Deliverable D4.2

Baseline Iteration Paper

Evaluation Framework to analyse and monitor scaling-up for integrated care programs

ACT@Scale
Advancing Care Coordination and Telehealth @ Scale

This publication arises from the ACT@Scale (Advancing Care Coordination and Telehealth deployment at Scale) Programme which has received funding from the European Union, in the framework of the Health Programme under grant agreement 709770.
The ACT@Scale programme is fully aligned with the European Innovation Partnership in Active and Healthy Ageing objectives to deploy integrated care for

Document Information

PROJECT ACRONYM:	ACT@Scale
CONTRACT NUMBER:	709770
DISSEMINATION LEVEL:	Public
NATURE OF DOCUMENT:	Report

TITLE OF DOCUMENT:	Baseline Iteration Report
REFERENCE NUMBER:	D4.2
WORKPACKAGE CONTRIBUTING TO THE DOCUMENT:	WP4
VERSION:	V1.0
EXPECTED DELIVERY DATE:	M 7
DATE:	9 November 2016
AUTHORS (name and organization):	H. Schonenberg (PEN), W. Cheizoo (PEN), I. Chouvarda (AUTH), D. Filos (AUTH), S. Pauws (PEN), V. Gaveikaite (PEN), R. van der Heijden (PEN), K. Lourida , N. Maglaveras (AUTH),

Short description of the Deliverable:
Work package 4 (WP4) contributes to the transfer of good practices and data analytics in the ACT@Scale project. This document describes the evaluation framework for the data collection and analysis. It describes the collection of the minimum data set indicators, i.e. the set of outcome indicators that are collected over all programs in the project, as well as the approach for collecting program-specific outcomes data. The framework provides a set of recommended outcomes for clusters of programs targeting the same disease group. In the framework we also describe the process outcomes that capture the current state of the drivers and their progress during the interventions. Structure outcomes describe the healthcare system and program details. The document further describes the planning for the data collection.

REVISION HISTORY			
REVISION	DATE	COMMENTS	AUTHOR (NAME & ORG)
MDS 1.1	29/07/2016	Draft of framework	Helen Schonenberg (PEN)
MDS 1.2	08/08/2016	Iteration of framework	Helen Schonenberg (PEN)
...MDS 1.7	14/10/2016	Minimum data set indicators highlighted	Helen Schonenberg (PEN)
V0	21/10/2016	Conversion of Minimum Data Set document to deliverable	Helen Schonenberg (PEN)
V 1.0	09/11/2016	Feedback consortium	Helen Schonenberg (PEN)

V2.0	14/11/2017	Commission claim corrected	Helen Schonenberg (PEN)

Executive Summary

Aims and objectives

The specific objective of Workpackage 4 (WP4) is to engage the consortium (and collaborating) regions in collecting the relevant data to measure experience, status, progress and success of scaling-up integrated care delivery. The outcome of this WP4 deliverable is an evaluation framework for all data collected in the ACT@Scale.

Methods

The Evaluation Framework has been designed based on (1) **experience** – the purpose and availability of data collected for the ACT project, (2) **practice** – the current data that are collected in the participating programs and together with the program priorities and goals, and (3) **evidence** –literature on assessment of integrated care programs, telehealth and healthcare.
The framework has been created with the consortium partners, based on discussions at biweekly telcos, additional sessions with the individual regions, and two physical consortium meetings where the framework was presented and discussed.

Results

The Evaluation Framework reflects a Donabedian framework of process-structure-outcomes. Besides addressing general scaling-up outcomes from the perspective of the IHI triple aim, this framework supports the programs specific objectives and recommends indicators for programs targeting the same disease group. This document specifies the minimal data to be collected by all programs. Furthermore the document presents the data collection planning and an overview of all surveys to be deployed.

Content

Introduction

Advancing Care Coordination & TeleHealth (ACT) project goal is to identify, transfer and scale up existing and operational Care Coordination and Telehealth good practices with the target of reaching a total of 75,000 care recipients across regions and programmes in multiple European countries.

ACT@Scale taps into experiences from successful real life deployment projects in five European regions by using indicators to assess real world services and linking process drivers to outcomes. The project activities are built around key methods and aspects needed in order to reach the project goal. At the same time, the activities reflect the areas that need to be addressed in an scaling-up process. These areas include and cover:

- Stakeholder and change management
- Service selection
- Sustainability and business models
- Citizen empowerment

The specific objective of Workpackage 4 (WP4) is to engage the consortium (and collaborating) regions in collecting the relevant data to measure experience, status, progress and success of scaling-up integrated care delivery.

