Universitair Ziekenhuis Gent

UNIVERSITEIT GENT

The Care Information System of the future is VIRTUAL

Prof. dr. B. Sijnave

CIO UZ Gent

Gedelegeerd Bestuurder CoZo Vlaanderen VZW

© 2014 Universitair Ziekenhuis Gent

The Care Information System of the future

Virtual

mult**I**-dimensional

per**R**sonalised

par**T**icipatory

sec**U**re

Available

supporting qua**L**ity of care

© 2014 Universitair Ziekenhuis Gent

The Care Information System of the future

Virtual

mult**I**-dimensional

per**R**sonalised

par**T**icipatory

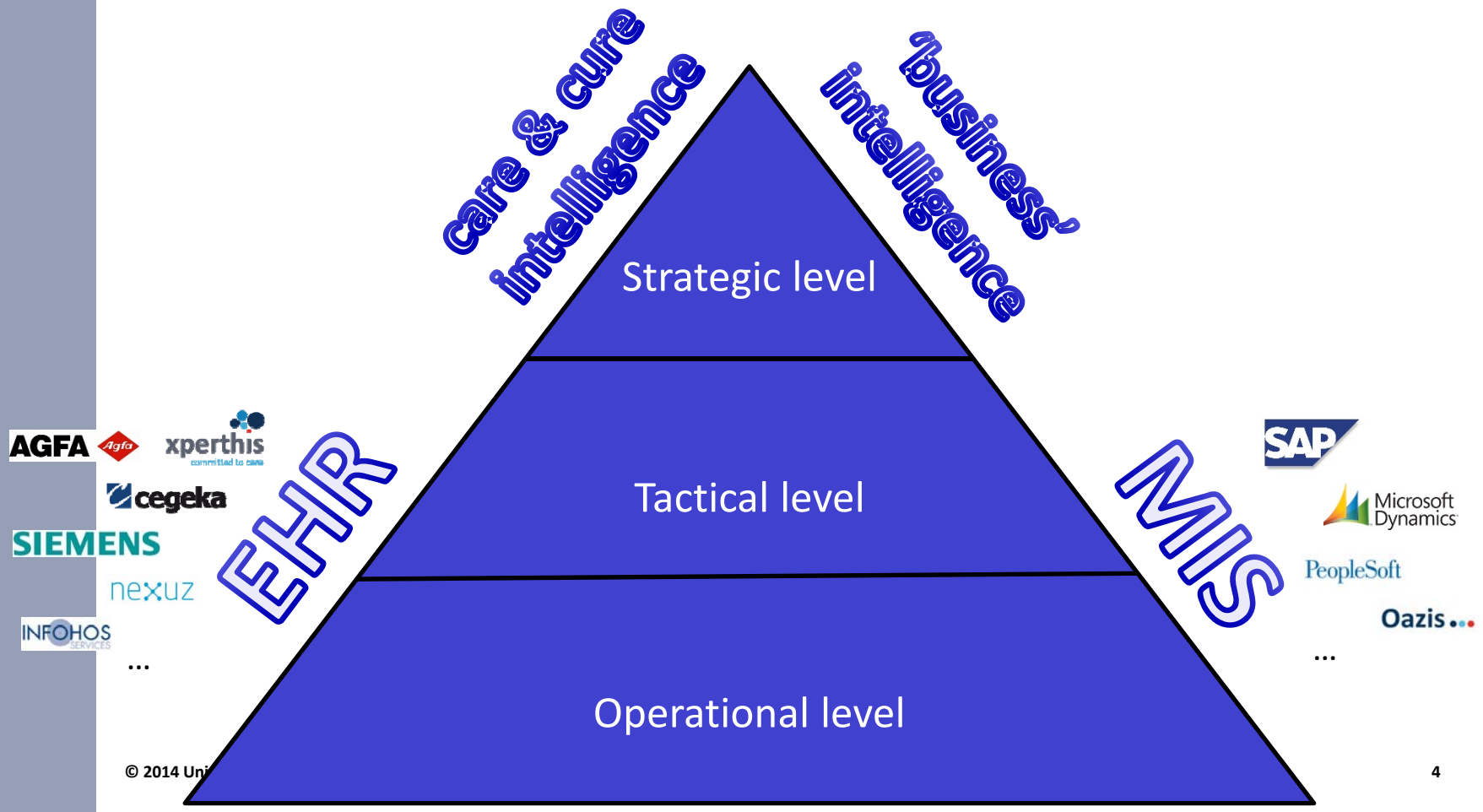
sec**U**re

Available

supporting qua**L**ity of care

© 2014 Universitair Ziekenhuis Gent

The classical Hospital Information System today



© 2014 Uni

V I R T U A L

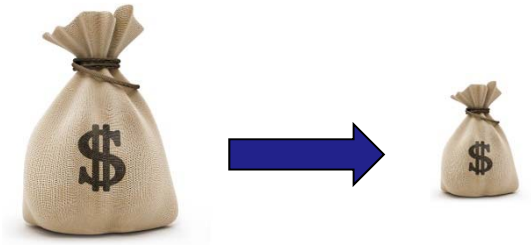
The HIS of the future is a virtual network

© 2014 Universitair Ziekenhuis Gent

VIRTUAL

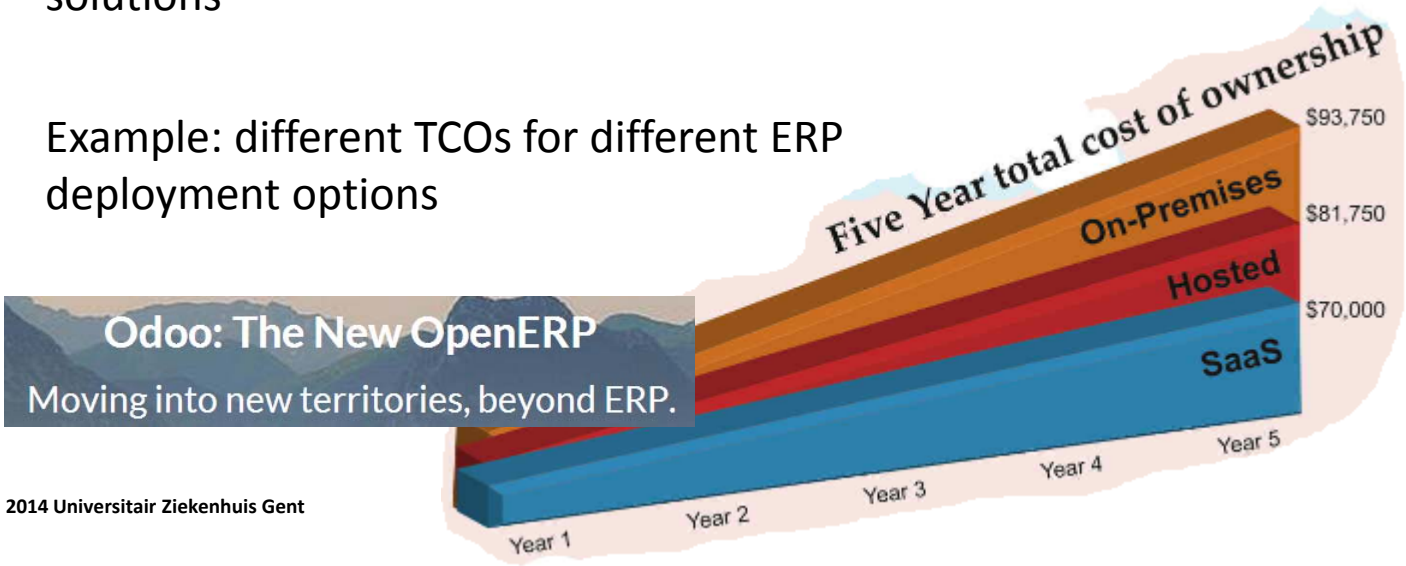
The virtual HIS or the HIS in the cloud – MIS part

