Advancing Care Coordination and Telehealth at Scale: Lessons learned from applying collaborative methodologies for scaling up integrated care programs in EU regions.

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Vienna Healthcare Lectures 2018

September 20, 2018

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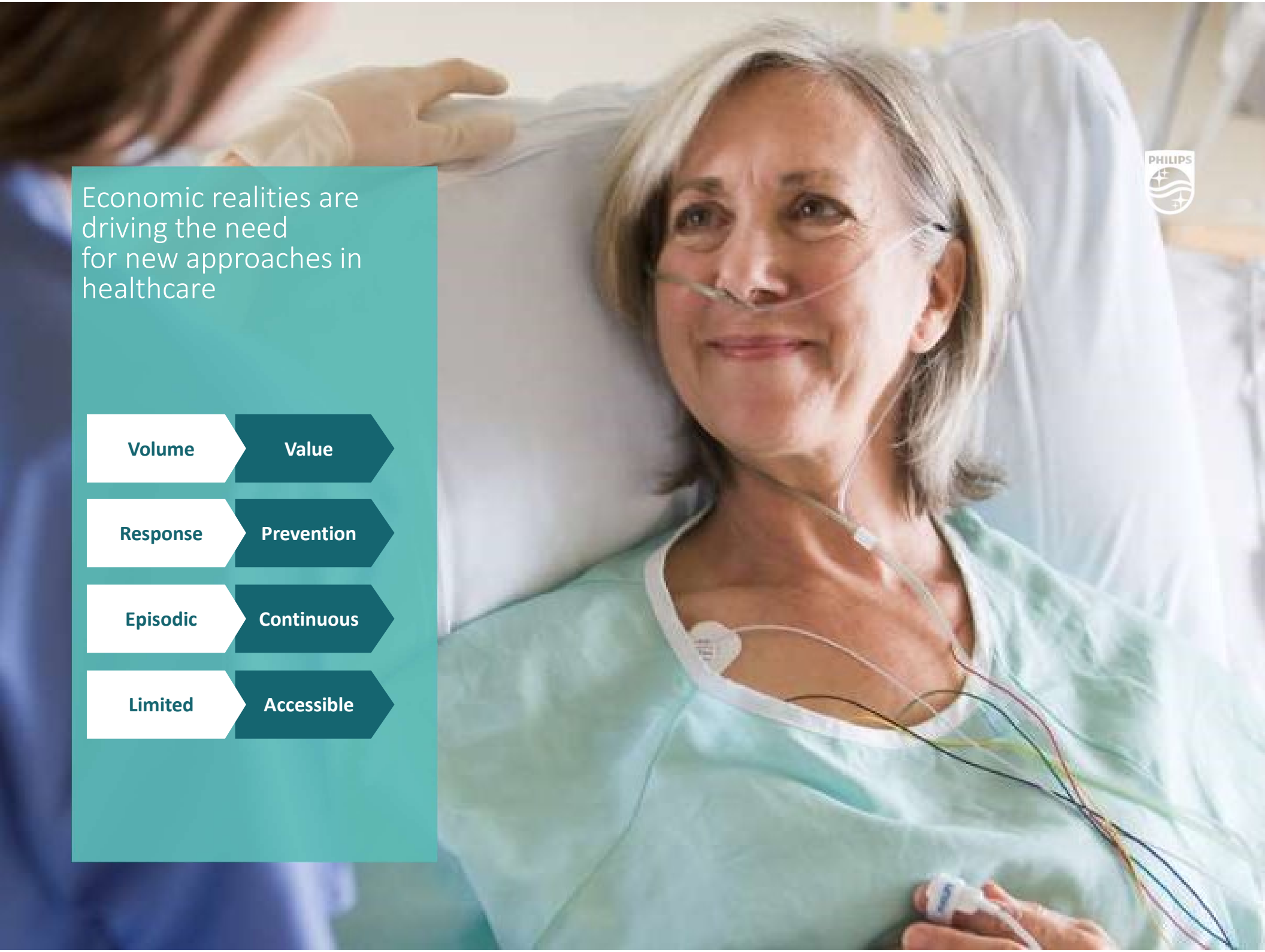
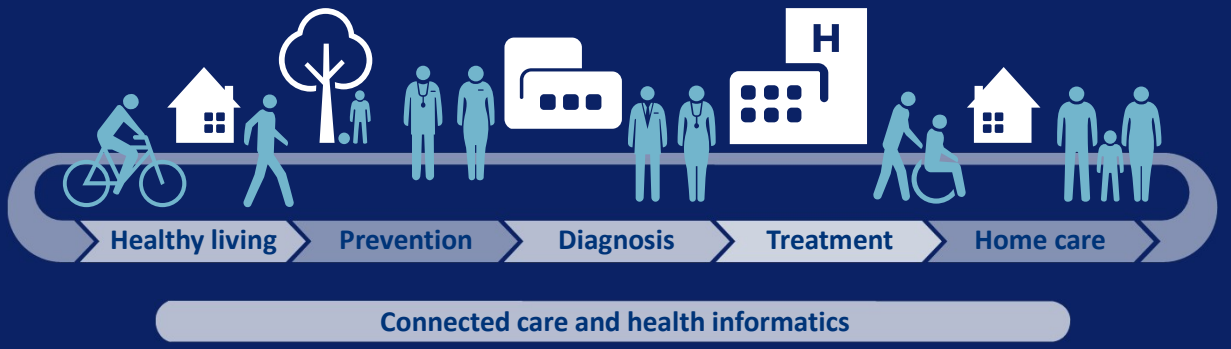


Economic realities are driving the need for new approaches in healthcare

Volume	Value
Response	Prevention
Episodic	Continuous
Limited	Accessible

Ready to take on the healthcare challenge

At Philips, we take a holistic view of people's health journeys, starting with healthy living and prevention, precision diagnosis and personalized treatment, through to care in the home – where the cycle to healthy living begins again.



