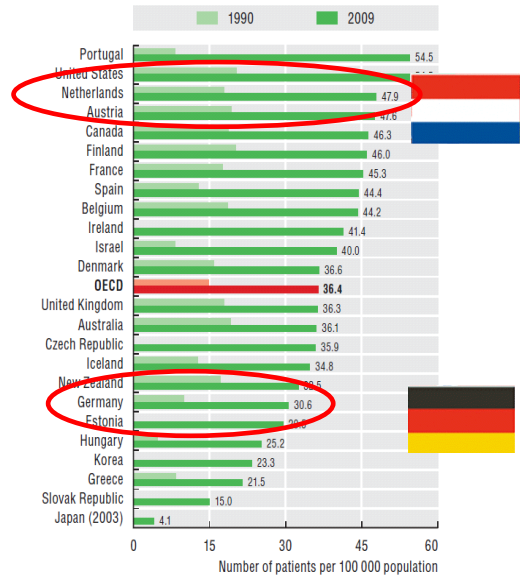


Registries contributing individual patient data  
 Registries contributing aggregated data

4.8.2 Prevalence of patients undergoing dialysis, 1990 and 2009 (or nearest year)



4.8.3 Prevalence of patients living with a functioning kidney transplant, 1990 and 2009 (or nearest year)



OECD 2011



# Improving Outcomes by Benchmarking

## Santeon: Better Together

7 hospitals, 16 diseases

Comparing outcomes

Combined with care delivery processes and costs

Local multidisciplinary improvement teams



UITKOMST INDICATOREN	1	Vrijfaarverwijzing, ongecorrigeerd (%)
	2	Hersoperaties na positieve uitstakken (%)
	3	Hersoperatie na post-operative complicaties (wondinfecties en nabloedag) (%)
	4	Ongeplande opname, afwijking behandelplan en/of hartfalen na systemtherapie (%)
	5	PROM: Levenskwaliteit (welzijn, functioneren, pijn, e.a.)
	6	PROM: Specifieke klachten als gevolg van behandeling (borst-, arm, vasomotor)
	7	Lokaal recidief binnen 5 jaar na eerste operatie (%)
KOSTEN INDICATOREN	1	Verplegdagen per patient (aantal dagen)
	2	Private borstsparende operaties zonder klinische opname (%)
	3	OK-tijd per patient (minuten)
	4	Poliklinische consulten per patient (aantal)
	5	Aanvullende diagnostische activiteiten (MRI, PET, CT, mammogram) per patient
	6	Gebruik dure geneesmiddelen
PROCES INDICATOREN	1	Tijdsluur van verwijzing tot 1e polibezoek
	2	Tijdsluur van 1e polibezoek tot diagnose (PA-uitdag)
	3	Tijdsluur van diagnose (PA-uitslag) tot bespreken behandelplan
	4	Tijdsluur van bespreken behandelplan tot start behandeling
	5	% patienten dat aangreft dat mogelijke gevolgen van evt. behandelingen zijn besproken
	6	Vast aanspreekpunt die de patient begeleidt, en deze is bekend bij patient (%)
BEHANDELMIX		% patienten per behandeloptie (bijv. borstsparend, directe reconstructie)

# Santeon - nephrology

## Reducing Central Venous Catheter Infections

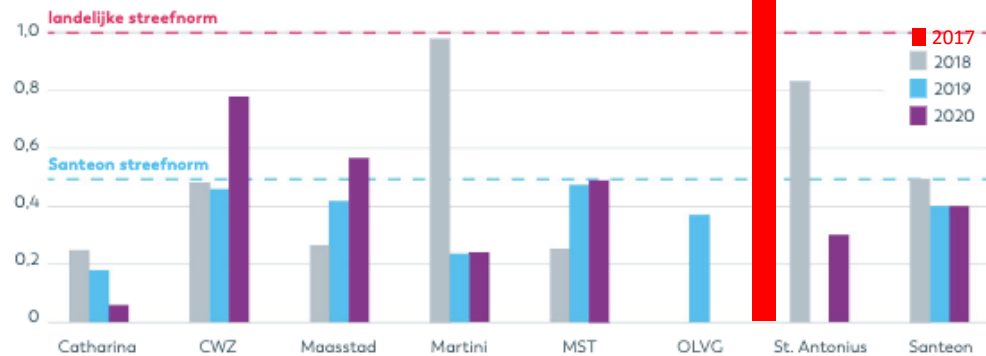
number of infections per 1000 catheter days