Main driver for MIS in the cloud is cost reduction (small set-up cost, small maintenance cost, …)



Type of data that is concurrential would only embrace private cloud solutions

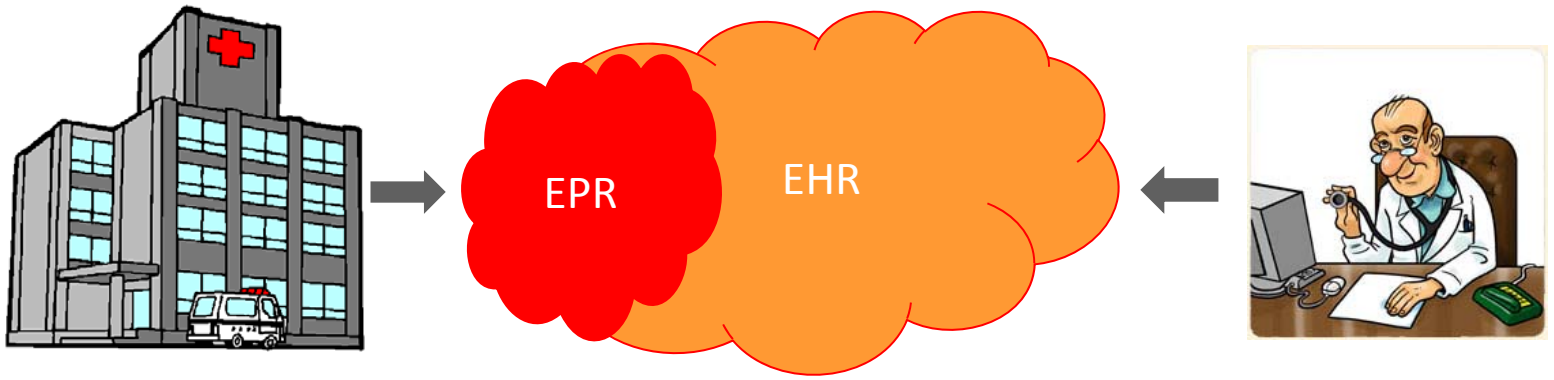
Example: different TCOs for different ERP deployment options



© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The virtual HIS or the HIS in the cloud – EHR part



Main driver for EPR in the cloud would most probably be…
cost reduction (small set-up cost, small maintenance cost, …)

Type of data that is extremely private would only embrace private cloud solutions

© 2014 Universitair Ziekenhuis Gent

VIRTUAL

The virtual HIS or the HIS in the cloud – EHR part

What is the best option for a hospital EPR? Does anyone know?
Is it really 'small and cheap' versus 'large and expensive'?