This deliverable describes the evaluation framework, planning and approach for data collection in the ACT@Scale project.

Evaluation Framework Overview

This chapter describes the evaluation framework created by the ACT@Scale consortium to be used for the evaluation of scaling-up of integrated care programs for the baseline assessment and for the two iterations.

The framework (see Figure 1) follows the classical conceptual Donabedian process-structure-outcome framework for examining health services and evaluating healthcare [20, 21]. The Donabedian framework allows us to track differences and changes in the process and structure, while monitoring the outcomes. The Donabedian Framework has limitations in explaining complex interactions between structure, process and outcomes, but it captures all elements and is a well-known framework in health services research.

The aim of the interventions performed by the programs in ACT@Scale are to make changes at a program process level in one or more of the driver areas: (1) citizen empowerment, (2) service selection, (3) change and stakeholder management, and (4) sustainability and business models. During the ACT@Scale project however, structural changes to the healthcare system may occur, but those are triggered externally and these are monitored by the structure indicators. The structure indicators describe the context in which care is delivered (e.g. buildings, staff, financing and equipment). Structure data is relevant for finding programs with a similar healthcare system context.

The process indicators describe the transactions between stakeholders in the care delivery process. These will be affected by the PSDA[1] cycles in which the programs participate to improve in at least one of the four above-mentioned areas. These indicators track what changes have been made in the process during these interventions.

Outcomes for scaling-up integrated care programs are defined at multiple levels. At the highest level the framework describes general outcomes for scaling-up integrated care programs. There are applicable across all programs and they follow the IHI triple aim[2]. There are outcomes that focus on the experience of care, the health of the population and per capita cost. All outcomes defined at this level are minimum data set indicators and will be collected by all programs.

On the next level cluster-specific outcomes are specified. A cluster is a set of programs that target the same disease or condition. Cluster-specific outcomes are sets of recommended outcomes for programs with a similar targeted population and they are based on literature and domain expert input. We recommend programs from a cluster to report on those common outcomes. Cluster-specific outcome data are the common denominator of data reported between programs within the same cluster.

Finally, at the lowest level, the framework captures program-specific outcomes. Programs will specify a change package with roadmaps (see Workpackage 3) for interventions to scale up. The roadmap specifies the driver area(s) they address with the intervention, the identified improvement areas, objectives to achieve, and improvements they want to execute. The roadmap also specifies the indicators to monitor progress of the objectives. Given the different nature of the participating programs and the interventions they choose, the framework should cater for program-specific objectives. Note that these outcomes may be specific for the program or come from the set of recommended cluster outcomes.

[1] Plan-Do-Check-Act (see WP3 documentation).

[2] http://www.ihi.org/engage/initiatives/tripleaim/pages/default.aspx

Data will be collected once per year during the 3 years of the project. There is a baseline measurement, an evaluation after the interventions of year one, and an evaluation after the interventions of year two. The framework is depicted in Figure 1.

