Advancing Care Coordination and Telehealth at Scale

Webinar
EIP-AHA B3 Group
23rd May 11:00 CET
Introductions

• Introduction and chair
  – Cristina Bescos, Philips Healthcare, Germany

• Map overview of service selection strategies
  – Esteban de Manuel, Ane Fullaondo, Kronikgune, Basque Country

• Map overview of change management and stakeholder engagement
  – Tomas Salas, Montse Moharra, AQuAS, Catalonia

• Map overview of business models
  – Maarten Lahr, UMCG, Northern Netherlands

• Evaluation Framework and Minimum Data Set
  – Helen Schonenberg, Philips Research, Netherlands
ACT@Scale

Start: March 2016
Duration: 36 months
Project Budget: 3.5 MEuros (60% funded)
Consortium: lead by Philips Healthcare (Germany)

Northern Ireland
Basque Country
Catalonia
South Denmark
Groningen

Experiences in CC&TH → ACT → ACT@Scale

Small scale tests
Limited evaluation and evidence
Focus on technology

Evaluation Framework
Regional CC&TH programs
Evaluation Engine

EU Scaling-up
Transfer/coaching of good practices
Evaluation and Quality improvement
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:
  – Evidence.
    • Collecting and measuring experience, status, progress and success of scaling-up
  – Stakeholder engagement.
    • Achieve support and commitment
  – Service selection.
    • Appropriate level of distribution of health and care resources by dynamic needs of patients and populations
  – Sustainability.
    • Deliver at least equal quality of care at lower cost or with fewer personal
  – Citizen empowerment.
    • Total engagement of users / citizens to make the strategy self-sustaining
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
Target Population / Programs (14)

**Chronic conditions**
- CAT Chronic care
- CAT Complex case management
- CAT Physical activity

**Respiratory**
- NNL Asthma / COPD
- NIRE COPD telemonitoring

**Diabetes**
- NIRE Diabetes telemonitoring

**Cardiac**
- BAS telemonitoring
- NNL Effective cardio

**Multimorbid**
- BAS Multimorbid integration

**Independent living**
- CAT Nursing homes
- CAT Frail older adults
- NNL Embrace

**Pregnancy**
- NIRE Weight management telemonitoring

**Mental health**
- RSD Telepsychiatry

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**Programs**

**Target populations:**
- Long-term conditions (DM, HF, COPD and multimorbid)
- Elderly care
- Mental Health
- Risk pregnant women

**Basque Country:**
- **Cluster:** Multimorbid
  - **Description:** Multimorbidity Population Integrated Intervention Program
  - **Target group:** Complex multimorbid patients

**Catalonia:**
- **Cluster:** Independent Living
  - **Description:** Healthcare support programmes for nursing homes
  - **Target group:** Elderly living in institutionalised homes

**Northern Netherlands:**
- **Cluster:** Respiratory
  - **Description:** Asthma / COPD Telehealth service
  - **Target group:** Patients suffering from asthma and / or COPD

**Northern Ireland:**
- **Cluster:** Respiratory
  - **Description:** COPD Telemonitoring Services
  - **Target group:** People with COPD

**South Denmark:**
- **Cluster:** Mental Health
  - **Description:** Center for Telepsychiatry
  - **Target group:** Citizens eligible for telepsychiatric treatment
Map Overview Service Selection

Kronikgune

Esteban de Manuel and Ane Fullaondo

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

Program scaling-up can be enhanced if:

- an appropriate level of distribution of health and care resources
- defined by the dynamic needs of the patients and populations addressed,
- enhancing risk prediction at population and clinical scenario.

Objective

To enhance service selection key elements in good practices scaling up
Risk stratification

Systematic process to define patients who are at risk for worse health outcomes, and who are expected to most benefit from an intervention.
Service Selection

- Population Service Selection
  - Population risk stratification
  - Target Population Program
- Patient Service Selection
  - Individual clinical risk assessment
  - Individual care plan
What is not Risk Stratification

- Current
  - Health Survey
  - Individual Diagnosis

- Future
  - Population Risk stratification
  - Individual Risk Scales
Classify patients according to their risk

- High complexity patients (5%)
- High risk Patients (15%)
- Chronic patients (80%)
- General Population
Service Selection Mapping

Description, identification and selection of patients

On-boarding the required professionals and services

Services responding to patients needs

10 indicators

11 indicators

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Service selection variables

31 variables

4 Descriptive

21 Ordinal

6 Nominal

Baseline mapping of all programs
Which level is used to identify and select patients?