SIEMENS

cegeka

polymedis
member of the xperthis group

xperthis
committed to care

AGFA

Agfa

alert

nexuz

CSC

INFOHOS SERVICES

docbyte
Value your content

Cerner

Epic

ChipSoft

McKESSON
Empowering Healthcare

iMDsoft

Care 4 Health
we care about your patients

© 2014 Universitair Ziekenhuis Gent

Universitair Ziekenhuis Gent

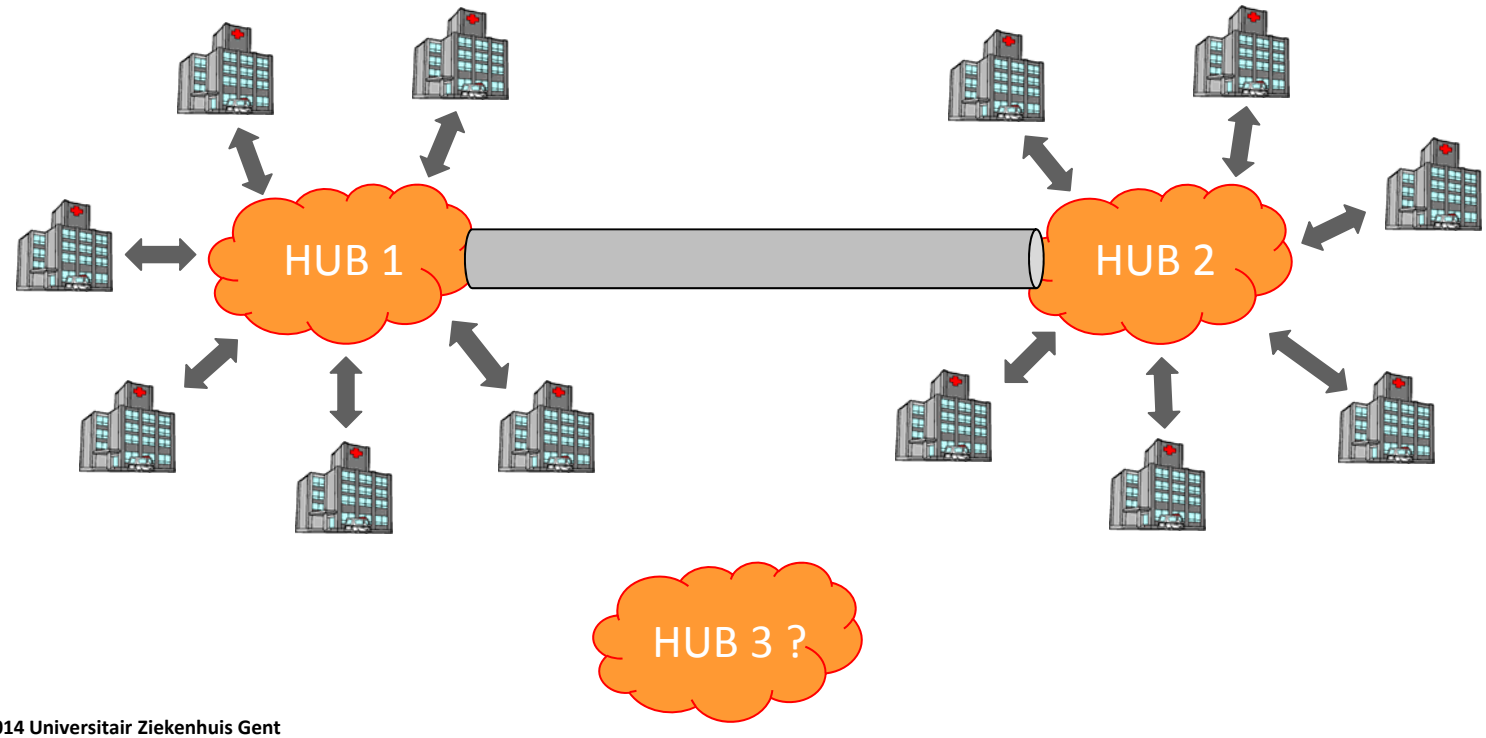
HIS

UNIVERSITEIT GENT

VIRTUAL

The virtual HIS or the HIS in the cloud – EHR part

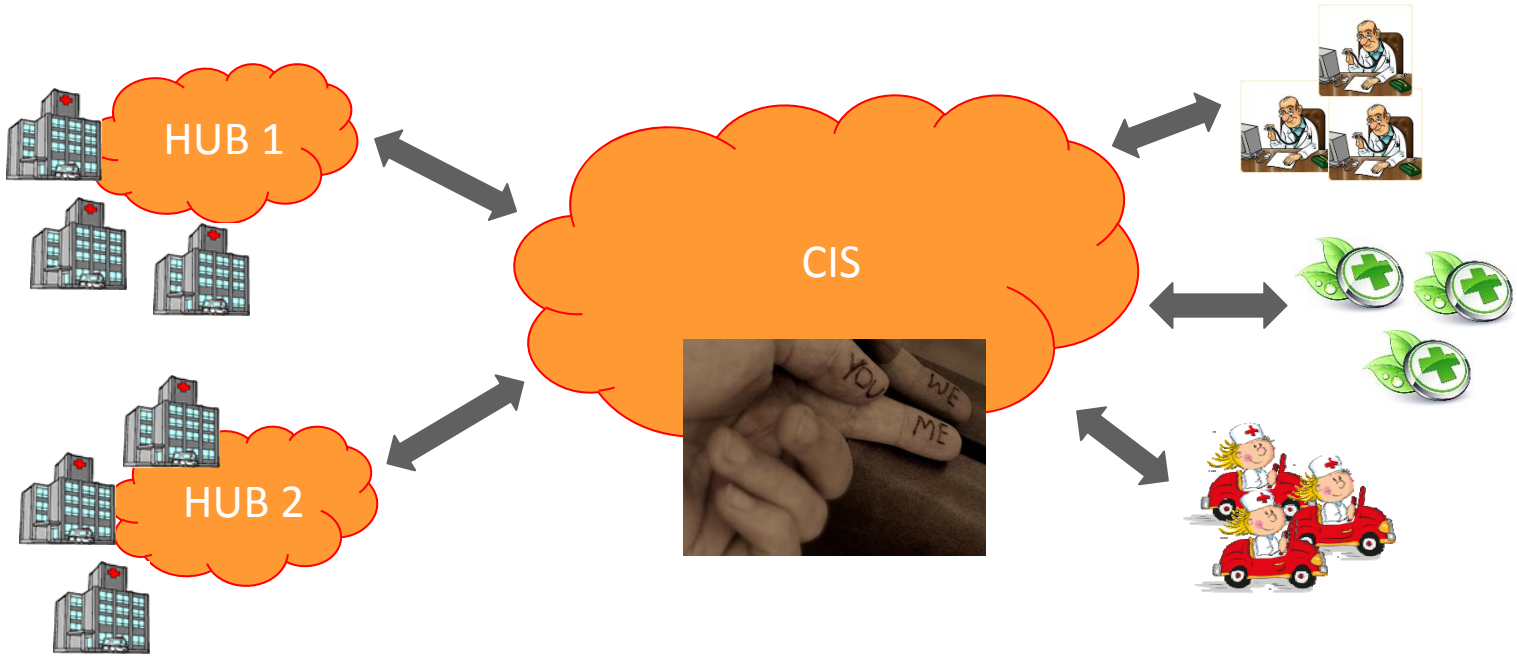
Cooperation is the key, taking into account local criteria and the large CIS picture



© 2014 Universitair Ziekenhuis Gent

VIRTUAL

The virtual CIS or the CIS in the cloud

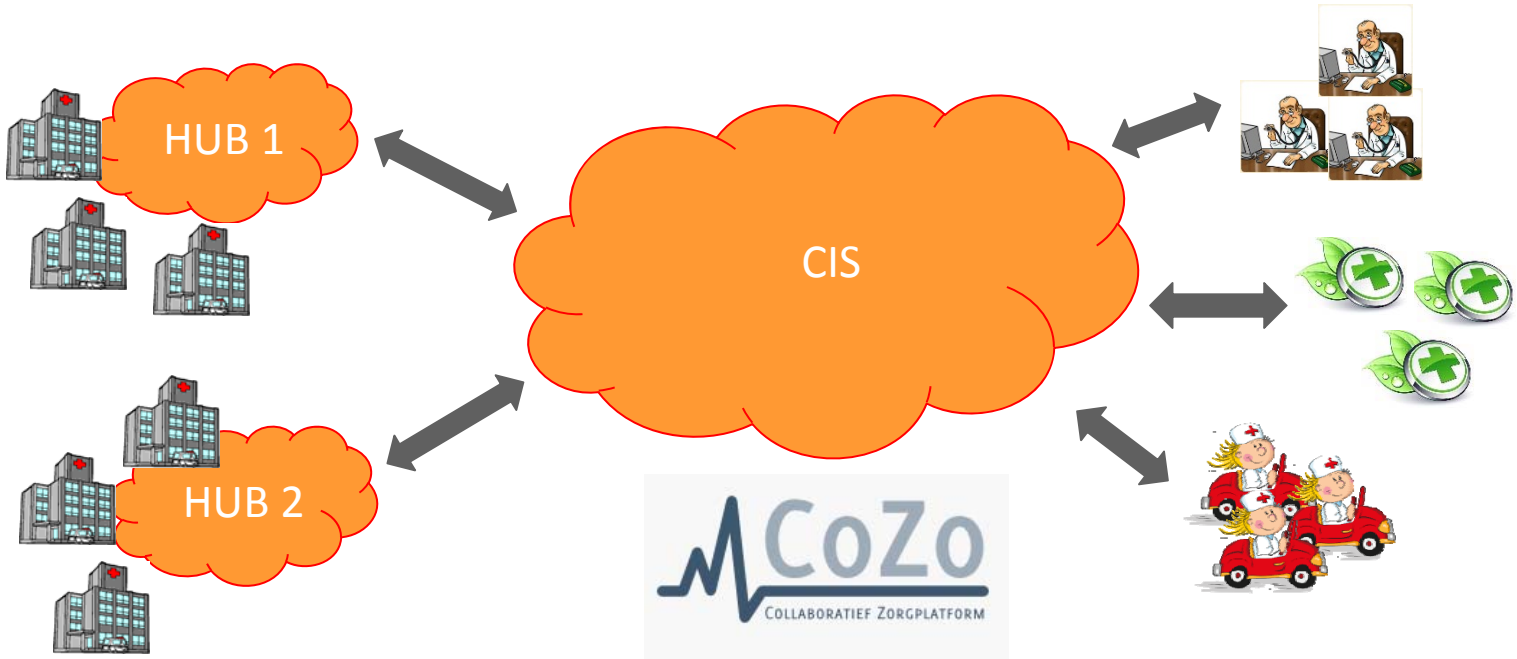


The CIS of the future should be a virtual network, connecting all care givers, care actors and care consumers (You! Me! We!) together

© 2014 Universitair Ziekenhuis Gent

VIRTUAL

CoZo: first steps towards the CIS of the future



CoZo Vlaanderen is a **virtual** network for care information exchange serving 37 hospitals and more than 1.500 GPs. Each month, more than 80.000 contacts are registered on the platform.