3,0 Previous international norm

1,0 New national norm

0,5 Santeon norm

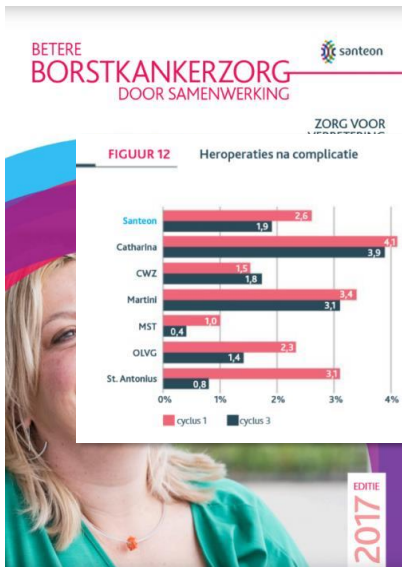
Gemiddeld aantal lijninfecties per 1000 katheterdagen (HD)



<https://santeon.nl/aandoening/chronische-nierschade-2/>

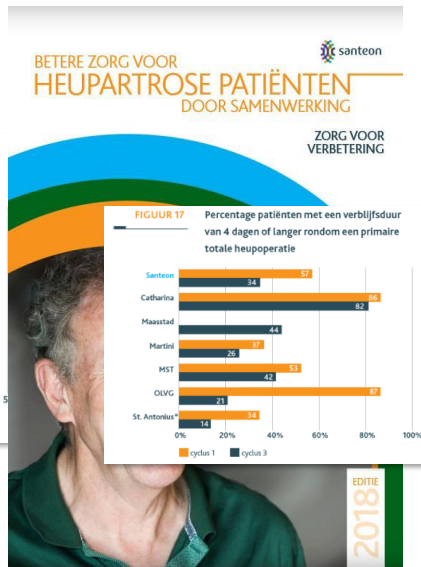
# Samen Beter – Santeon

## Learn, improve, publish



Breast Cancer Surgery :

Reduction of second surgery after complications



Hip-replacement:

Reduction of length of stay > 4 days



Stroke:

Increase of door-to-needle-time ≤ 30 minutes

# Shared Decision Making based on outcome data

## Decision Aid Kidney Replacement Therapy

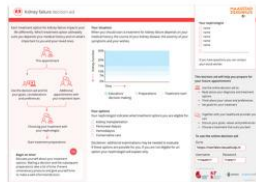
- Articulating Preferences
- Outcome information

Dialysis  
Transplantation  
Conservative Care



Starting the process of SDM

1 Team talk and option talk



The nephrologist explains the patient's diagnosis and treatment options using the **hand-out sheet**. Each hand-out contains a weblink and unique log-in code for the interactive website.



During the process of SDM

2 Decision support



The patient reads the information in the **interactive website** and lists his/her goals, considerations and treatment preferences.



Concluding the process of SDM

3 Decision talk



Patient and nephrologist discuss the patient's goals, consideration and preferences, supported by the **personal summary sheet**. Together they make a shared treatment modality decision.

Survival

Click here if you want to view survival outcomes for each treatment modality. [Hide](#)

Age

18 - 44 years	45 - 64 years	65 - 74 years	75 - 79 years	older than 80 years of age
---------------	---------------	---------------	---------------	----------------------------

Survival after

1 year	3 years	5 years
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LDKT 3 years after LDKT 72 out of 100 people are still alive