Individual clinical assessment

Population risk stratification

Case identification of potential candidates

Case selection
Inclusion into the program

Case evaluation characterization and assessments
Service selection: progress indicators

- 31 variables
  - 4 Descriptive
  - 21 Ordinal
  - 6 Nominal

Progress indicators
Composite progress indicators

SERVICE SELECTION APPROACH

Scope and ambition
Mean value of 12 variables
*Themes:* Selection criteria, variables included, interventions according to risks, care plan content etc

Utilisation and coverage
Mean value of 9 variables
*Themes:* deployment, update frequency, professionals involved, training frequency etc.
Service selection: progress indicators

Scope and ambition

- CAT Complex case
- CAT Chronic care
- CAT Nursing
- BC Multimorbid
- BC Telemonitoring
Service selection: progress indicators

Utilisation and coverage

- CAT Complex case
- CAT Chronic care
- CAT Nursing
- BC Multimorbid
- BC Telemonitoring
**IMPROVEMENT AREA**

**Underuse of stratification tools and methods**
- Clinical variables as well as social aspects are not considered in the stratification.
- Output of the population-based stratification is not updated as frequent as needed.
- Lack of clinical view in the population-based stratification of patients.
- Non-dynamic population-based stratification which doesn’t respond to needs.
- Poor professionals’ credibility on the tool.

**Objectives**
- Apply stratification to provide right service to patient (and caregivers)
  - Include dyn. predictive risk.
  - Evaluate transitional & long term community care model.
  - Implement, evaluate program.
  - Link tertiary care to primary care (vertical).

**Intervention**
- Improve current stratification approach
  - Integrate patient’s (social and mental) health info in the Electronic Record.
  - Plan, program scripts and run the stratification’s update in a 6-month basis.
  - Include the most relevant clinical variables and social features in stratification.

**Commonalities**
- Link population based strategy with clinical risk assessment.
- Clinicians perceive population based strategy non-matching current clinical status (they don’t see the benefit).
- Need to link population and clinicians.

**Insights**
- Clinicians need data on daily basis.
- Clinicians need better understanding on how to use population based strategy.

**Differences**
- BAS: No social support data yet.
  - No education
  - Updates: 1 year
  - VS: Updates: 6 months

**What can we do together?**

**What can we do together?**

**Evaluate revised stratification**

**Commonalities**
- BAS: Universal training for all professionals (open).
  - Implementation

**Insights**
- Includes evaluation observational study.
Next assessments

Service selection survey:

- September 2016: Thessaloniki Baseline
- July 2017: composite progress indicators
- July 2018: whole survey (31)
Map overview of Stakeholder & Change Management

Agency for Health Quality and Assessment of Catalonia (AQuAS)

23rd May 2017
Objectives

To achieve an appropriate level of support and commitment from the stakeholders to innovative health services, specifically care coordination and telehealth (CC & TH)

To identify stakeholders and analyze their contribution and commitment to the project as well as issues related to organizational or technological change

To develop and deploy a tool to provide a baseline for stakeholder engagement.

To design an action plan aimed to increase stakeholder contributions to the project

Organizational adaptations to scale

Stakeholder maps, influence maps and baseline change management maturity maps for all program
Methodology

PRELIMINARY RESULTS

PM SURVEY

STAFF SURVEY

COLLECTING DATA

QUALITATIVE AND QUALITATIVE RESEARCH METHODOLOGY

Answered by PM

- The questionnaire contained: 16 questions: 5 multiple choice questions, 7 dichotomous questions and 4 open-ended questions.