© 2014 Universitair Ziekenhuis Gent

The Care Information System of the future

Virtual

mult**I**-dimensional

per**R**sonalised

par**T**icipatory

sec**U**re

Available

supporting qua**L**ity of care

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The multi-dimensional HIS

Multi-dimensionality and –disciplinarity of the HIS

MIS

EHR

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The multi-dimensional CIS: possible approaches

The discussion between

&

doesn't have a single truth, but should have a complementarity, or

instead of

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The multi-dimensional CIS: possible approaches

instead of

can only be achieved by

standardization

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

Shared Patient record in practice: Netherlands

vk.nl de site van de Volkskrant

Eerste Kamer wil uitstel invoering landelijk EPD

Van onze verslaggever – 07/07/10, 00:00

EPD wisselt al informatie van 8,5 miljoen mensen uit

GIJS HERDERSCHEÊ – 23/03/11, 00:00

Opt Out
Costly
No ther. relation check
No exclusions

Elektronisch Patiëntendossier gaat definitief niet door

Gijs Herderscheê – 08/11/11, 14:41

Landelijk elektronisch patiëntendossier blijft toch

Gijs Herderscheê – 08/12/11, 14:11

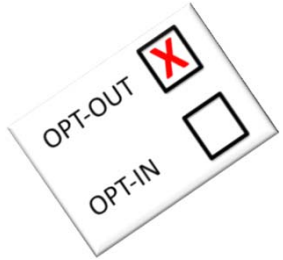
'persoonlijk gezondheidsdossier'

Smaller, Opt-IN

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

Shared Patient record in practice: NHS



The Telegraph

NHS patients to see medical records online

Patients will be able to view their medical records online, email their GP and compare doctors across Britain under plans for an "information revolution" in the NHS.

feb 2010

The Telegraph

Patients' medical records go onl… …consent

Patients' confidential medical rec… …ed on a controversial NHS database without their knowledge … …ave warned.

Oct 2013: NHS pulls the plug on its £11bn IT system (The Independant)

apr 2010

…versial medical records database suspended

A controversial scheme to upload confidential medical records to a national database has been suspended following public outcry.

The Telegraph

NHS patients 'will be able to view medical records online'

Patients will be able to view their medical records online, under proposals backed by the Government.

Dec 2011
(est: 2014)

VIRTUAL

The multi-dimensional CIS in Belgium

What it is today…

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The multi-dimensional CIS in Belgium

