



Ministry of Health, Welfare and Sport

Digital health in The Netherlands

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Director of Information Policy



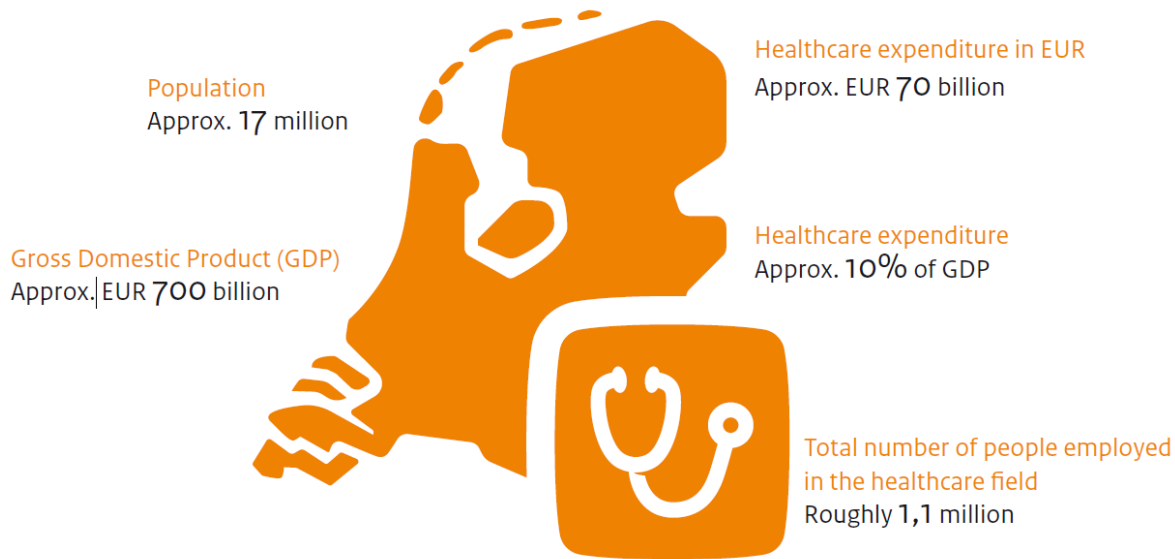
Healthcare in the Netherlands...

Main principles

- Access to healthcare for all
- Solidarity through medical insurance
- High quality healthcare services