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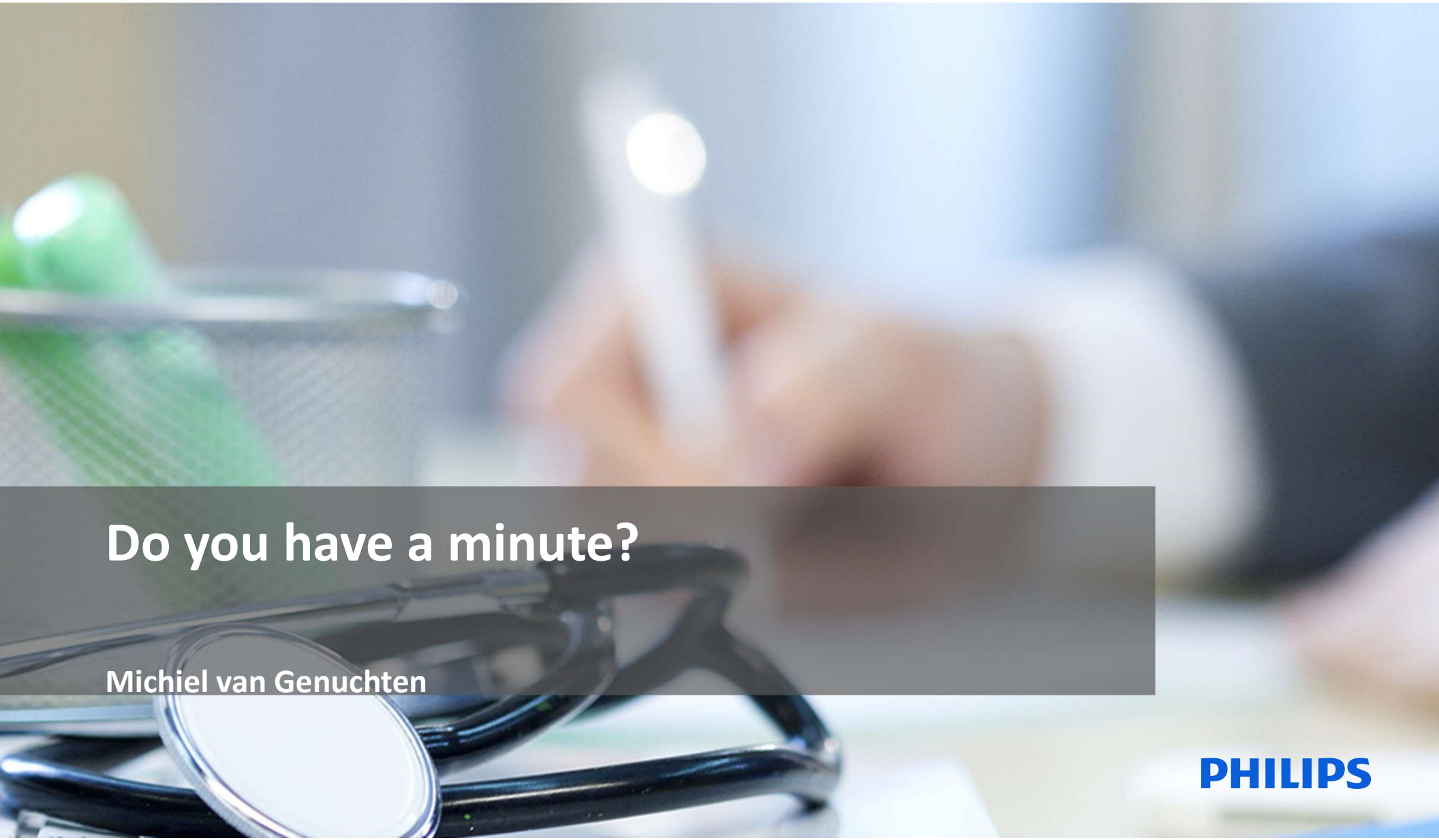

Do you have a minute?

Michiel van Genuchten

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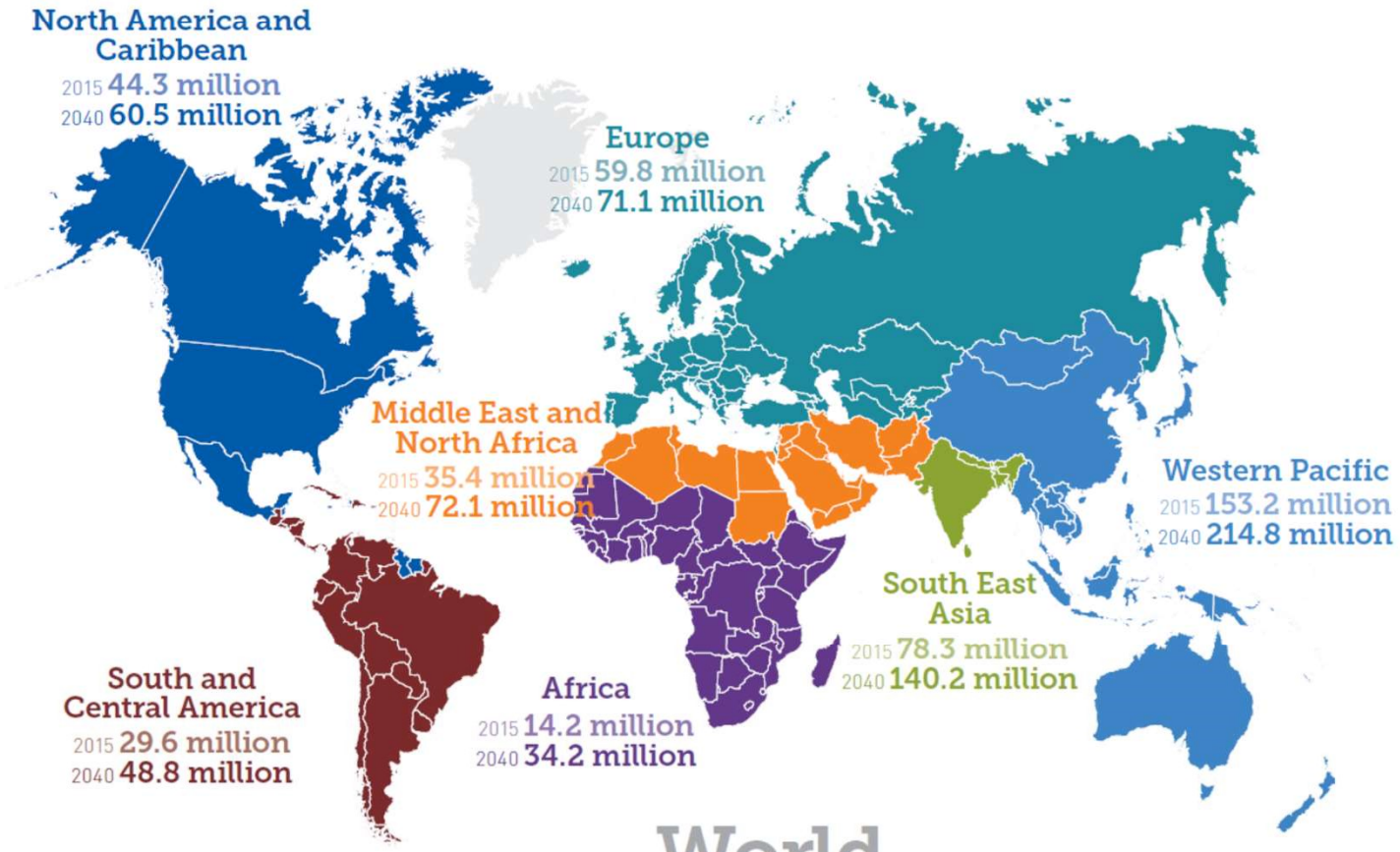
Estimated number of people with diabetes worldwide and per region in 2015 and 2040 (20-79 years)



Source: Int. Diabetes Federation

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Not enough GP's to handhold chronic patients

	Sample size	Minutes Seen by Doctor Mean
Germany	889	8
Spain	539	8
United Kingdom	446	9
Netherlands	579	10
Belgium	601	15
Switzerland	620	16
USA	106	13
Australia	926	14
Saudi Arabia	843	6
United Arab Emirates	925	6
State of Qatar	598	7

Source: Bener, 2007, Deveugelee et al., 2002, Levinson and Chaumenton, 1999, Britt et al., 2002, Al-Shammari, 1991, Annual Health Report UAE, 2004

How can we make better use of minutes?