What it could become tomorrow…

CoZo
Collaboratief Zorgplatform

Réseau Santé Wallon

…

hubs of hospitals and GPs

vitalink
gegevens delen, van vitaal belang

eHealth

…

governmental initiatives

zorg net Vlaanderen

cegeka

Universitair Ziekenhuis Gent

nexuz health
Medisch samenwerkingsverband

…

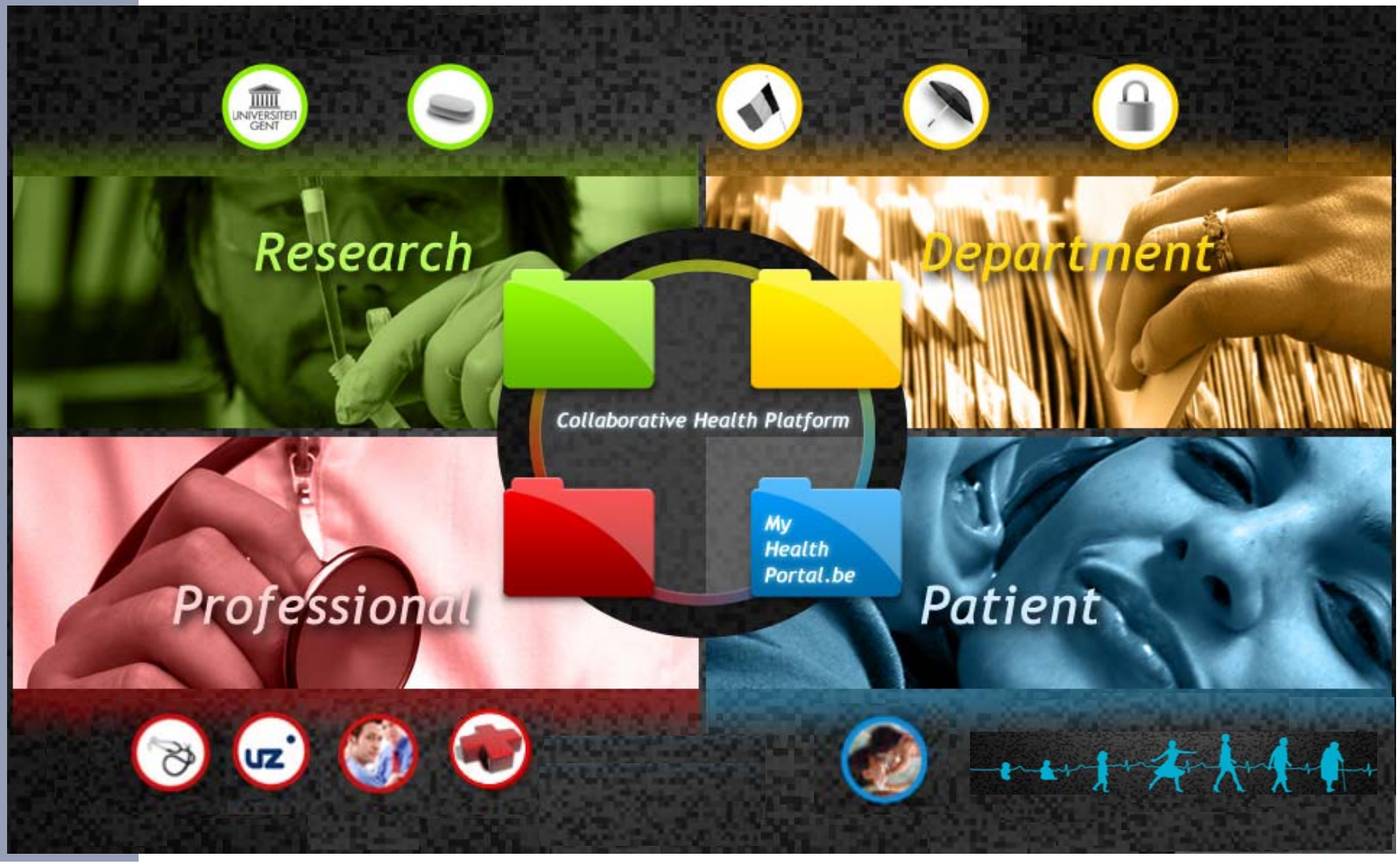
groupings of hospitals

© 2014 Universitair Ziekenhuis Gent

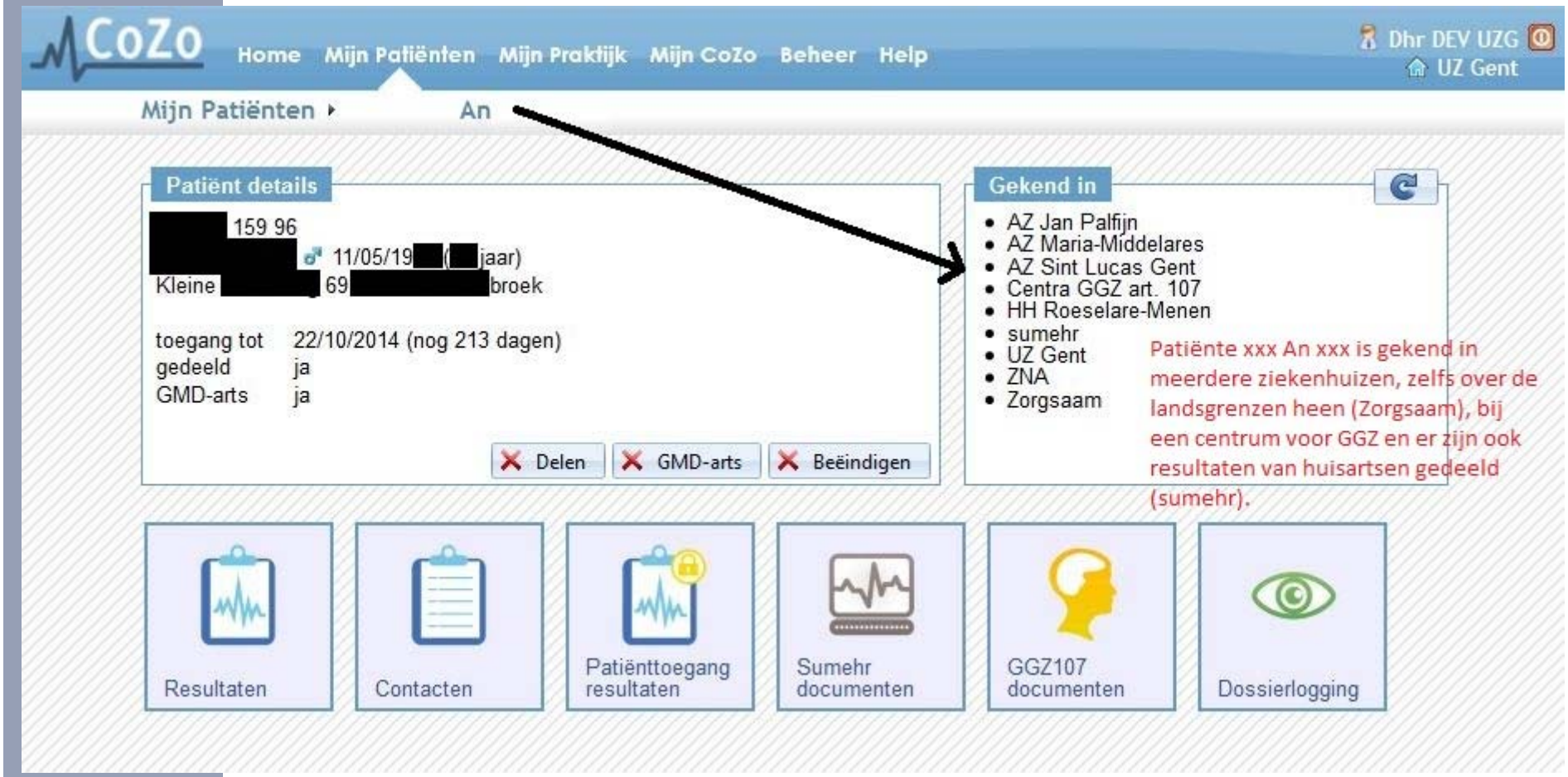
Universitair Ziekenhuis Gent

UNIVERSITEIT GENT

CoZo: a multi-dimensional open network



CoZo: a multi-dimensional open network



© 2014 Universitair Ziekenhuis Gent

The Care Information System of the future

Virtual

mult**I**-dimensional

per**R**sonalised

par**T**icipatory

sec**U**re

Available

supporting qua**L**ity of care

© 2014 Universitair Ziekenhuis Gent

The personalised CIS

The care of the future will be highly **personalised**

Personalisation is all about 'person-based **knowledge**'

Knowledge is extracted from **data**

Hurray! We have lots of **data**,
not to say huge data and it is still growing!

But where to start to get knowledge out of it?

© 2014 Universitair Ziekenhuis Gent

The personalised CIS

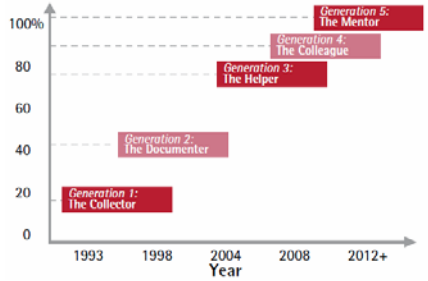
A few suggested starting points…

- Turning silo's of non-integrated data into connected 'care warehouses'

- Integrate into open networks/platforms

EHR4CR

- Going for real EHR-mentorship



© 2014 Universitair Ziekenhuis Gent

The Care Information System of the future

Virtual
mult**I**-dimensional
per**R**sonalised
par**T**icipatory
sec**U**re
Available
supporting qua**L**ity of care

© 2014 Universitair Ziekenhuis Gent

The participatory CIS

Clear trend towards people taking more control of their own health: participation is no longer an option, it is a fact!

- 4,3 mio members
- > 41% of primary care contacts

V I R T U A L

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The participatory CIS

But…

‘my’ data

psychiatric evaluation
social situation
suspected abuse?
shield certain results?