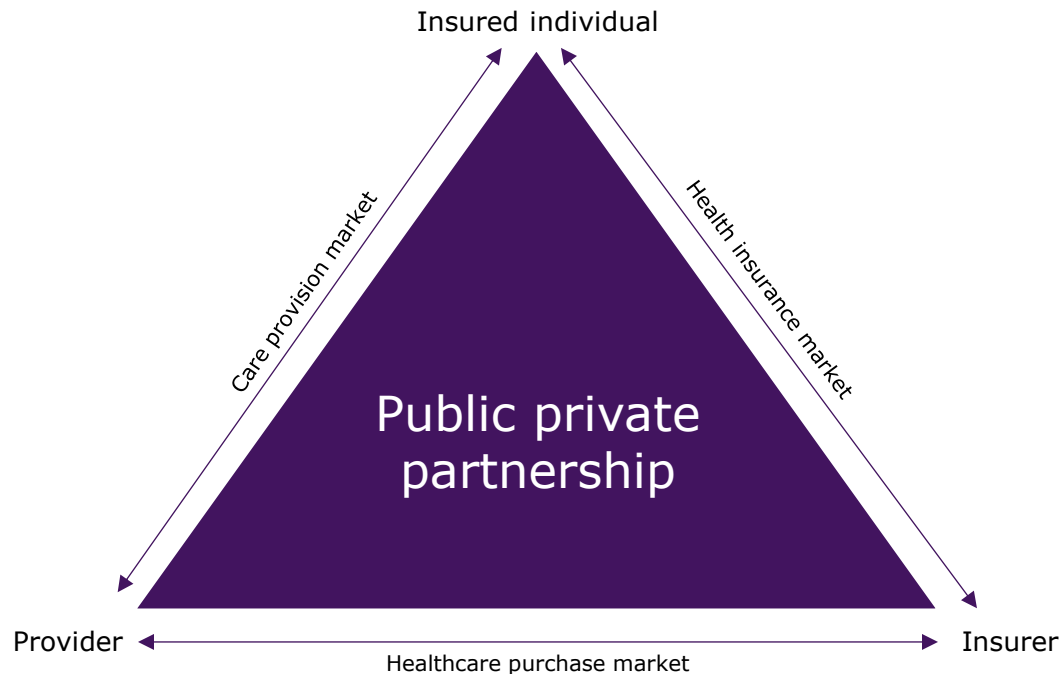
Public requirements

- Private individuals are required to purchase basic health insurance
- Insurers have to accept all clients
- Price is equal to all insured individuals
- Insurers have duty of care
- The contents of the insures basic health coverage is provided for under law.





...is a system of managed competition



Government is responsible for organising accessibility, defining basic package and supervising market and quality

Insured individuals are free in their choice of insurer; possibility to change every year

Providers compete for contracts with insurers on price & quality of care

Insurers compete for insured on premium, quality, service level



Dutch ambitions

- 80% of the chronically ill have direct electronic access to some of their medical data, such as medication data, vital functions and test results, and is able to use this data in mobile apps or internet applications.
- Of the chronically ill (diabetes, COPD) and vulnerable elderly, 75% who are willing and able can take their own measurements, mostly in combination with remote monitoring by a professional.
- Everyone in need of care at home will be able to communicate by video with their care professional remotely 24 hours a day. Also, smart home technology will be used to support home care.
- The next 4 years: > 50% of healthcare value based