- Two sections:
  - Section 1 devoted to Stakeholder Management,
  - and Section 2 to Change Management Process

- Survey

1. Topic selection: identify a particular issue
2. Set up the multidisciplinary team
3. Identification of improvement areas
4. Definition of collaborative objectives
5. Development of “change package”
May affect, be affected by, or perceive themselves to be affected by a decision, activity, or outcome of a project.

Stakeholders

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Process, tools and techniques to manage the people-side of change to achieve the required business outcome.

Organizational tools can be utilized to help individuals make successful personal transitions resulting in the adoption and realization of change.
Results
Figure 3. Responses to Q4. “Describe which stakeholders are involved in your programme?” (Please select all that apply)*

*Multiple choice question which allows to select more than one correct answer

N=14
Stakeholders involvement

- **Patient/User**: Ask for information
- **Healthcare professionals**: Collaborate and give responsibility
- **Health administrators**: Ask for information
- **Payers**: Give information
- **Politicians**: Give information
- **Private health providers**: Give information, Ask for information, Collaborate
- **ICT Industry**: Collaborate
- **Academy**: Give information
Stakeholders management

- Specific strategy to identify stakeholders, but in many cases they don’t have a detailed plan to identify and prioritize them
- Usually no commitment & not risk assessment are performed
- The process itself it’s not assessed
- Action plan oriented to maintain and increase stakeholders commitment

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Change management elements

Which elements of change management are you addressing?

- Strategy
- Communications
- Alignment
- Monitoring
- Availability of public...
- Leadership and...
- Capabilities
- Financing and...
- Culture

Change Management

- Indicators
- Evaluation methods to assess the progress / impact of the change
- Mechanisms to promote the change and overcome resistance
- Definitions/scopes/goals and steps of the change
- Adequate policies/resources/financing for the change
- Skills required by the change
- New rules/old rules
- Education and training
- Stakeholders engagement
- Possibility of top-down and bottom-up initiatives.
- Overcoming resistance to the change

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Change Management - Barriers

- Lack of leadership
- Pressure to produce short term results
- Stakeholder resistance
Change management barriers - Implementation

Phase 3 - Implementation

- Lack of time
- Stakeholder resistance
- Unstructured approach to change
- Lack of recognition of need for change
- Lack of leadership
- Lack of vision
- Inadequate skill set
- Inflexible information technology
- Lack of funding
- Lack of adequate incentive

Average
WHAT WE CAN DO TOGETHER?

✓ Identify all stakeholders in advance and incentives for each stakeholder
✓ Implemented planning among all stakeholders
✓ Adapt care pathway to feel ownership of new team
✓ Transfer knowledge regarding communication and education towards healthcare professionals

COLLABORATIVE METHODOLOGY
Key points

Main Barriers

Phase 1&2 : Design & Adaptation
- Lack of Leadership
- Stakeholder Resistance

Phase 3: Implementations
- Pressure to produce short term results

Improvement areas

- Lack of Engagement
- Lack of Coordination

- Poor implementation
Thank you 😊

www.aquas.gencat.cat

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Maarten M.H. Lahr, Ph.D.
Postdoctoral Researcher, Department of Epidemiology, University Medical Center Groningen, The Netherlands.

WP Leader, Sustainability and business models.
Objectives

- How are the CC & TC programs organised?
- What are the financial flows and care pathways?
- Which outcomes are measured and why (goals)?
- Which models are used to measure the financial effects of new healthcare programs?
- Identification of barriers and best practices
- Transferability
Mapping indicators

**Mapping: description of structural items**

Please respond to the questions and provide a financial flow following the example provided on the *ppt*.

1. Financial flow can be described for the program?
   i. Yes (please attach description, see PPT)
   ii. No

2. Financial flow can be described at baseline (2015)
   i. Yes
   ii. No

3. Financial flow can be described each year (2016, 2017, 2018)
   i. Yes
   ii. No

4. How is the program financed?
   i. By budget
   ii. By reimbursement
   iii. Other,.................................................................................................................................
## Funding Stability: Establishing a consistent financial base for your program