delicate balance

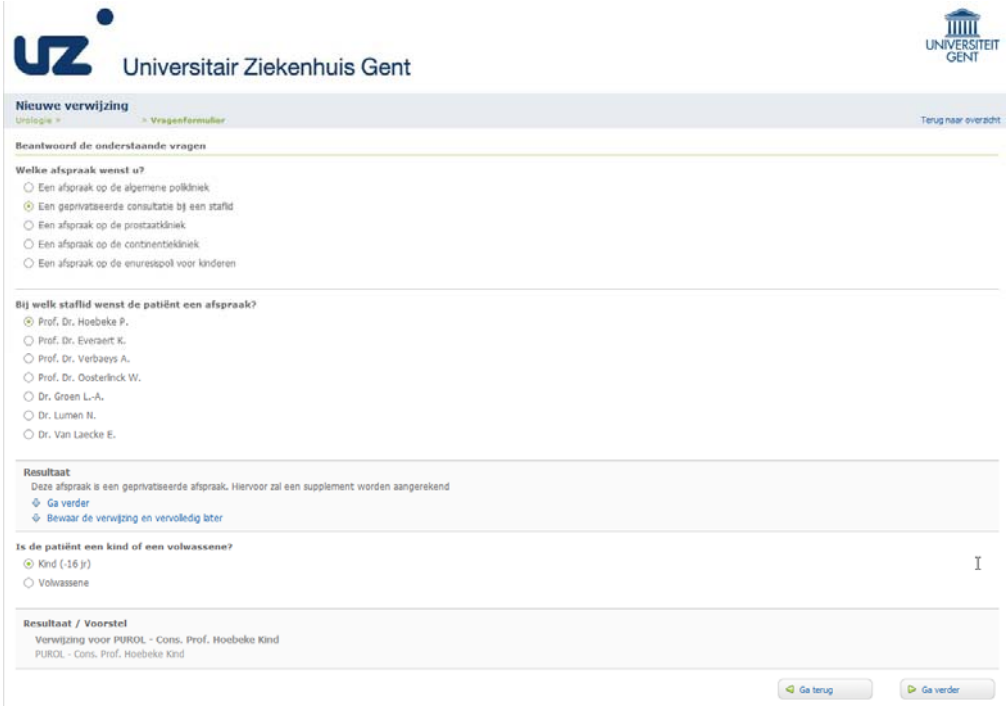
© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The participatory CIS

Helping patients to easy accessible health care by building patient-friendly portals for online appointments, live chats, …

- Reduction in number of physician visits
- Reduction in number of no-shows

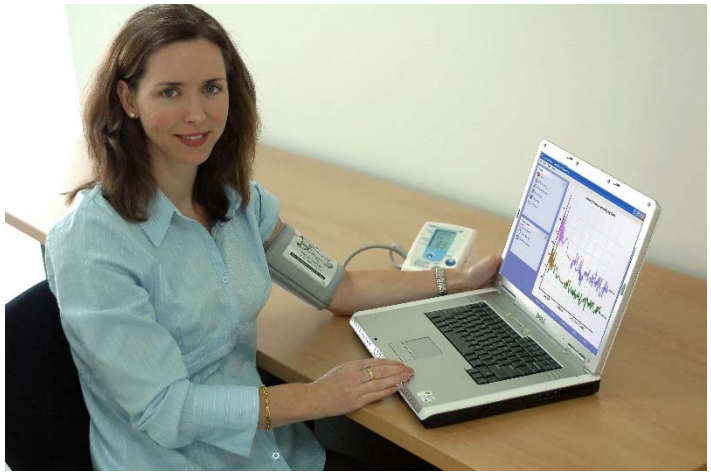


© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The participatory CIS

Also a good way of controlling the cost and keeping patients out of the hospital: home monitoring



- Improvement of care experience
- Improvement of health of population while reducing care cost per capita

© 2014 Universitair Ziekenhuis Gent

VIRTUAL

The participatory CIS

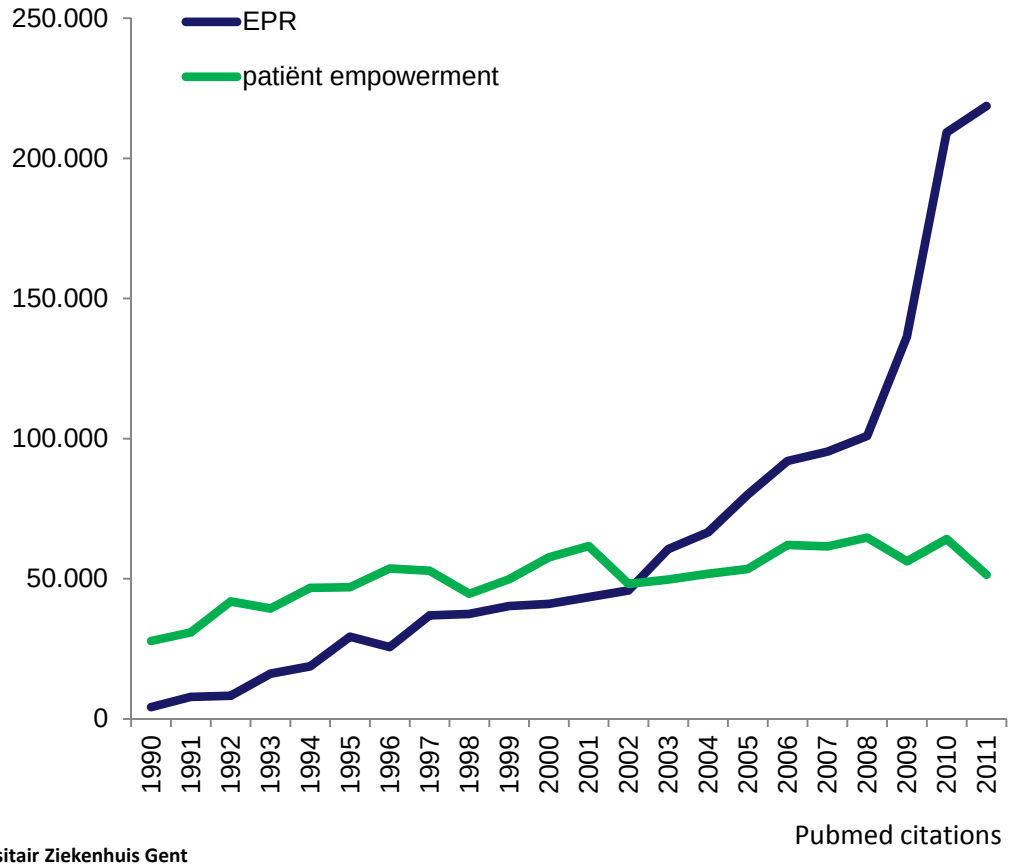
Last but not least: participation is key for prevention and

Prevention is so much better than healing because it saves the labour of being sick. (Thomas Adams, 17th century)

© 2014 Universitair Ziekenhuis Gent

VIRTUAL

The participatory CIS

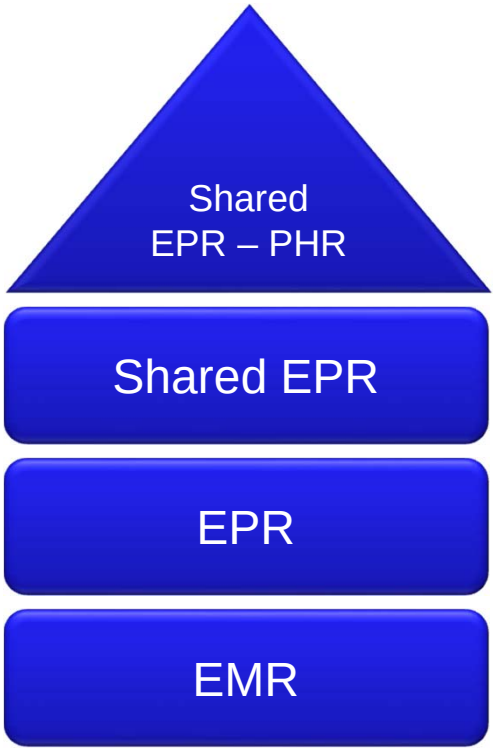


Pubmed citations

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

Patient empowerment: finally accessible?