eHealth in NL - digitization of patient records

Digital EHRs

GPs	99%
Specialists	90%
Nurses (cure)	75%
Nurses (care)	31%

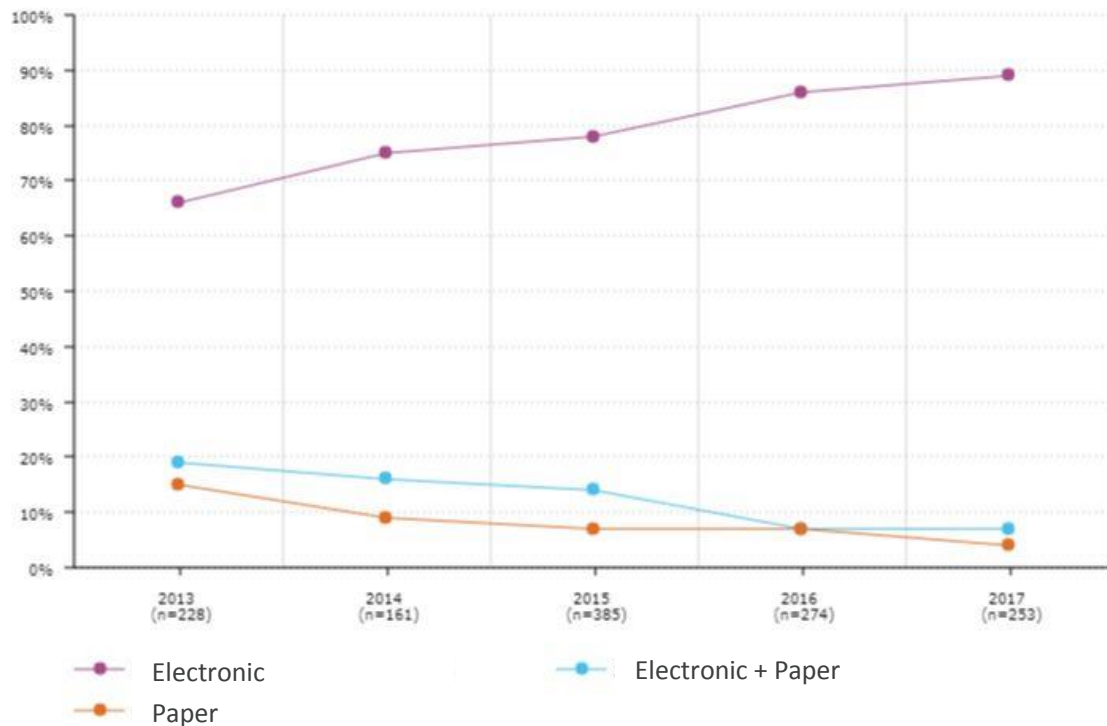
Medication interaction warning

GPs	98%
Specialists	60%

Effects (eHealth Monitor)

- Higher quality of care	72%
- Increased safety	67%
- Less administration	33%

Use of EHR by specialists





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Shared decision
making based on
same information by

empowered citizens
& empowered
professionals



The right care at the right place

Therefore the right information at the right place at the right moment

Empowered citizens

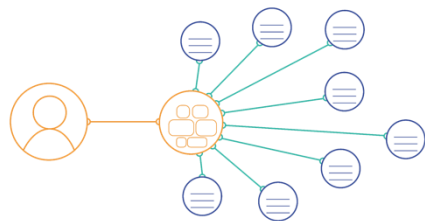
- Everyone CEO of their own health
- Shared decision making
- Make informed healthy decisions in daily life
- MedMij: National Trust Framework for Personal Health Environments
- Outcome data for value based shared decisions for 50% of disease burden

Empowered healthcare professionals

- Mandatory electronic exchange
- Unity of language
- Unity of technology
- Reducing administrative burden: let doctors doctor

MedMij allows you to collect, share and manage your health data in your own **personal health environment**