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<th>To little or no extent</th>
<th>To a very great extent</th>
<th>Not able to answer</th>
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<td>1. The program exists in a supportive state economic climate.</td>
<td>1 2 3 4 5 6 7 NA</td>
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<tr>
<td>2. The program implements policies to help ensure sustained funding.</td>
<td>1 2 3 4 5 6 7 NA</td>
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<td></td>
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<tr>
<td>3. The program is funded through a variety of sources.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
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<tr>
<td>4. The program has a combination of stable and flexible funding.</td>
<td>1 2 3 4 5 6 7 NA</td>
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<tr>
<td>5. The program has sustained funding.</td>
<td>1 2 3 4 5 6 7 NA</td>
<td></td>
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Funding schemes

• Northern Netherlands
  – Embrace, elderly care model
  – Effective cardio, telemonitoring for heart failure
  – Asthma and COPD telehealth service

• Northern Ireland
  – Telemonitoring for diabetes
  – Telemonitoring for respiratory diseases
How is the program financed?
Alternative funding schemes

- Shared savings
- VHA model
- Population coverage
Northern Netherlands - Embrace

Older adult

Costs

- Health care utilization
  - GP visits, hospitalisations, outpatient clinic visits, home visits, ED visits.
  - Long term care
  - Home help, transfer support, in-home modifications

Financing

- Health care insurance companies
- Long term care offices (Government)
- Municipalities

Embrace: financing

Developmental phase:
- Governmental policy rules

Implementation phase:
- Health care insurance companies, governmental, municipalities
Complex?
Catalonia: complex casemanagement and physical activity

Older adult

- Health care utilization
  - GP visits, hospitalisations, outpatient clinic visits, home visits, ED visits.
- Long term care
- Home help, transfer support, Meals at home, panic button, laundry at home, GPS tracking and cleaning at home
- Home adaptations, social exclusion and isolation avoidance support

Costs

Financing

- Catalan public insurance (CATSALUT)
- Catalan public insurance (CATSALUT)
- Municipalities
- Third sector, volunteers
Southern Denmark: Telepsychiatry

- Costs: online mental health treatment
- Funding: regional authorities (government)
- Simple Financial model

- Challenges
  - Reimbursement clinicians
  - Scaling up, dividing budget between primary and secondary care
  - Transfer of activities into community
  - Shift to primary care?
  - What type of costs to include
  - Track resource utilization
  - Monitor scaling up
Differences in sustainability objectives

- **Region South Denmark:**
  - Provide equal access to quality care
  - 1 budget, aim is to increase the coverage of the programs
  - Focus on reimbursement care professionals
  - Shift from secondary to primary care
  - Issues regarding staff capacity

- **Basque Country:**
  - Integration of (IT) services between professionals
  - Between patient and professional

- **Northern Netherlands:**
  - Fragmented funding schemes
  - Unsustainable funding schemes
  - Investigate alternative business models
Upcoming activities

• In-depth analysis programs selecting business case improvements
• Patient survey (M14, June ‘17)
• Sustainability survey (M15, July ‘17)
• Minimal dataset: care consumption, unit costs (per patient and per program).

• Teleconferences with regions
  – The business model (provide canvas model)
  – The care pathway (patient and financial flows)
  – The impact (evaluate results before-after implementation)
  – The best practices (identification of success factors)
  – The barriers (identification and ways to overcome)
Evaluation Framework and Minimum dataset

Dr. Helen Schonenberg
Philips Research
ACT@Scale Framework

- Describes collected indicators
  - Scaling outcomes
  - Recommended outcomes per program type
  - Program-specific outcomes
  - Structure and process indicators

Minimum data set (MDS): data collected by all programs
Experience of care
- Patient Engagement
- Patient Activation
- Patient Experience

Health of a population
- Population size
- Disease burden
- Service & scaling data

Per capita cost
- Total cost per program
- Total cost per member

IHI triple aim

Citizen empowerment

Service Selection

Business models

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### Adjustment Variables

- **Experience of care**
  - Patient Engagement
  - Patient Activation
  - Patient Experience

- **Health of a population**
  - Population size
  - Disease burden
  - Service & scaling data

- **Per capita cost**
  - Total cost per program
  - Total cost per member

### Domain experts / Literature review

#### Chronic conditions

- **Respiratory**
  - Reference indicators

- **Diabetes**
  - Reference indicators

- **Cardiac**
  - Reference indicators

- **Multimorbid**
  - Reference indicators

### Individual program goals

#### CAT chronic care
- CAT complex case management
- CAT physical activity

#### Chronic conditions

- **Respiratory**
  - NNL asthma/copd
  - NIRE copd TLM

- **Diabetes**
  - NIRE diabetes TLM.