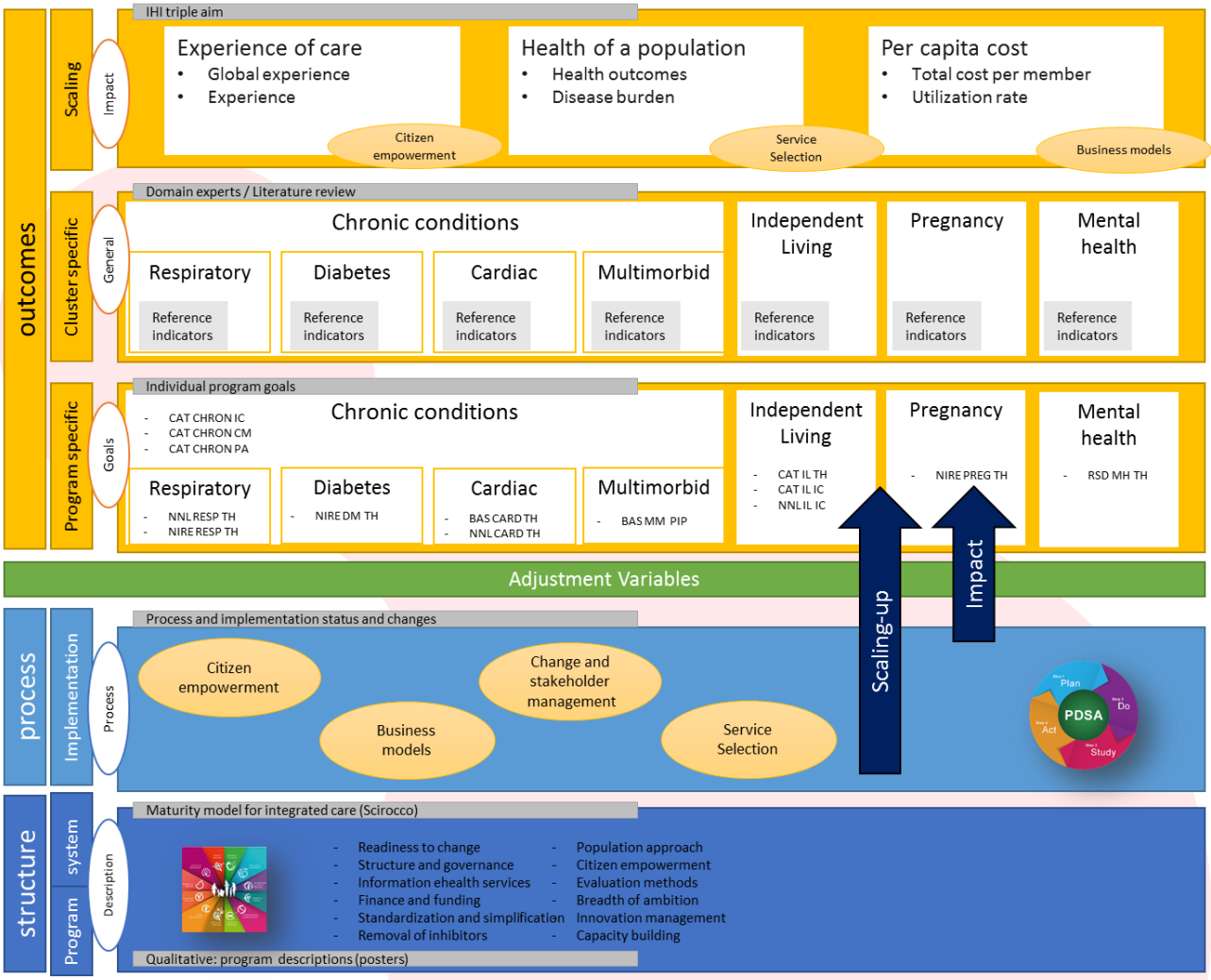

Figure 1 ACT@Scale Evaluation Framework for the evaluation of scaling-up of integrated care programs.

Adjustment Variables

Type: Minimum Data Set
Collection: Baseline, Year 1, Year 2
The cluster and program-specific outcomes consider data of individuals. The framework defines four adjustment variables for analysis of individual level data for case mix adjustment purposes. A case mix is defined as a locally prevailing statistically related group of patients that are treated by a set of care providers within medical specialties in the integrated care programs deployed in a regional geography. As case-mixes differ from one region to the other, this results in varying disease prevalence, incidence, treatments and outcomes. Case mix adjustment refers to the use of statistical procedures to permit comparison of treatment outcomes between providers with differing mix of patients with regard to diagnoses, severity of illness, and other variables associated with the probability of improvement with treatment.
Not all the required data is available in the information systems, hence some data will be collected in the surveys to be deployed to the patients. We will collect the following adjustment variables:

- Age (Information system)
- Gender (Information system)
- Marital status (Survey)
- Education level (Survey)

Note that these adjustment variables are only those that are in the minimum data set, reported over all the programs. For example disease severity is not part of the adjustment variable of the minimum data set due to the different types of disease addressed by the programs. An appropriate measure for disease severity is recommended per cluster and programs are recommended to select recommended variables from the cluster related to their program.

Scaling-Up Outcomes

Type: Minimum Data Set
Collection: Baseline, Year 1, Year 2
Following the IHI triple-aim structure for optimizing healthcare performance, we consider experience of care, population health and per capita cost in the context of scaling-up integrated care programs. All yellow highlighted elements are minimum data set elements.