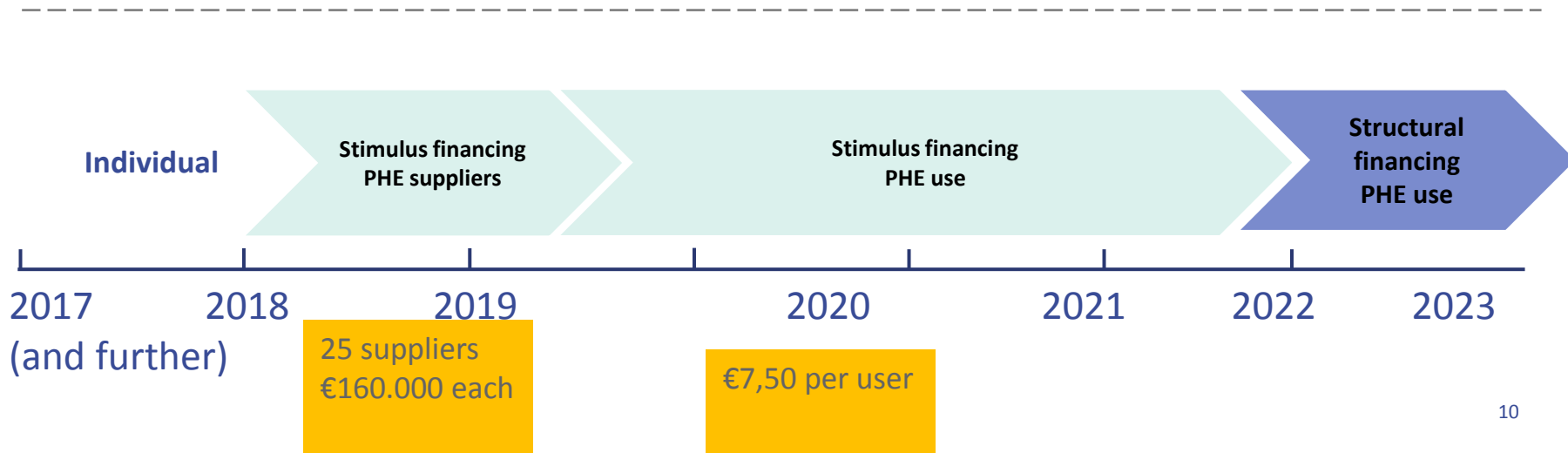
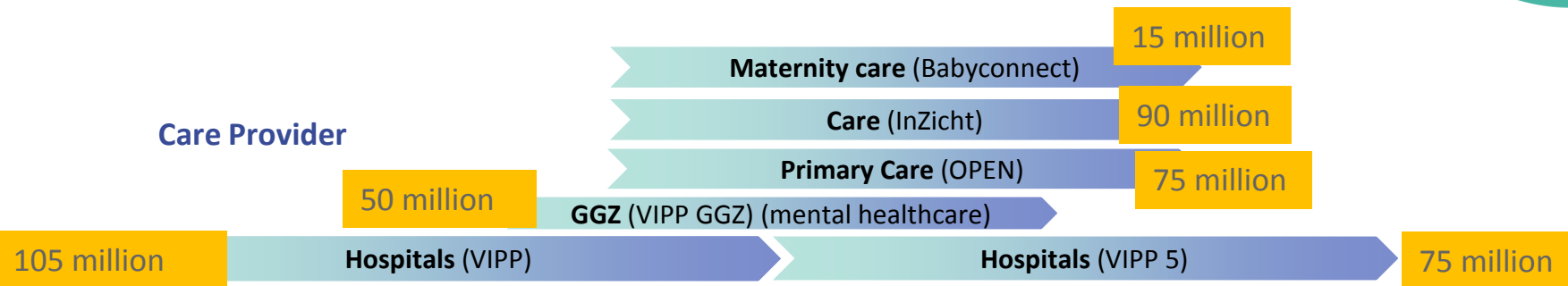
- Copy of own data by law
- Nationwide FHIR implementation
- Based on Health and Care Information Models (semantical and technical standards)
- 8 Certified PHE's, dozens in line