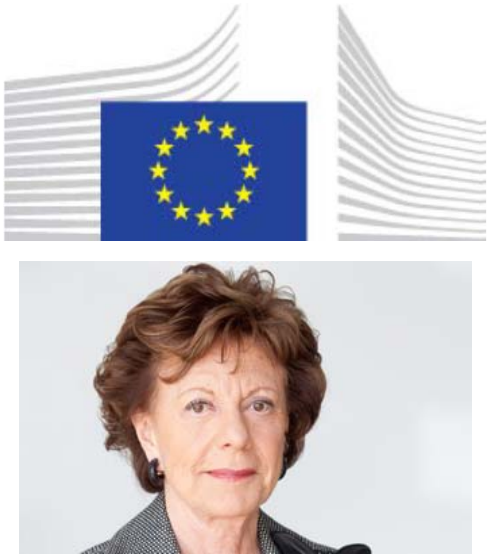


© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The participatory CIS

Although everyone agrees, reality of sharing is still poor…



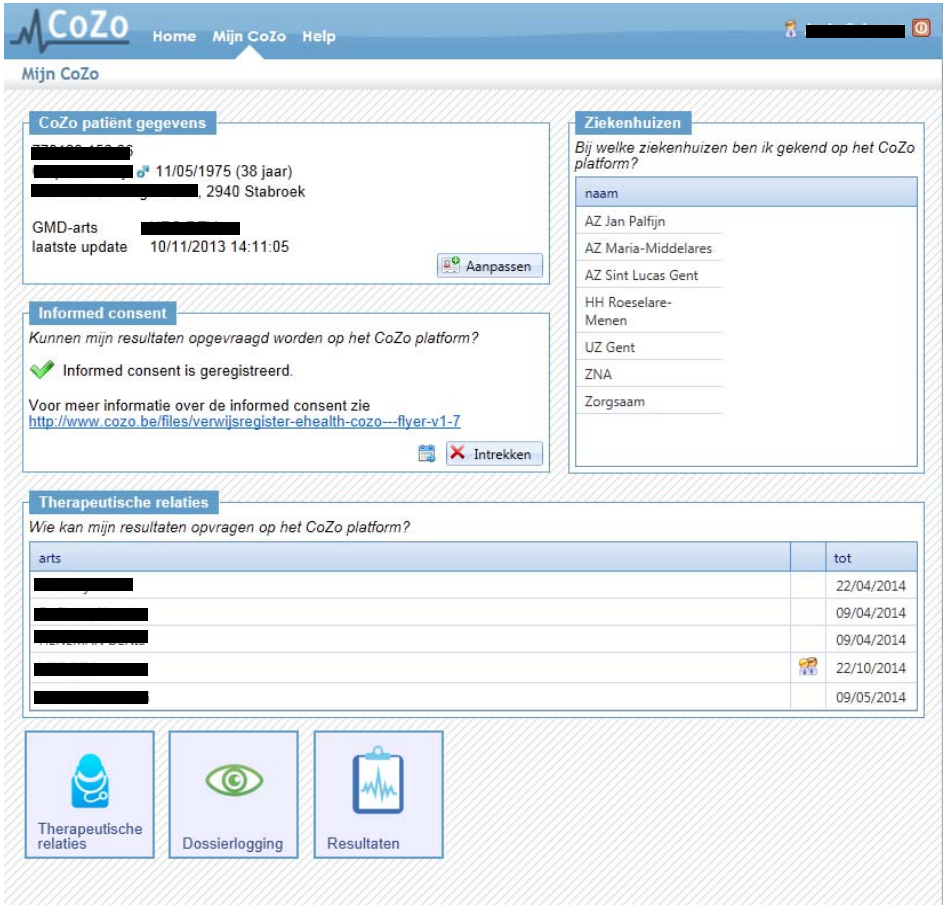
Neelie Kroes (maart 2014):

"Only 9 % of the hospitals in Europe gives patients online access to their own medical file!
This is unacceptable."

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

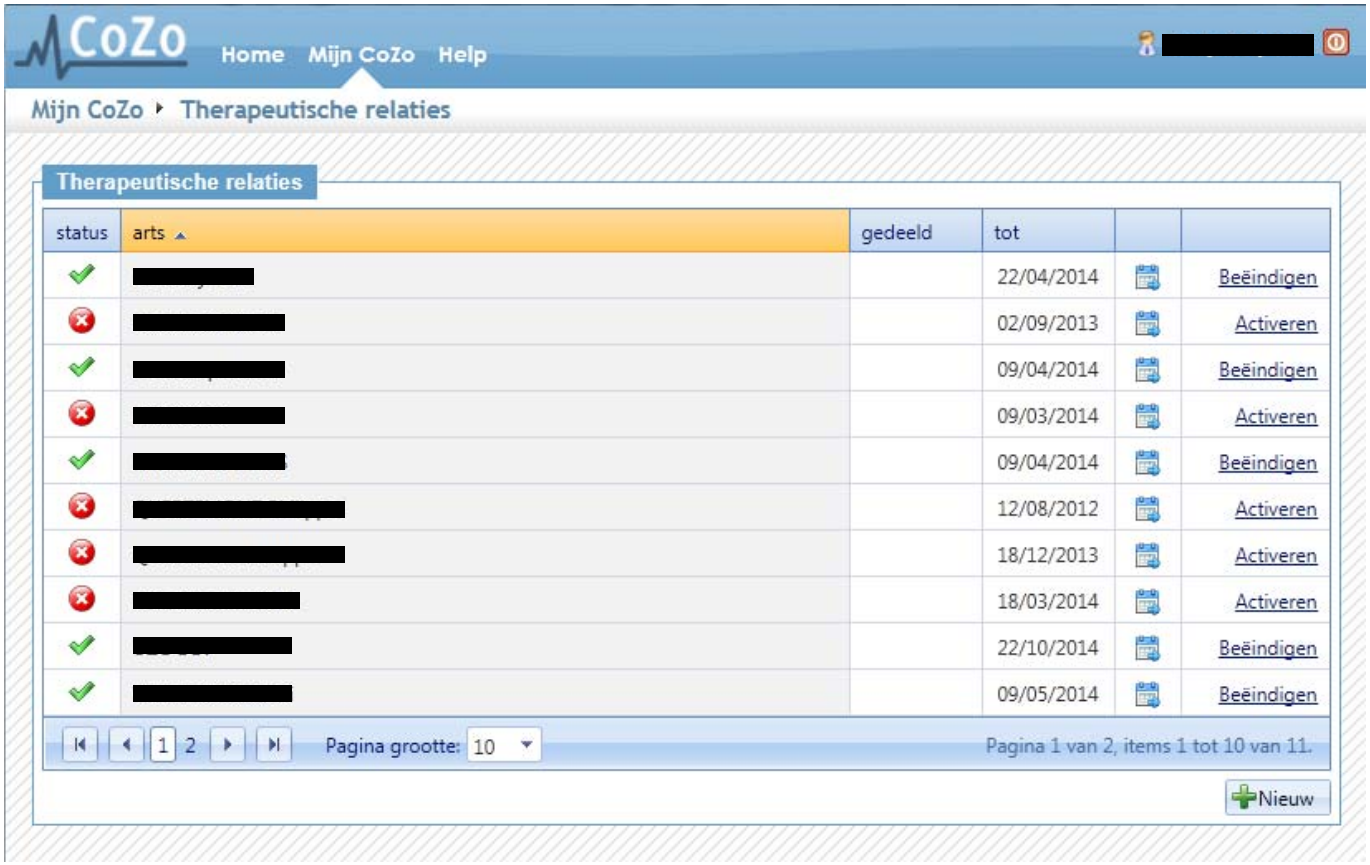
Patient empowerment in CoZo: 'Mijn CoZo'