Experience of care

We evaluate two aspects of experience of care

1. Health care consumer assessment: Survey: NPS (Net Promotor Score)
    - Measures: customer satisfaction
    - Description: a single question asking the patient whether (s)he would recommend the program or service to a peer or friend
    - Reference: https://www.surveymonkey.co.uk/mp/net-promoter-score/
2. Patient Activation: PAM (Patient Activation Measure)
    - Measures: patient activation (validated survey)

- Description: identifies in which of the four levels of activation the patient falls and gives health care providers and coaches insights to more effectively support the patient
- Reference: http://www.insigniahealth.com/products/pam-survey

Health of Population

We measure 2 aspects of population health

1. Coverage
2. Disease burden

Coverage

Population

- Population size — size of the population in the region
- Population stratified — number of people stratified by the tool
- Population per risk stratum — number of people per risk stratum
- Target population — number of people identified for the program
- Population served — number of people served by the program
- Population diagnosed — number of people diagnosed with target disease

Individual

- Diagnosis per patient (for adjustment)
- Status in the program:
  - Selected — Patient selected for the program, but not yet included
  - Active — Patient participating in the program (start date)
  - Out — Patient stopped with the program (end date)
- Reason for out:
  - Death — Patient is died during the program (date)
  - Normal ending — Program ended
  - Interruption physician — Physician stopped further participation in the program
  - Interruption patient — Patient quitted the program
  - Other — Other reasons

Disease burden

Population

- Incidence of target disease to estimate future scaling targets. (nr of new cases / year)
- Prevalence to check with stratification outcomes, or instead of stratification outcomes, if no stratification tool is used. (number of cases in reported year)

Per Capita Cost

Here we consider the total cost only. The programs differ too much to define a minimum data set of common unit costs and associated utilisation resources.

- Program total cost Total cost of the program per year
- User cost Average cost per user per year

The following cost data are recommended for analysis, especially for programs that plan to work in the sustainability and business models area.

- Program development cost Total cost involved in program development
- Program implementation cost Total cost involved in program implementation
- Administrative expenditure* Total administrative cost
- Hospital expenditure* Total hospital cost
- Medication expenditure* Total medication cost
- Outpatient expenditure* Total cost for primary and outpatient hospital care

*) Cost data described by the WHO CostIt Tool[3].

Cluster Outcomes

Type: Recommended
Collection: Baseline, Year 1, Year 2

Cluster outcomes are cluster-specific refinements of general minimum data set indicators, specified by the general scaling-up outcomes. The cluster outcomes provide a set of recommended outcomes for programs that target a common disease or condition. For example, for a cardiac program it is recommended to consider the indicators from the cardiac cluster. These outcomes are commonly reported in literature. We distinguish 4 types of cluster outcomes:

1. Cluster specific adjustment variables (ADJ)
    - For case-mix adjustment
2. Cluster specific experience of care outcome measures
    - Patient reported outcome measures (PROMs)[4]
        - E.g. health status, general health perceptions, quality of life (QoL)[5], Health related quality of life (HRQoL)[6], reports and ratings of health care[7], symptoms (impairments) and other aspects of well-being and functioning (disability)[8]
3. Cluster specific health of population outcome measures (HOM)
    - To be used for cluster specific reporting clinical outcomes and management clinical values
4. Cluster specific per capita cost outcome measure (COM)
    - To be used for cluster specific reporting of health care utilization and cost.

[3] http://www.who.int/choice/toolkit/cost_it/en/
[4] https://www.england.nhs.uk/statistics/statistical-work-areas/proms/
[5] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4243951/
[6] https://www.cdc.gov/hrqol/
[7] For all ratings other than the Net Promotor Score (covered in experience of care).
[8] http://onlinelibrary.wiley.com/doi/10.1002/art.11415/pdf

Cardiac cluster outcomes

Cluster	TYPE	Measure	Note
Cardiac[9][10]	ADJ	NYHA classification	Associated to mortality[11]
	ADJ	LVEF	Associated to mortality
	HOM	Heart rate	BPM
	HOM	Blood pressure	mmHg
	HOM	Blood glucose	mmol/l
	HOM	Total cholesterol	mmol/l
	HOM	LDL cholesterol	mmol/l
	COM	PC: home visit	Cost + utilization
	COM	PC: GP visit	Cost + utilization
	COM	PC: nurse visit	Cost + utilization
	COM	SC: ED visit	Cost + utilization
	COM	SC: specialist visit	Cost + utilization
	COM	SC: admissions	Cost + utilization
	COM	SC: readmissions (30)	Cost + utilization
	COM	SC: hospitalization	Cost + utilization
	COM	SC: outpatient visit	Cost + utilization
	COM	CC: community care referrals	Cost + utilization
	COM	CC: home visit	Cost + utilization