- Utilizing increasing number of sensors at home
- Actively involve the patient
- Questionnaires to collect meaningful data up front
- Med rules to signal medical exceptions
- Patient knows he/she is being watched by medical professional
- Population mgmt and campaigns to focus on high risks patients
- GP can spend more time with high risk patients as a result

Measuring outcomes

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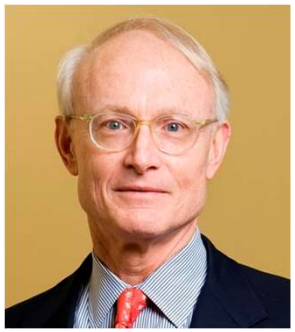
$$\text{Patient Value} = \frac{\text{Health Outcomes}}{\text{Cost}}$$



ICHOM Standard Sets (4 CV out of 23 total)

Hypertension

Cardiovascular

Heart Failure

Cardiovascular and circulatory

Coronary Artery Disease

Cardiovascular and circulatory

Stroke

Cardiovascular and circulatory

The Kings Fund — Ideas that change health care

Authors
Nancy J Devlin
John Appleby

Getting the most out of PROMs

Putting health outcomes at the heart of NHS decision-making

THE HEALTH CARE CRISIS

In spite of countless health care reform efforts over many decades, uneven quality, frequent errors, and high and rising costs continue to plague the U.S. and countries around the globe. The status quo is untenable, and everyone—providers, health plans, employers, governments, and most of all, patients—will suffer if we fail to fundamentally change our approach.

High & Rising Costs

Figure #1

4%

Average annual real growth in per capita health spending across OECD nations, 2000-2009.

Healthcare spending accounts for

17.6%

of GDP in U.S.

THE SOLUTION: IMPROVING VALUE FOR PATIENTS

Solving our health care crisis begins with getting all stakeholders to agree on a single overarching goal: **improving the quality of care delivered for each dollar spent.** Competition has failed in health care for the simple reason that it is based upon entirely wrong metrics. We must reorient health care around value for patients, rather than current drivers like geography or the discounts negotiated by insurers. Only then can we create a system that delivers sustained improvements in quality and efficiency.

DIABETES PROVIDER WEB APP

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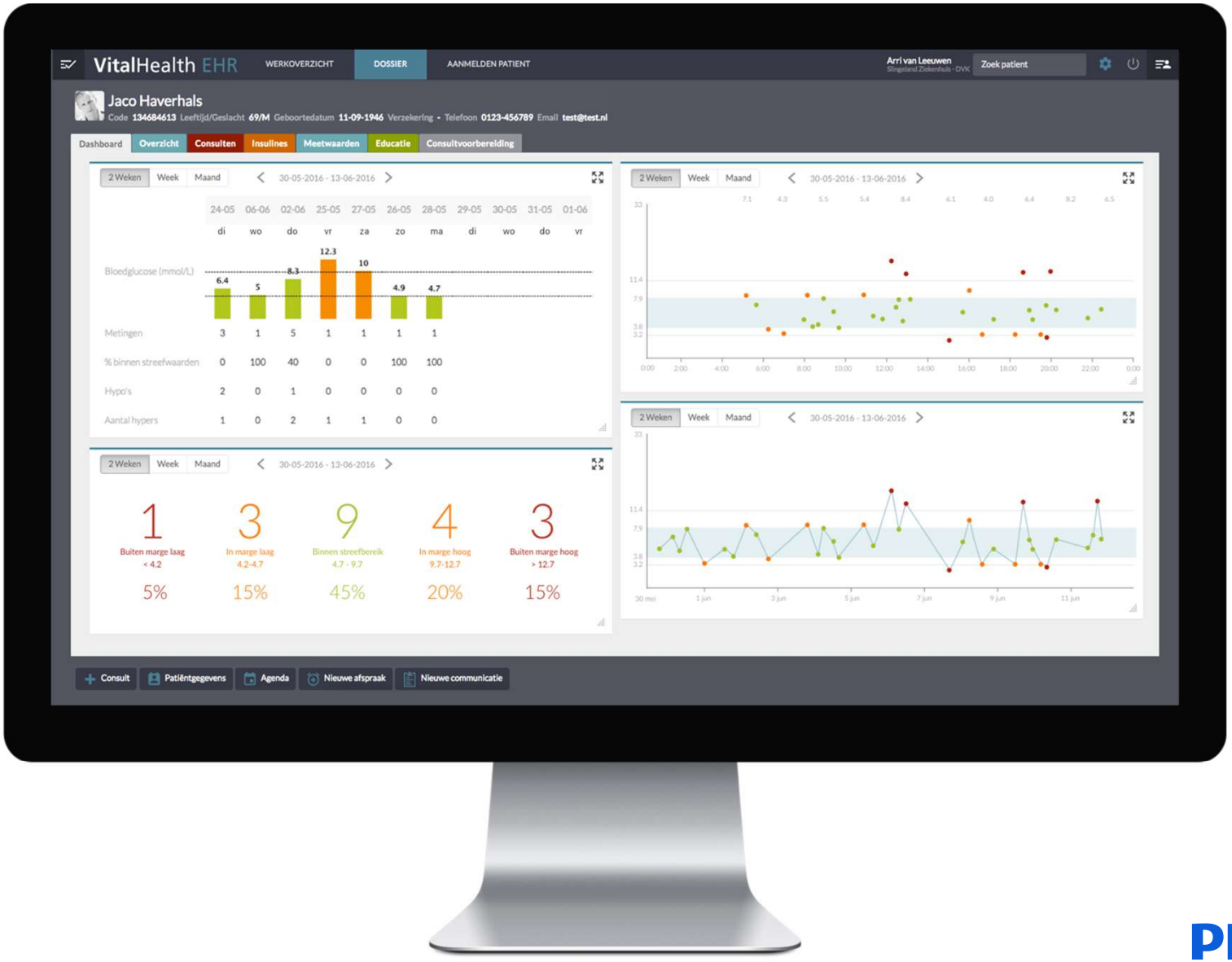