DDKT 3 years after DDKT 58 out of 100 people are still alive



Dialysis 3 years after starting dialysis 53 out of 100 people are still alive



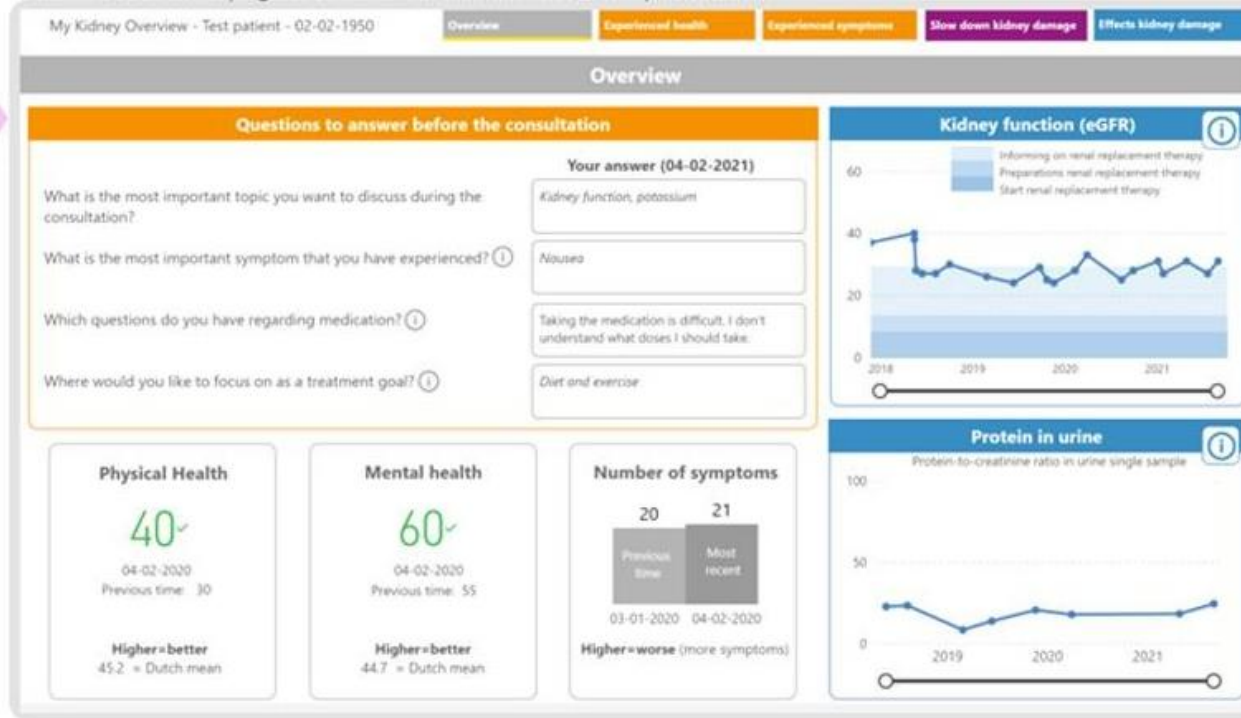
CCM 3 years after choosing for CCM 12 out of 100 people are still alive



# Increasing Patient Involvement

## Medical data, PROM's, patient preferences

Screenshot of first page of the CKD dashboard: no real patient data.



# Implementation of Outcome driven care in health system with many stakeholders

## Top down

National strategy

- involve all stakeholders
- clear targets
- solve barriers
  - IT
  - reimbursement

**Stimulate and support**

**bottom-up initiatives**

## Bottom up

Learning & improving

- Quality registries
- Hospitals

Patient involvement

- PROM's
- Shared Decision Making

Platform to exchange experiences

**Cultural change**

# Hippocratic Oath

using outcomes of care is the way to fulfill promises made

Ik zweer/beloof dat ik de geneeskunst zo goed als ik kan zal uitoefenen ten dienste van mijn medemens. Ik zal zorgen voor zieken, gezondheid bevorderen en lijden verlichten.

Ik stel het belang van de patiënt voorop en eerbiedig zijn opvattingen. Ik zal aan de patiënt geen schade doen. Ik luister en zal hem goed inlichten. Ik zal geheim houden wat mij is toevertrouwd.

Ik zal de geneeskundige kennis van mijzelf en anderen bevorderen. Ik erken de grenzen van mijn mogelijkheden. Ik zal mij open en toetsbaar opstellen.

Ik ken mijn verantwoordelijkheid voor de samenleving en zal de beschikbaarheid en toegankelijkheid van de gezondheidszorg bevorderen. Ik maak geen misbruik van mijn medische kennis, ook niet onder druk.

Ik zal zo het beroep van arts in ere houden.

Dat beloof ik.

of

Zo waarlijk helpe mij God almachtig.

I will put patient interest first

I will listen and inform

I will promote knowledge

I will be open and testable

I will promote access to healthcare

Nederlandse artseneed



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**“Be the change you want to see in the world”**

Ghandi