Diabetes cluster outcomes

Cluster	TYPE	Measure	Note
Diabetes[12][13]	HOM	HbA_{1c}	% as index for metabolic control
	HOM	Body mass index (BMI)	kg/m^2
	HOM	Blood pressure	mmHg
	HOM	Blood glucose	mmol/l
	HOM	Total cholesterol	mmol/l
	HOM	LDL cholesterol	mmol/l
	COM	PC: home visit	Cost + utilization
	COM	PC: GP visit	Cost + utilization
	COM	PC: nurse visit	Cost + utilization
	COM	SC: ED visit	Cost + utilization
	COM	SC: specialist visit	Cost + utilization
	COM	SC: admissions	Cost + utilization
	COM	SC: readmissions (30)	Cost + utilization

[9] http://circ.ahajournals.org/content/105/24/2810
[10] http://www.rug.nl/research/portal/files/2841869/05_c5.pdf
[11] Mortality is collected as part of population health
[12] http://intqhc.oxfordjonals.org/content/15/4/301
[13] http://care.diabetesjournals.org/content/27/2/398

	COM	SC: hospitalization	Cost + utilization
	COM	SC: outpatient visit	Cost + utilization
	COM	CC: community care referrals	Cost + utilization
	COM	CC: home visit	Cost + utilization

Respiratory cluster outcomes

Cluster	TYPE	Measure	Note
Respiratory[14][15]	ADJ	GOLD classification	COPD programs
	ADJ	FEV1	%, COPD programs
	HOM	FEV1/FVC	diagnostic indicator COPD
	HOM	Total cholesterol	mmol/l
	HOM	LDL cholesterol	mmol/l
	HOM	Exacerbations	Extracted from HIS
	COM	PC: home visit	Cost + utilization
	COM	PC: GP visit	Cost + utilization
	COM	PC: nurse visit	Cost + utilization
	COM	SC: ED visit	Cost + utilization
	COM	SC: specialist visit	Cost + utilization
	COM	SC: admissions	Cost + utilization
	COM	SC: readmissions (30)	Cost + utilization
	COM	SC: hospitalization	Cost + utilization
	COM	SC: outpatient visit	Cost + utilization
	COM	CC: community care referrals	Cost + utilization
	COM	CC: home visit	Cost + utilization

Multimorbid cluster outcomes

Cluster	TYPE	Measure	Note
Multimorbid[16][17]	ADJ	Charlson Comorbidity Index	CCI score
	ADJ	Comorbidity Polypharmacy Index	CPS score
	HOM	Total cholesterol	mmol/l
	HOM	LDL cholesterol	mmol/l
	COM	PC: home visit	Cost + utilization
	COM	PC: GP visit	Cost + utilization
	COM	PC: nurse visit	Cost + utilization
	COM	SC: ED visit	Cost + utilization
	COM	SC: specialist visit	Cost + utilization
	COM	SC: admissions	Cost + utilization
	COM	SC: readmissions (30)	Cost + utilization

[14] https://effectivehealthcare.ahrq.gov/search-for-guides-reviews-and-reports/?pageaction=displayproduct&productID=365
[15] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3714354/
[16] http://www.ncbi.nlm.nih.gov/pubmed/26976529
[17] http://www.chrodis.eu/our-work/06-multimorbidity/

	COM	SC: hospitalization	Cost + utilization
	COM	SC: outpatient visit	Cost + utilization
	COM	CC: community care referrals	Cost + utilization
	COM	CC: home visit	Cost + utilization

Independent Living cluster outcomes

Cluster	TYPE	Measure	Note
Independent living	ADJ	Charlson Comorbidity Index	CCI score
	ADJ	Smoking	Yes/no
	ADJ	Physical activity	Self-reported /survey, e.g. the number of days per week physically active for more than 30 minutes.[18]
	HOM	Total cholesterol	mmol/l
	HOM	LDL cholesterol	mmol/l
	HOM	Functional status	Barthell[19]
	COM	PC: home visit	Cost + utilization
	COM	PC: GP visit	Cost + utilization
	COM	PC: nurse visit	Cost + utilization
	COM	SC: ED visit	Cost + utilization
	COM	SC: specialist visit	Cost + utilization
	COM	SC: admissions	Cost + utilization
	COM	SC: readmissions (30)	Cost + utilization
	COM	SC: hospitalization	Cost + utilization
	COM	SC: outpatient visit	Cost + utilization
	COM	CC: community care referrals	Cost + utilization
	COM	CC: home visit	Cost + utilization