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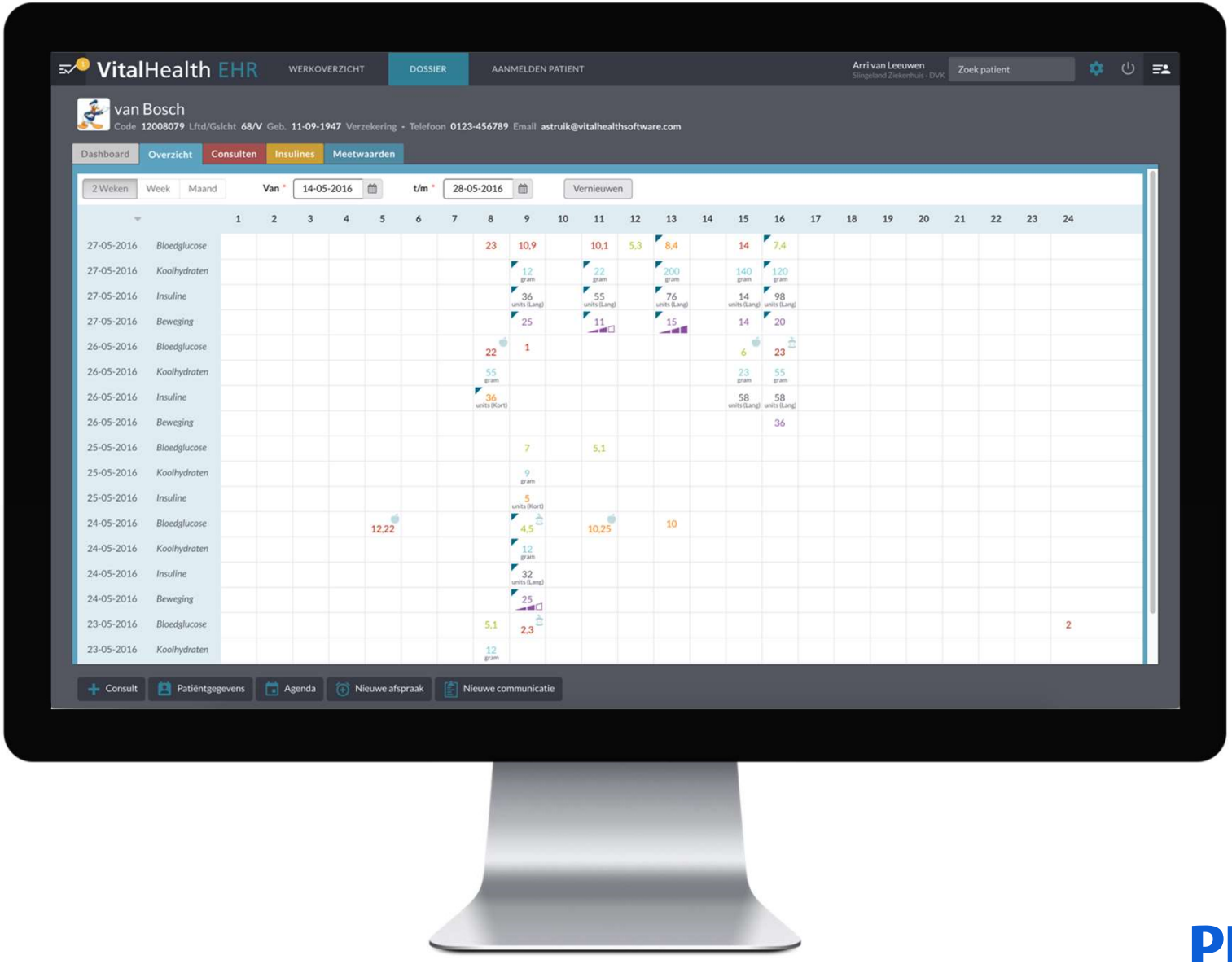

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DIABETES PATIENT MOBILE APP

Mobile APP designed for and with Diabetes patients and connect though devices to support them in their daily life.

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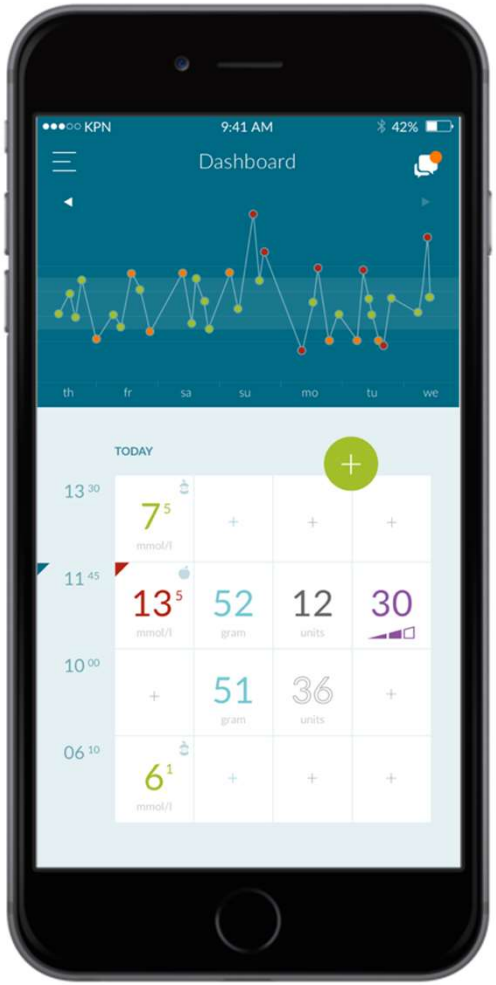

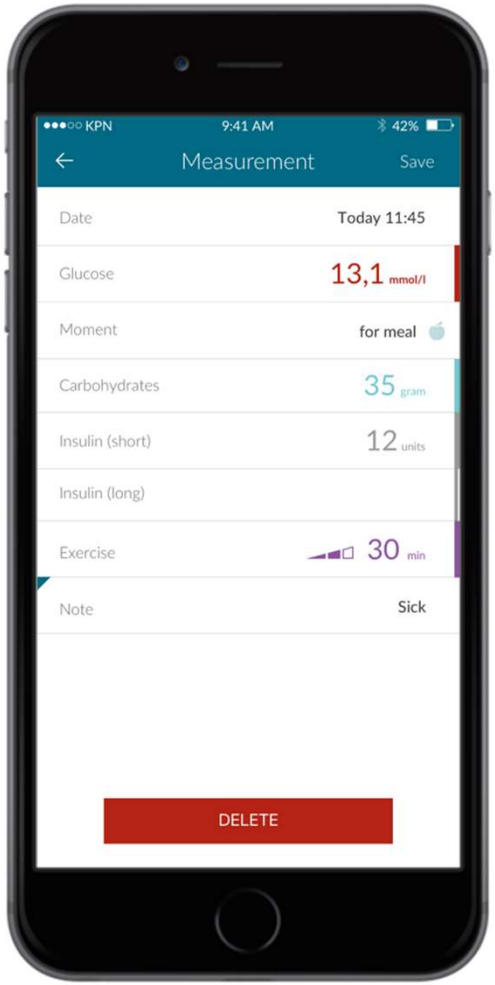

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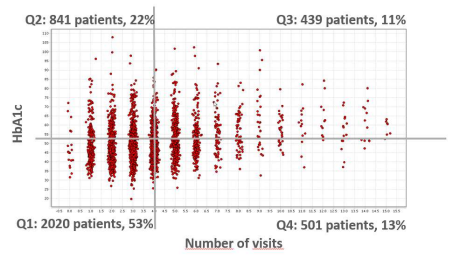
Caregroup Synchroon

Making impact through insight

Caregroup Synchroon: Synchroon aims to provide the best possible care for chronically ill patients by connecting healthcare providers with the patient.