medmij



Investing in patient empowerment

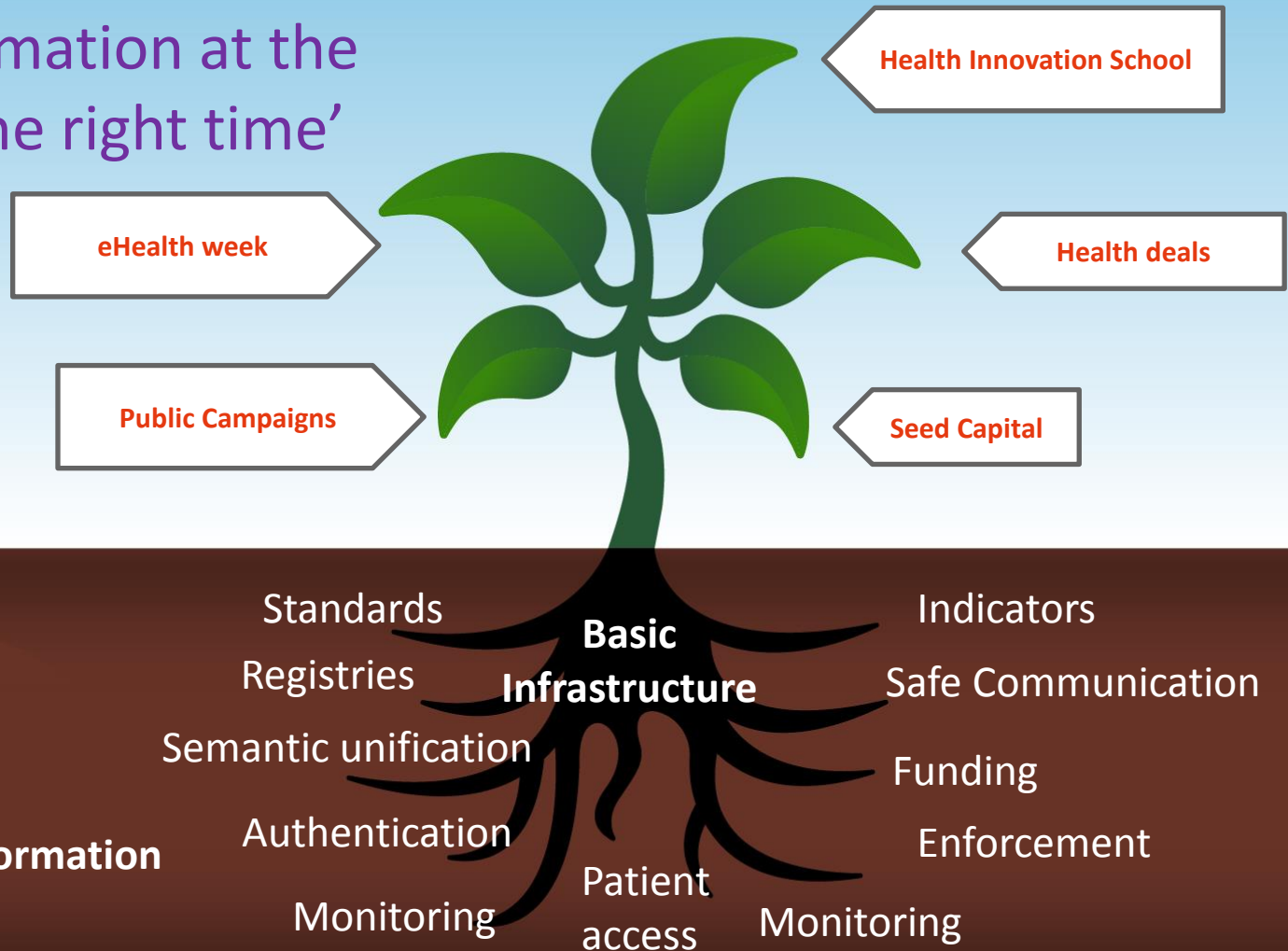


‘The right information at the right place at the right time’



Fertile Soil

Sustainable Health Information



Whole system in the room: National Health Information Council





Electronic exchange between care providers gets mandatory

- Usecase by usecase
(Medication, Images, Discharge to and from nursing homes, Patient summary exchange)
- Based on mandatory use of semantic and technical standards
- Incorporating same HCIM's as in MedMij
- Certification of ICT systems used









Consortium for Global eHealth Interoperability (HIMSS, IHE and HL7)

A global community of stakeholders working together to achieve rapid, coordinated, and efficient deployment of the next generation of API-based interoperable standards to improve health.



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By 2022 we want to
use outcome
information for
shared decision
making for 50% of
disease burden

Shared decision-making leads to...



... and the use of outcome information supports shared decision-making.