© 2014 Universitair Ziekenhuis Gent

V I R T U A L

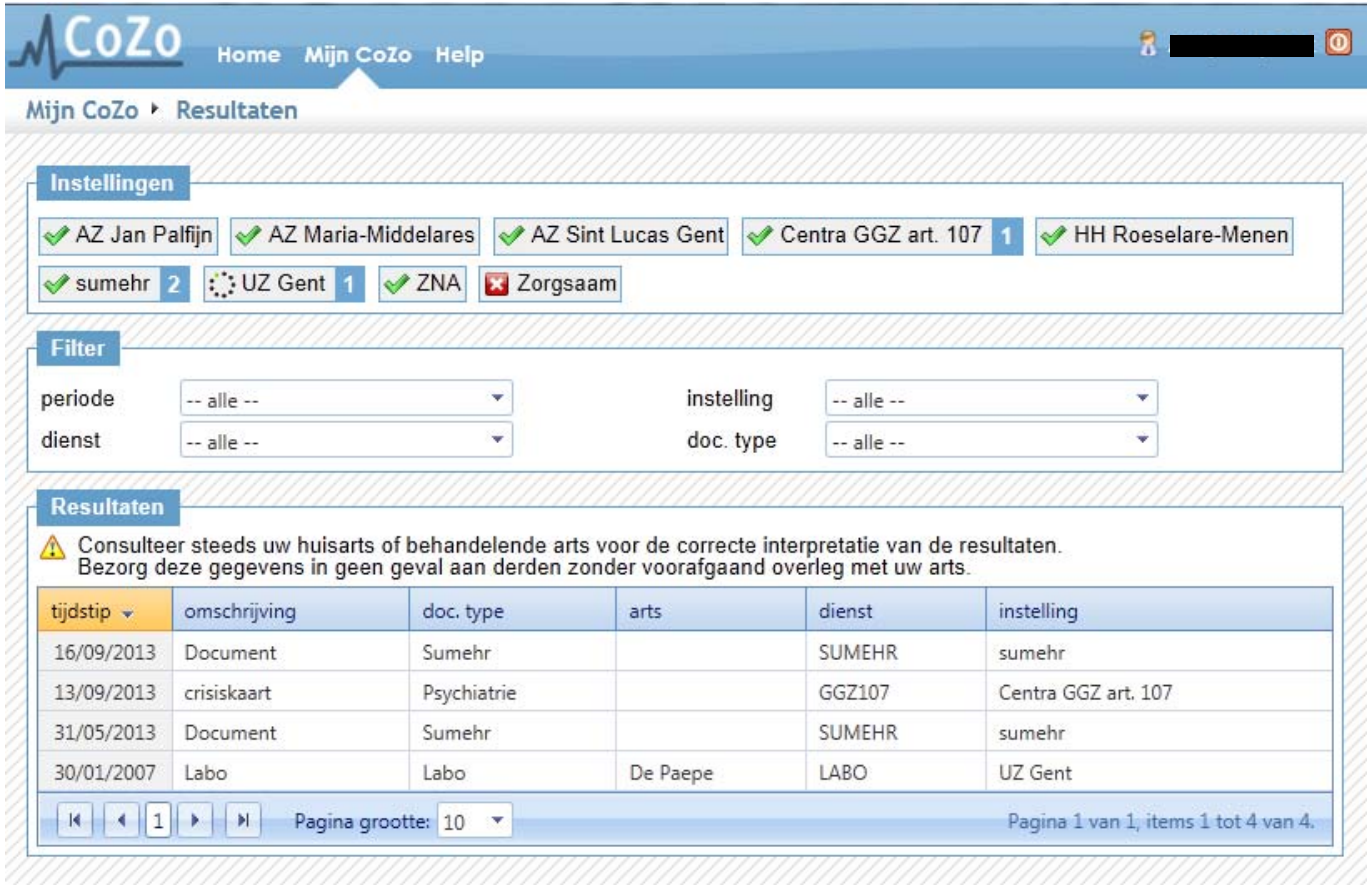
Patient empowerment in CoZo: Mijn CoZo



© 2014 Universitair Ziekenhuis Gent

V I R T U A L

Patient empowerment in CoZo: Mijn CoZo



© 2014 Universitair Ziekenhuis Gent

The Care Information System of the future

Virtual

mult**I**-dimensional

per**R**sonalised

par**T**icipatory

sec**U**re

Available

supporting qua**L**ity of care

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The secure CIS

- Compiled medical data is very attractive…
  - insurance companies
  - pharmaceutical industry
  - employer related (sickness)
  - ….
- Data safety concerns (outside hacking)

© 2014 Universitair Ziekenhuis Gent

The Care Information System of the future

Virtual
mult**I**-dimensional
per**R**sonalised
par**T**icipatory
sec**U**re
Available
supporting qua**L**ity of care

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The available and performing CIS

The more simultaneous users, the more the availability and the performance of the systems gets challenged

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The accessible CIS

Availability is more than about the ‘always on’-philosophy

It is also about being available on any platform

© 2014 Universitair Ziekenhuis Gent

The Care Information System of the future

Virtual

mult**I**-dimensional

per**R**sonalised

par**T**icipatory

sec**U**re

Available

supporting qua**L**ity of care

© 2014 Universitair Ziekenhuis Gent

V I R T U A L

The quality CIS: data quality = care quality = life quality

- longitudinal health record in a mobile world
- increased complexity, treatment options and regulations
- increasing number of participating health actors
- transmural care, data sharing, cooperation
- prevention and home monitoring
- cost reduction (if implemented right)
- ….

© 2014 Universitair Ziekenhuis Gent

The Care Information System of the future is

Virtual

mult**I**-dimensional

per**R**sonalised

par**T**icipatory

sec**U**re

Available

supporting qua**L**ity of care

© 2014 Universitair Ziekenhuis Gent

First steps to get there…

© 2014 Universitair Ziekenhuis Gent

Next steps to get there ?

© 2014 Universitair Ziekenhuis Gent

Thank you for your attention!

© 2014 Universitair Ziekenhuis Gent