Caregroup Synchroon works with VitalHealth CHM

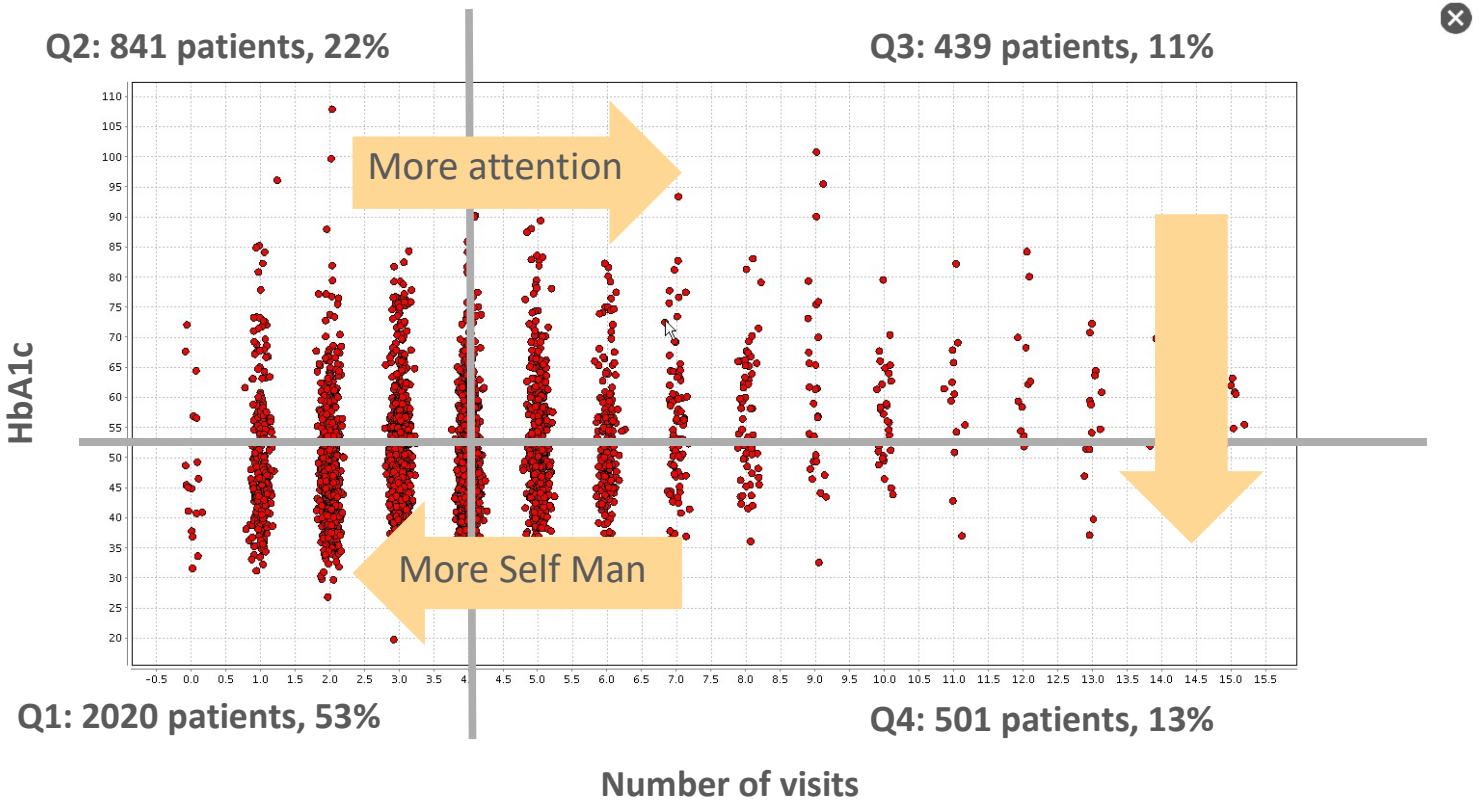
Risk stratification



(click to enlarge)

- Analysis number of visits per patient versus HbA1c-levels
- Determining patients at risk and providing them with personalized care
- Method for benchmarking and learning from colleagues
- 250 Euro per patient per year; 85% of patients never goes to hospital

Are minutes spent with the right patients?



Research questions

- What can we learn from operational data?
- What to measure?
- How to engage the patient?
- How to prove effectiveness?
  - Needed for sw as class 2 medical device and value based healthcare

EU Project on scaling integrated care

Start	**March 2016**
Duration	**36 months**
Project Budget	**3.5 MEuros (60% funded)**
Project Lead	**Philips Healthcare (Germany)**

ACT@Scale is funded by the European Union, in the framework of the Health Programme under grant agreement 709770

ACT@Scale Consortium

- Philips Healthcare Germany (coordinator), Germany
- Osakidetza – Basque Country Health System, Spain
- KRONIKGUNE – Research Centre on Chronicity, Spain
- University Medical Center Groningen, the Netherlands
- Region of Southern Denmark, Denmark
- Agency for Health Quality and Assessment of Catalonia (AQuAS), Spain
- Centre for Connected Health and Social Care, Northern Ireland, Ireland
- Philips Electronics (Netherlands), the Netherlands
- Aristotle University of Thessaloniki, Greece
- City University London, School of Health Sciences, UK
- Universitätsklinikum Würzburg, Germany
- University of Hull, UK
- The Consorci Institut D'Investigacions Biomediques August Pi i Sunyer (IDIBAPS), Spain