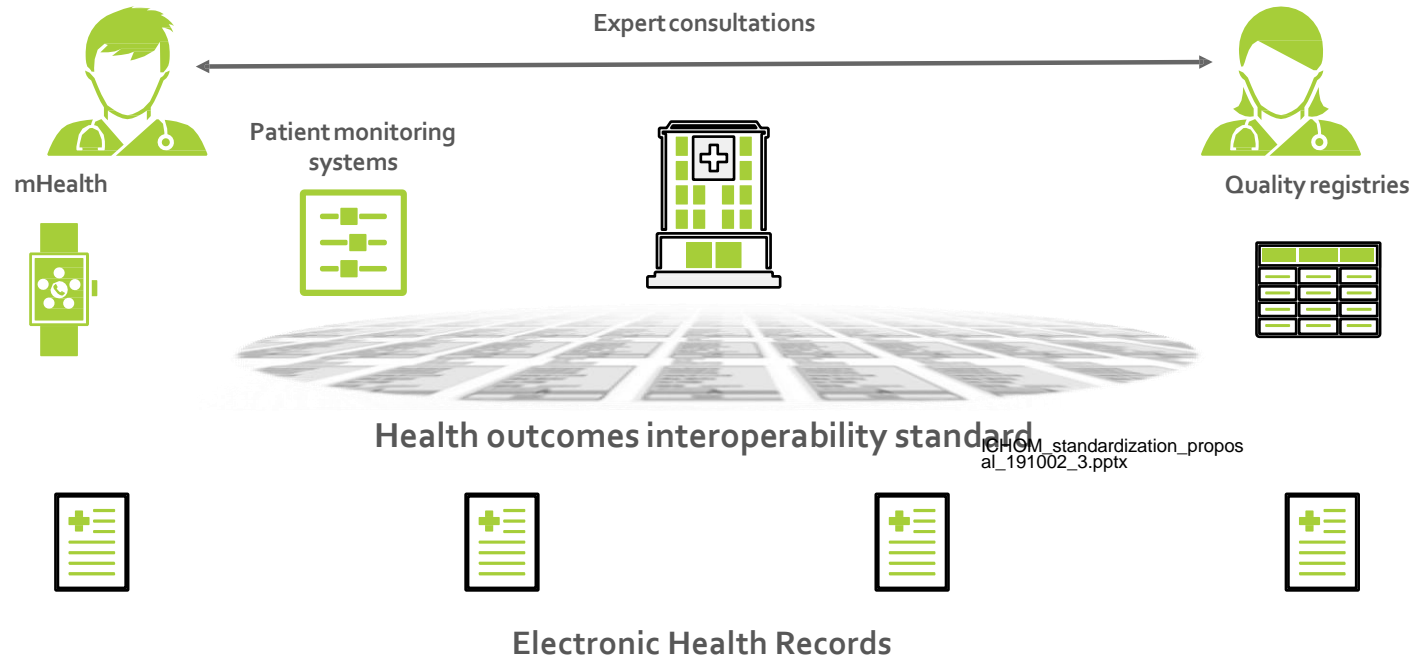
Sources

- Stacey *et al.* (2017), Decision aids for people facing health treatment or screening decisions;
- Knops *et al.* (2013), Decision aids for patients facing a surgical treatment decision: a systematic review and meta-analysis;
- Veroff (2013), Enhanced Support For Shared Decision Making Reduced Costs Of Care For Patients With Preference-Sensitive Conditions.

Better access to relevant and up-to-date outcomes information







- All patients are able to report their outcomes.
- Data management (collection, management and processing) is well organised and can be scaled up, without administrative burden.
- Data automatically extracted out of EMR's.
- All persons and organizations involved in patient care have access to outcome information.
- Outcome information is safely available for other purposes, taking privacy guidelines into account.