Pregnancy cluster outcomes

Cluster	TYPE	Measure	Note
Pregnancy	HOM	Body mass index (BMI)	kg/m^2
	COM	PC: home visit	Cost + utilization
	COM	PC: GP visit	Cost + utilization
	COM	PC: nurse visit	Cost + utilization
	COM	SC: ED visit	Cost + utilization
	COM	SC: specialist visit	Cost + utilization
	COM	SC: admissions	Cost + utilization
	COM	SC: readmissions (30)	Cost + utilization
	COM	SC: hospitalization	Cost + utilization
	COM	SC: outpatient visit	Cost + utilization
	COM	CC: community care referrals	Cost + utilization
	COM	CC: home visit	Cost + utilization

[18] Alternatives: steps, PAL
[19] Alternatives: HAQ, KATZ, MACTAR

Mental Health cluster outcomes

Cluster	TYPE	Measure	Note
Mental health	HOM	Beck Depression Inventory	BDI[20]
	COM	PC: home visit	Cost + utilization
	COM	PC: GP visit	Cost + utilization
	COM	PC: nurse visit	Cost + utilization
	COM	SC: ED visit	Cost + utilization
	COM	SC: specialist visit	Cost + utilization
	COM	SC: admissions	Cost + utilization
	COM	SC: readmissions (30)	Cost + utilization
	COM	SC: hospitalization	Cost + utilization
	COM	SC: outpatient visit	Cost + utilization
	COM	CC: community care referrals	Cost + utilization
	COM	CC: home visit	Cost + utilization

[20] http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3694473/

Program-Specific Outcomes

Type: committed outcomes per program
Collection: collected at individual level, yearly[21]:
Program-specific outcomes are defined by the programs in the change package during the collaborative process. Anything that is relevant for the program to achieve their objectives, monitor their interventions and that is not captured by scaling-up outcomes could be specified as program specific outcome. General recommendation are provided by the relevant cluster outcomes.
In the collaborative method, each of the programs specifies a program road map that describes the program-specific outcomes. Each program roadmap describes:

1. Selection of a **topic**
   - Change and stakeholder management
   - Service selection
   - Sustainability and business models
   - Citizen empowerment
2. Definition of a multidisciplinary team
3. Definition of **improvement areas** (~ select issues within the drivers)
4. Definition of **objectives** (~ describe progress to be achieved in each area)
5. Description of the **change package** (interventions) (~ describe intervention)
6. Definition of Key Performance/Progress **Indicators** (~ list indicators to be monitored)

Each region selects at least 2 topics for the regional programs. A program addresses at least one topic. A multidisciplinary team is formed to select one or more issues within the drivers. The team describes the interventions to be implemented to address the issue and defines the list of indicators that measure the progress for each of the defined issues. The definitions for the first iteration will be completed in October 2016. This road map thus defines the program-specific indicators (6) as well as the objectives (4) for those indicators. These are the program specific indicators and their objectives. Figure 1 provides the template for registering the program-specific outcomes. This template is to be completed after the definition of the roadmaps for each of the programs (November 2016).

Program	Outcome Indicators	Objectives
Cardiac		
BAS CARD TH		
NNL CARD TH		
Diabetes		
NIRE DM TH		
Respiratory		
NNL RESP TH		
NIRE RESP TH		
Multi-morbid		
BAS MM IC		
Chronic		

[21] Per calendar year.

CAT CHRON IC
CAT CHRON CM
CAT CHRON LS
Independent living
CAT IL IC
CAT IL SUP
NNL IL IC
Pregnancy
NIRE PREG TH
Mental Health
RSD MH TH

Figure 1 Template for program-specific indicators an objectives.