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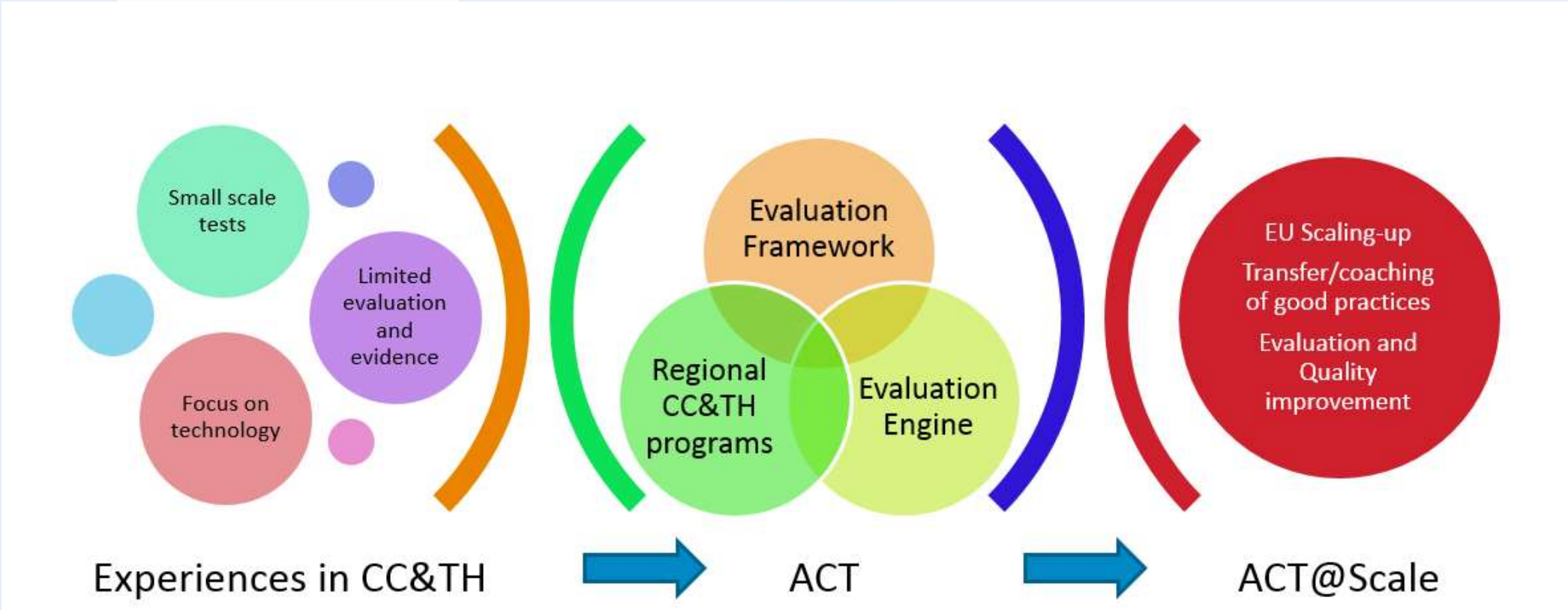
Project History



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ACT@Scale Aims

- Aim: scaling-up integrated care programs
  - Structured methodology (PDSA) for assessment, benchmarking and exchange of good practices of scaling-up
  - Transferability of good practices for scaling-up

- Topics:

Stakeholder & change management

achieve support and commitment

Service Selection

Appropriate level of distribution of resources by dynamic need of patients and populations

Sustainability & business models

Deliver at least equal quality of care at lower cost or with fewer personnel

Citizen Empowerment

Total engagement of users to make the strategy self-sustaining

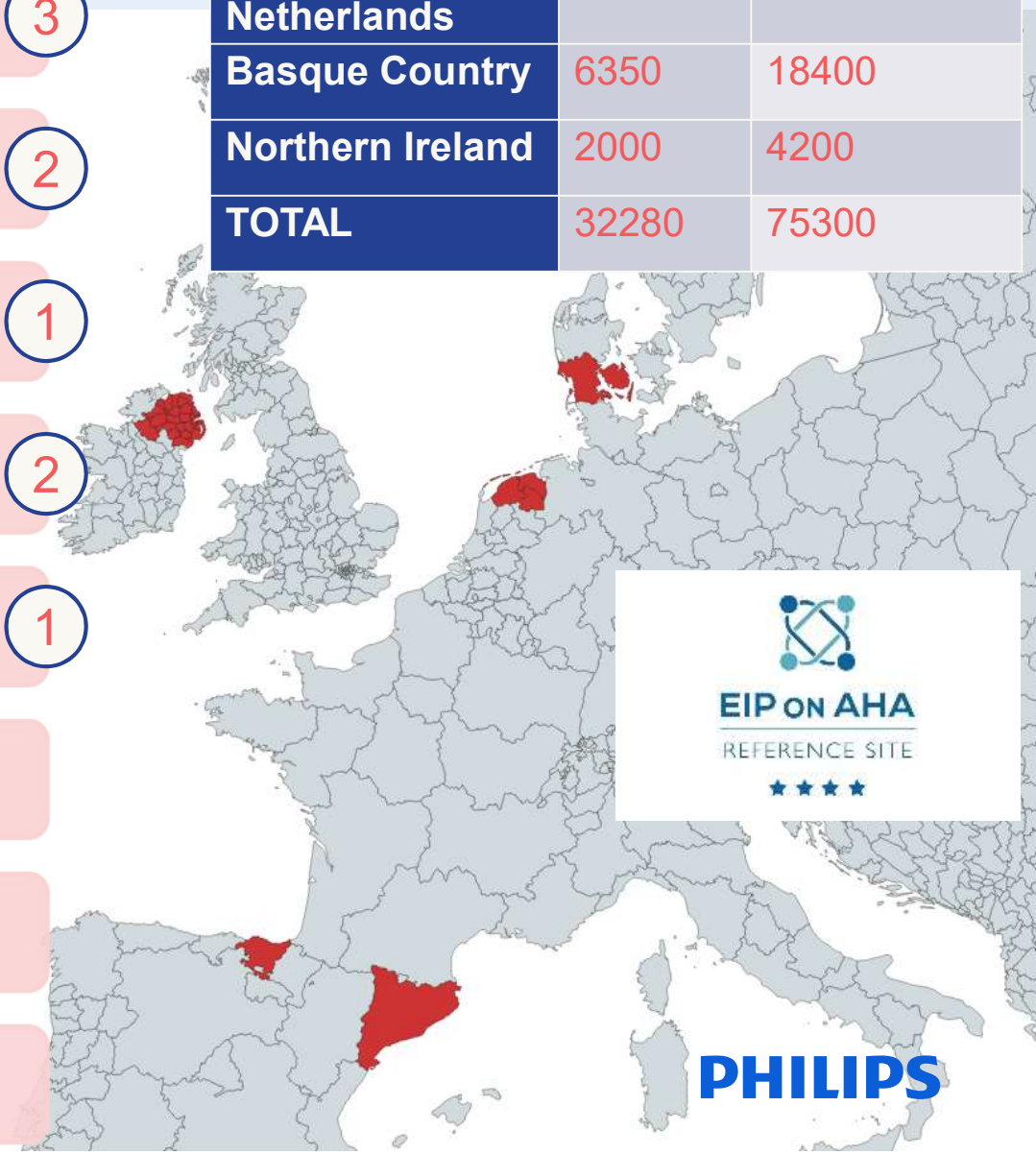
Evidence

Collecting and measuring experience, status, progress and success of scaling-up

Target Population / Programs (14)