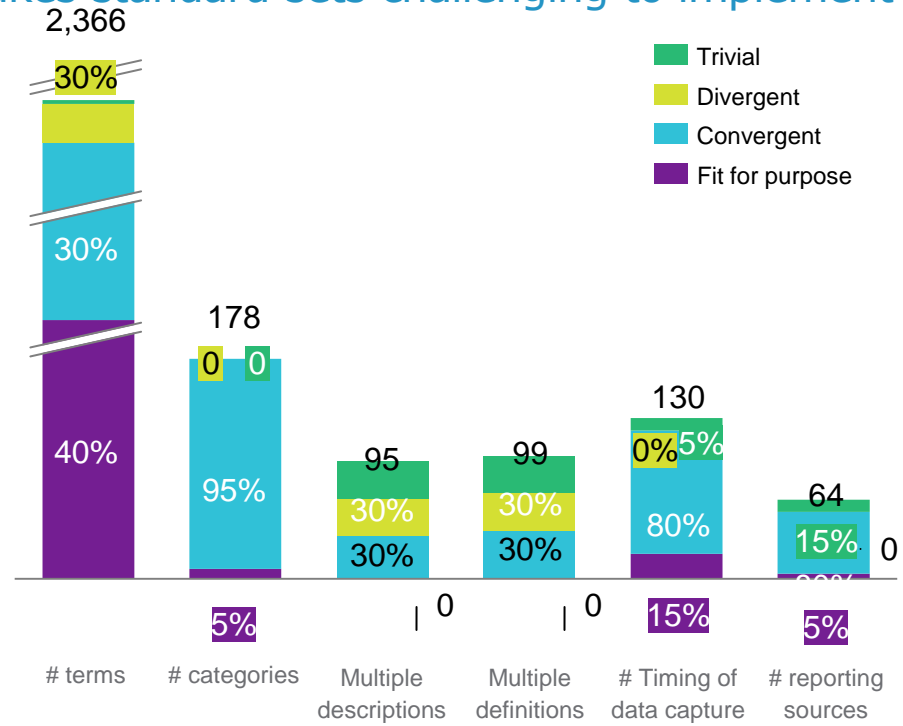
The ICHOM health outcomes interoperability standard is created by standardizing the ICHOM outcome sets and expressing them in a reference information model. Once in place, the standard promotes the interoperability required for valid health data capture and exchange.





The condition-centric approach to defining terms has not addressed the need for a global taxonomy and term bank, which makes standard sets challenging to implement

-   **Trivial**
Trim away blank space, correct typos
-   **Divergent**
Split entities to capture unique meaning
-  **Convergent**
Merge overlapping entities to prevent redundancy
-  **Fit for purpose**
Term is valid for implementation and tracking



Over the course of summer 2019, a pilot study has been conducted to implement the process for creating the ICHOM health outcomes interoperability standard. A proof of concept, illustrated by 4 standardized ICHOM outcome sets was delivered on September 18, 2019.

Steering Committee



Mona Khalid
Stefan Larsson
Martin Ingvar



Ministerie van Volksgezondheid,
Welzijn en Sport

Ron Roozendaal
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Stanley Huff

Technical advisors*



ChipSoft



Project team



May 2019

4.5 FTEs

Sep 2019

1

2

3

4

5

*Individuals affiliated with these institutions have provided technical input informing the work, however, affiliations do not necessarily represent an official endorsement by the listed organizations.



World leaders launched Global Coalition for Value in Healthcare 2019

ViHC Executive Board

 Bernard Tyson Chairman and Chief Executive Officer	 Bruno Bruins Minister of Health, Welfare and Sport of the Netherlands	 Bruce Broussard President and Chief Executive Officer	 Hans-Paul Bürkner Chairman of the Board
 Omar Ishrak Chairman and Chief Executive Officer	 Michael Porter Bishop William Lawrence University Professor	 Rick Valencia President	 Frans van Houten Chief Executive Officer
 Vasant Narasimhan Chief Executive Officer	 Simon Stevens Chief Executive Officer	 Christophe Weber President and Chief Executive Officer	 Marc Harrison Chief Executive Officer

Global Coalition for Value in Healthcare

4 Health informatics standardization initiative could transform the sector

Workstreams for this effort

- Vision and person-centric principles
- Endorsement and coordination
- Use cases
- Implementation and policy recommendations

Organizations that have endorsed proposal



This initiative will be championed by the Global Coalition for ViHC

Expect that this initiative will take up to 4 years, and would start with a lean team to execute in 2019



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Evidence for e-Health





Telemonitoring in Heart Failure

- 40% less days in hospital
- 30% less ambulance rides
- 70% less emergency care visits





And we do have
multiple programs
in the areas of:

- > **data**
- > **AI**
- > **Cyber**
- > **...**