Process Indicators

Type: Minimum data set indicators
Collection: Baseline, Year 1, Year 2

In Figure 2, the list of process indicators is presented. Process indicators measure the progress of the program in each of the four driver areas. Changes in the driver areas are measured throughout the interventions (baseline, year 1 and year 2). Surveys for program managers, staff and patients are collected to measure this progress. This is the list of surveys that will be deployed to measure the process outcomes

Driver / survey	Respondent
Change and Stakeholder Management	
- Stakeholder management	PM
- Change management	PM
- Staff engagement PM	PM
- Staff engagement Staff	Staff
Service selection	
- Service selection	PM
Sustainability and business models	
- Sustain[22]	PM
- Financial flows and business models	PM
Citizen empowerment	
- More About You (MAY)[23]	Patients
- Clinician activation measure (CSPAM)[24][25][26]	Staff

Figure 2 List of surveys to collect process indicators per driver area

[22] http://www.sustain-eu.org/project/
[23] https://digisemas-staging.ehv.campus.philips.com/demo/may_en_20_18
[24] Healthcare provider assessment that measures clinical support for patient activation: how far clinicians value people's role in the care process. https://www.england.nhs.uk/wp-content/uploads/2015/11/cspam-report.pdf
[25] http://www.ncbi.nlm.nih.gov/pubmed/25959036
[26] http://www.health.org.uk/journal/new-tool-measures-carer-activation

Structure Indicators

Type: Minimum data set indicators
Collection: Baseline, Year 1, Year 2

Healthcare system

The structure of the healthcare system will be described by the maturity model for integrated care, developed by the B3 Action Group of the European Innovation Partnership on Active and Healthy Aging. The Scaling Integrated Care in Context (SCIROCCO) project aims to develop the maturity model into a validated and tested self-assessment tool.
In the model the many activities that need to be managed for delivery of integrated care are organized in 12 dimensions, each having 6 levels of maturity. The maturity in each of the 12 dimensions is measured and the overall maturity per region or program can be visualized by a radar chart showing areas of strength and weakness and progress over time.
Compared to the maturity model, the process indicators provide a much deeper insight into the process in some of the dimensions of the maturity model. In ACT@Scale we assume that development of those dimensions is key to scaling-up the programs and that those dimensions can be impacted by the programs.

Figure 3 Maturity model for integrated care[27]

Program descriptions

Additional information on the programs as specified in the program posters at the kick-off meeting in Luxembourg Q1 2016. The posters covered the following elements[28].

- Program name
- Cluster
- Region / Healthcare system description
- Target group

[27] http://www.scirocco-project.eu/maturitymodel/

[28] In the poster the status on integrated care was presented, but this is now already covered by the maturity model of the healthcare system and is not covered here.

- Program description
- Topics status and importance
- Keys to success
- Challenges
- Best practices and lessons learned

Data Collection Summary

Figure 2 provides an overview of the data collection for the general scaling outcomes, the process indicators and the adjustment variables. Cluster variables, program-specific variables and structure outcomes are not presented in this overview.

Data input	WP	Topic	Type	Target for surveys
@Outcomes / Scaling-up / Experience of Care	8	Healthcare Consumer Assessment	NPS survey	Patients
	8	Psycho social	PAM included in MAY survey	Patients
@Outcomes / Scaling-up / Health of a population	6	Coverage	Population indicators	-
	6	Disease burden	Population indicators	-
@Outcomes / Scaling-up / Per capita costs	7	Total cost	Population indicators	-
@Adjustment variables	4	• Age • gender	Individual indicators	-
	4	• Marital status • Education level	Individual indicators collected in survey	Patients
@Process / Stakeholder and Change Management	5	Stakeholder management	ACT@Scale survey	Manager/researcher
		Change management	ACT@Scale survey	Manager/researcher
		Staff Engagement	ACT@Scale survey	Manager/researcher
			ACT@Scale survey	Frontline staff
@Process / Service Selection	6	Service selection	ACT@Scale survey	Manager/researcher
@Process / Sustainability and Business models	7	Sustain Financial wlow and business models	SUSTAIN survey ACT@Scale survey	Manager/researcher Manager/researcher
@Process / Citizen empowerment	8	Psycho social	MAY survey	Patients
		Psycho social	CSPAM survey	Frontline staff

Figure 2 Data collection overview.