9	Chronic conditions	•CAT Chronic care •CAT Complex case management •CAT Physical activity	3
	Respiratory	•NNL Asthma / COPD •NIRE COPD telemonitoring	2
	Diabetes	•NIRE Diabetes telemonitoring	1
	Cardiac	•BAS telemonitoring •NNL Effective cardio	2
	Multimorbid	•BAS Multimorbid integration	1
3	Independent living	•CAT Nursing homes •CAT Frail older adults •NNL Embrace	
1	Pregnancy	•NIRE Weight management telemonitoring	
1	Mental health	•RSD Telepsychiatry	

Region	2016	2019
South Denmark	430	2000
Catalonia	5000	15500
Northern Netherlands	18500	35200
Basque Country	6350	18400
Northern Ireland	2000	4200
TOTAL	32280	75300



EIP ON AHA
REFERENCE SITE
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Collaborative Methodologies

How to improve integrated care programs?
E.g. How to engage the patient?

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Process Improvement

- Innovative process improvements are increasingly implemented in integrated care

- We use evidence-based methods from implementation research
  - monitor and evaluate running integrated care programs
  - understand if and how implemented actions affect the program

- We need to consider all aspects of the implementation of the program
  - **Context** in which it is being implemented
  - **Processes** organized around the programs
  - **Perspectives** of all relevant stakeholders (in particular the end users)

- Implementation research also promotes the systematic application of research findings in practice (Peters et al 2013).

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Collaborative Methodology

- The collaborative approach requires groups to come together periodically to
  - learn and exchange ideas and quality methods
  - exchange their experiences with implementing actions (changes)

- Local stakeholders design and implement local improvements

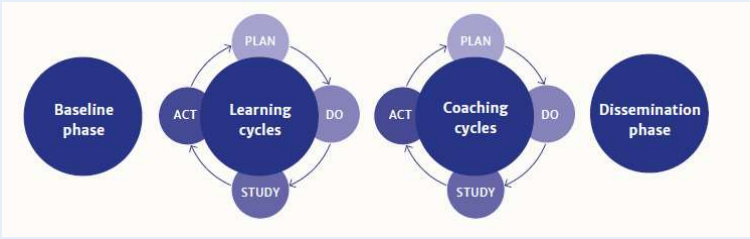
- Objective
  - Stimulate rapid improvement
  - Disseminate good ideas
  - Boost learning skills

  → Cyclic improvement process

Elements

1. Topic selection
2. Purpose and expectations
3. Experts recruitment
4. Enrolment of participating teams
5. Learning sessions
6. Action periods
7. Measurement and evaluation

Cyclic improvement process
PDSA cycles



Elements

1. Topic selection
2. Purpose and expectations
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Plan the actions and develop a framework to test the change (who, what, when, where).

PLAN

DO — Test the action and document any problem or unexpected observation

STUDY — Analyze the results, compare the data obtained to the predictions and summarize what has been learned.

ACT — Refine the changes based on learning and determine the modifications

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Roadmap 4
Citizen empowerment

CHF Telemonitoring | Multimorbid Integration | Chronic Care | Nursing homes

Example PDSA documentation

IMPROVEMENT AREA

Underuse of existing empowerment tools

- Underuse of existing tool. Incoherence empowerment level and education / services provided. Low capacity of care professionals to give proper education and assess impact on health and QoL
- No uniform information and training provided to care professionals. Patient and care giver training for patients not adapted to disease phase and available tools are underused and not adapted to user capacities
- Improve communication for between patient/relatives and health care profs among patient's needs and treatment. Improve self awareness in patient chronic conditions.

OBJECTIVES

Expand use of empowerment tools

- Provide patients and caregivers with training programs adapted to their specific needs and capacities. Augment healthcare professionals' understanding the relevance of the empowerment.
- Promote and improve empowerment skills of both healthcare professionals and patients/caregivers. Provide patients and caregivers with online applications or corporative technological platforms.
- Via apps and CAT patient portal: communication tool patient and professional, improve awareness, chronic management apps, training courses, improved communication primary care and nursing homes

We combine

- Process improvement documentation (PDSA)
- Context information (EIP AHA maturity model)
- Patient activation (PAM survey)
- Patient self-care behaviours (MAY survey)
- Patient experience (NPS question)
- Patient data (local IT systems)
- Care giver perspective on activation (CSPAM survey)

INTERVENTION

Develop empowerment content

- Adapt the content of the Kronik ON program to address empowerment in early stages of the disease publish it in the online Health School (OBS: on hold) . Empowerment program neds tailoring towards early states of disease (online)
- Develop a Specific "Active patient" program for CHF. Create and implement a structured empowerment program for patients with congestive heart failure for all the organizations of Osakidetza" ~ Create homogenity across different sites.
  - Common elements, but support of personalized content.
- Create an APPS to increase awareness about health chronic conditions and improve their management. Protocolize and improve the patient's information and their accessibility. Improve accessibility for patients.

Training and awareness

- Develop and set up a training program for all professionals to provide capacity in empowerment methodologies. Periodically revise and validate training material. Prepare, organize and provide training sessions focused on empowerment methodologies, techniques and tools for professionals (primary and secondary care)
- Ensure patients and caregivers attend the training chronic care programmes in Primary Health Care. (= motivation)

Add communication channels

- Foster the access to Catalonian patient portal to improve the communication between health professionals and patients. Formalize the communicational processes.

differences

Accessibility (Catalonia) **VS** Homogenity (Basque country)

Program Evaluation

How to evaluate integrated care programs?
What data to collect?