- **Cardiac**
  - BAS CHF TLM
  - NNL effective cardio

- **Multimorbid**
  - BAS multimorbid Integ.

#### Independent Living
- **CAT nursing homes**
- **CAT frail older adults**
- **NNL embrace**

#### Pregnancy
- **NIRE weight mgmt**

#### Mental health
- **RSD telepsychiatry**

### Scaling

- Impact

### Business models

- Experience of care
- Patient Engagement
- Patient Activation
- Patient Experience

- Health of a population
- Population size
- Disease burden
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- Per capita cost
- Total cost per program
- Total cost per member

### General

- Independent Living
- Chronic conditions
- Multimorbid

### Business models

- Experience of care
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### Citizen empowerment

- Experience of care
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### Service Selection

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### Per capita cost

- Experience of care
- Patient Engagement
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- Health of a population
- Population size
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- Per capita cost
- Total cost per program
- Total cost per member
Adjustment Variables

- Process and implementation status and changes

  - Citizen empowerment
  - Change and stakeholder management
  - Business models
  - Service Selection

IHI triple aim

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Domain experts / Literature review

- Chronic conditions
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  - Cardiac
  - Multimorbid

- Independent Living
- Pregnancy
- Mental health

Process specific

- Cluster specific
  - General

- Program specific
  - Goals

Citizen empowerment

Scaling

Impact

Business models

Scaling-up

Impact

Reference indicators

Citizen empowerment

Service Selection

Domain experts / Literature review

- Chronic conditions
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Process and implementation status and changes

- Citizen empowerment
- Change and stakeholder management
- Business models
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| Process        | • **Program manager survey**  
|                |   • Stakeholder management  
|                |   • Change management  
|                |   • Service selection  
|                |   • **SUSTAIN**  
|                |   • Financial flows  
|                | • **Staff survey**  
|                |   • Staff engagement  
|                |   • CSPAM  |

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|           |         | • **PAM-13**  
|           |         | • **NPS**  |

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|            | • Population per risk stratum  
|            | • Size of target population  
|            | • Size of population served  
|            | • Size of population diagnosed  
|            | • Incidence  
|            | • Prevalence  
|            | • **Service data**  |

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|                | • Program total cost  
|                | • Program user cost  |
Questions?

Please participate!

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

Cristina.Bescos@philips.com
**ACT@Scale Program**

**Baseline (6M)**
- Agree on KPIs
- Data collection & analysis
- Mapping current situation
- Identify critical factors for scaling-up (#1)

**Iteration 1 (12M)**
- Apply improvement on critical factor
- Data collection & analysis
- Mapping updated situation
- Identify critical factors for scaling-up (#2)

**Iteration 2 (12M)**
- Apply improvement on critical factor
- Data collection & analysis
- Mapping updated situation

**Dissemination (6M)**
- Final results
- Lessons learned
- Good practices

**ACT@Scale Transferability Event**
10th October, Odense
WHINN 2017: Week of Health and Innovation
Registration: [www.whinn.dk](http://www.whinn.dk)

**ACT@Scale M14**

3/2016 - 3/2019
Thank you!

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

Cristina.Bescos@philips.com
ACT@Scale distributed engine

• How to use operational data to evaluate integrated care solutions
  • It is not a technology issue; data is usually in the systems and technology exists
  • Follow the local ethics procedures and conform to all applicable data protection and privacy laws
  • Government organizations are (and should be) very careful to protect citizen data
  • Follow a distributed approach\(^1\)
    • No central database
    • Data remains local in the region
    • Analysis is distributed to the region
    • Results over all regions available centrally

\(^1\) Approach recommended by programs of EU health programme (2014-2020).