Slides adapted from the IFIC conference.
Presentation in collaboration with the EU projects: SUSTAIN and SELFIE

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Scientific evidence

- Strong belief in the benefits of integrated care
- Roll-out many integrated care initiatives for people with complex needs
- Policy-makers need process- and outcome-oriented, evidence-based strategies

Evidence remains inconsistent

- Impact and outcomes not obvious for complex patients
- Five year evaluation of 30 initiatives: no reduction in emergency admissions and associated costs [Bardsley et al 2013]
- Systematic reviews shed no light on what works

Research design problems

- Sample sizes and recruitment
- Evaluability
- Counterfactual, before and after
- Measurement: attribution and sensitivity
  - Reliance of service measures, QoL
  - Improvement in health and social status

Evidence from practice

Need to understand the implementation process and what works for whom, in what setting and with what outcome

- From practice we know the important ingredients
- Evidence grounded from practice
  - provides the best routes to achieving specific outcomes
  - avoids inappropriate data collection
  - highlights the relevance of ‘proxy’ measures
  - improves professional credibility and confidence

	Live their life	***Perform their role***	***Take their responsibility***
Patients	• Kindness and patience • Dignity • Independence • Contact with others • Stay in your own home		
Professionals		• Defining objectives and roles • Shared documentation • Space • Active management • Autonomy	
Organizations			• Leadership & governance • Funding and contract agreements • Workforce strategies • IT infrastructure

Appropriate outcomes for evaluation

Classical health outcomes

Wellbeing indicators

Often there is a strong focus on classical health outcomes
E.g. health status, physical functioning and quality of life

Whereas outcomes such as wellbeing, experience with care, social functioning, social participation and goal attainment might be more appropriate for vulnerable target groups

Quantitative outcomes

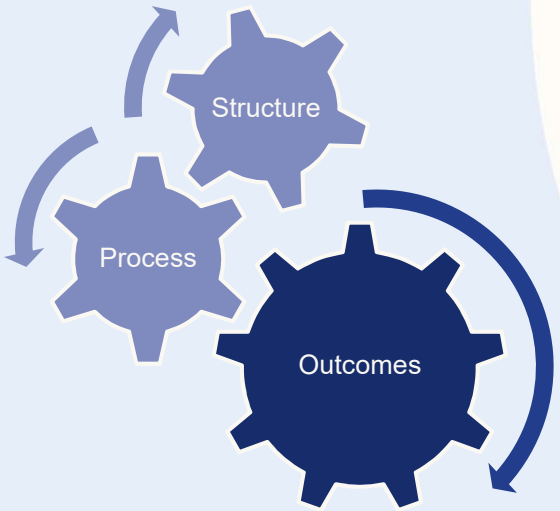
Mixed methods

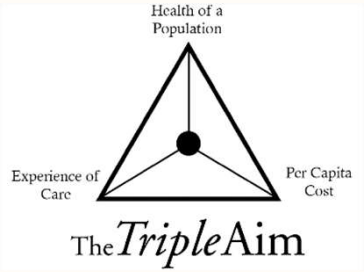
Often there is a strong focus on quantitative outcomes

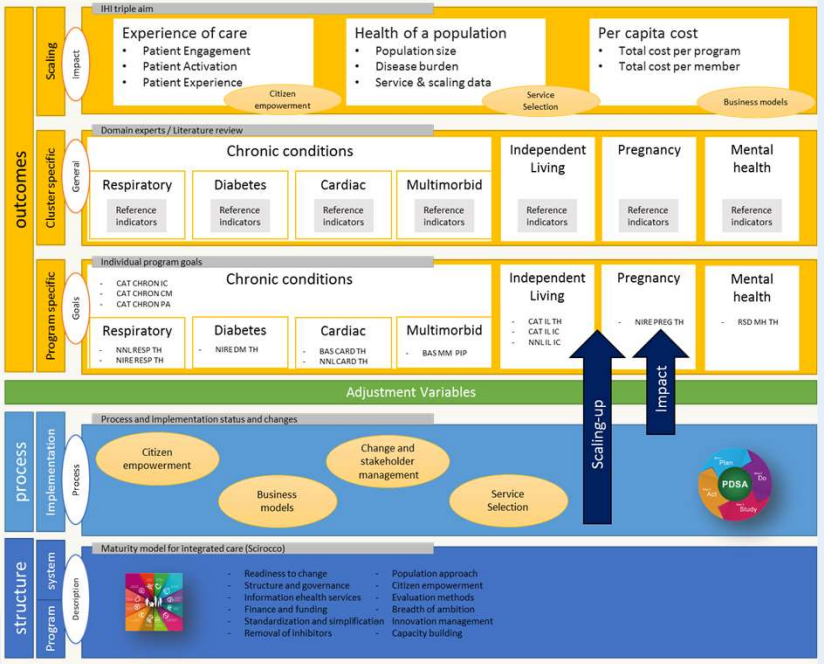
Whereas mixed methods approaches might be more appropriate in evaluating **complex interventions** such as integrated care taking into account the **processes and contexts** in which these programs are implemented

ACT@Scale Framework

- **Conceptual framework for data collection**
  - Scaling outcomes
  - Recommended outcomes per program type
  - Program-specific outcomes
  - Adjustment variables
  - Structure and process indicators







Minimum data set (MDS): data collected by all programs

Challenges, experiences & good practices

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Challenges
Surveys

- **Harmonization between countries**
  - Questionnaires not available in all languages
  - Translations have not been validated
  - Sometimes inappropriate in a different culture

- **Harmonization between programs**
  - Mismatch with program population or program ambitions

- **Survey / research fatigue**

  User shorter alternatives, combine surveys

- **Additional challenges in vulnerable populations**
  - Organization and distribution difficult
  - Due to age of the population, surveys:
    - Difficult to understand and too long
    - Don't match experiences and perceptions of elderly
  - Reliability of the responses?

  Consider interviews, face-face administration of surveys, involve representative

Challenges
Measuring impact

- **Data inconsistency**
  - Quantitative: registries, local systems (regions, countries)
  - Qualitative: different instruments

- **Data availability: issues preventing upload of data and/or to produce linked data for analysis**

- **Changing environment**
  - Process improvement +
  - All sudden or gradual changes in organization, funding, processes, politics, technology, recruitment, staff engagement

- **Time pressure**
  - Quick results: produce outcomes versus the ability to create data
  - Project life cycles
    - Especially if also interventions are implemented within the programs
    - We expect to see impact on the process, but not see impact on outcomes

Challenges
Dealing with variety

Expect differences due to program objectives, cultural differences, availability of validated surveys, access to data, or other pragmatic considerations

- Operational setting: running programs with existing measures
  - Continuation of measurements used in the past is more important than comparability across programs
- Harmonization between countries
  - Data registries measure and report differently
  - Local systems measure and report differently
- Harmonization between programs
  - Wide scope of programs, difficult to get agreement on outcome indicators

Layered approach: core set + cluster and program specific outcomes

Experiences
Collaborative Methodology

Elements
1. Topic selection
2. Purpose and expectations
3. Experts recruitment
4. Enrolment of participating teams
5. Learning sessions
6. Action periods
7. Measurement and evaluation

1. Select a program with convincing evidence
2. The maturity level of the service and management engagement are key
3. Be effective in running the collaborative meetings
4. Make sure you have sufficient ambassadors to promote the program
5. Build a collaborative team representative of all stakeholders
6. Ensure you address organizational changes necessary
7. Implement the program into the existing care model using substitution of pathway elements
7. Make use of proven care models such as the chronic care model

Experiences available in brochure (print+PDF)

Questions?

Advancing Care Coordination and Telehealth deployment at Scale

https://www.act-at-scale.eu

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