Planning 2016

*) If available and possible, collection will start in September
**) Survey designed for ACT@Scale

Data input	Topic	Type	Target for surveys	
Scaling-up: Experience of Care	Healthcare Consumer Assessment	**NPS** question	Patients	Q4 2016
	Psycho-social factors	**PAM** included in **MAY** survey	Patients	Q4 2016
Scaling-up: Health of a population	Coverage	Databases Population	-	Q4 2016
	Disease burden:	Databases Population	-	Q4 2016
Scaling-up: Per capita costs	Total cost	Databases Population	-	Q4 2016
Adjustment variables	- Age - Gender	Databases Individual	-	Q4 2016 *
	- Education level - Marital status	Additional survey questions	Patients	Q4 2016 *
WP5: Stakeholder and Change Management	Stakeholder management	Survey **	Manager/ researcher	Done
	Change management	Survey **	Manager/ researcher	Done
	Staff Engagement	Survey **	Manager/ researcher	Q4 2016
		Survey **	Frontline staff	Q4 2016
WP6: Service Selection	Service selection	Survey **	Manager/ researcher	Done
WP7: Sustainability and Business models	Sustainability Financial flow and business models	**SUSTAIN** survey Survey **	Manager/ researcher	Q4 2016
WP8: Citizen empowerment	Psycho social	**Rest** or **MAY** survey	Patients	Q4 2016
	Psycho social	**CSPAM** survey	Frontline staff	Q4 2016

In addition to these common data collection elements, the collection of the program-specific data elements starts in Q4 2016.

Program Survey Populations

Table 1 presents an overview of estimated population size, targeted population for survey distribution, and estimated response rate. Due to different population sizes, the programs work with different targets, based on local feasibility. Differences in response rate are due to different ways of survey collection (paper based, email, telephone).

- N – size of the population
- T – target: the number in the population to send the survey to[29]
- %T – expected response rate
- RR – response rate

Table 1 Overview of program population, and survey targets.

Program	Program managers PM			Healthcare professionals HCP			Patients PA		
	N	T	%T	N	T	%T	N	T	%T
Basque Country			100%		100%	30%			60%
BAS MM IC	4	4	4	350	350	105	6200	180	108
BAS CARD TH	2	2	2	40	40	12	150	20	12
Catalonia			100%			100%		10%	25%
CAT IL SUP	1	1	1	12	3	3	3563	300	75
CAT CHRON IC	1	1	1	62	30	30	445	40	10
CAT CHRON CM	1	1	1	8	8	8	500	50	13
CAT CHRON LS	1	1	1	6	6	6	200	20	5
CAT IL IC	1	1	1	8	8	8	700	30	8
Northern Netherlands			100%			90%			90%
NNL RESP TH	1	1	1	350	10	9	11500	30	27
NNL IL IC	1	1	1	30	10	9	1500	30	27
NNL CARD TH	1	1	1	2	2	2	200	20	18
Northern Ireland			100%		100%	70%		60%	25%
NIRE RESP TH	5	1	1	55	55	39	600	360	90
NIRE DM TH	5	1	1	40	40	28	500	300	75
NIRE PREG TH	5	1	1	20	20	14	200	120	30
South Denmark			100%		50%	100%	N/A	N/A	N/A
RSD MH TH	1	1	1	25	6	6	N/A	N/A	N/A

[29] In general the objective for T: >25% professionals, >10% for the patients. Programs that have a big patient population provide a feasible minimum number of patients instead.

Conclusion

In this document we have described the data collection and evaluation framework for ACT@Scale. This framework has been created as a concerted consortium effort in biweekly telephone conferences, two consortium meetings and additional sessions with the individual partners. It is a framework to evaluate the **outcomes** of the scaling-up process of integrated care programs. The framework monitors the scaling-up **process** in the areas of (1) changes and stakeholder management, (2) service selection, (3) business models and sustainability, and (4) citizen empowerment. The maturity of the healthcare system is tracked by the **structure** indicators in the framework. In addition, the framework facilitates programs to monitor and evaluate their **program-specific objectives**. For this purpose, the framework recommends indicators per cluster of programs that target a similar disease group, though programs are free to specify additional program-specific indicators that need to be tracked by the framework.

The document also contains an overview of all surveys to be deployed during baseline, year 1 and year 2. For this year 3 of the baseline surveys have already been conducted, and the remaining surveys will be bundled per respondent, i.e. one survey set for the program managers, one for the staff, and one for patients. These surveys will be rolled out in Q4 2016.

Appendix

A1: Programs

The table below presents an overview of all the programs participating in ACT@Scale. In the table you can find the program cluster, the acronym of the program, its description and target population.

Table 2: Programs of ACT@Scale, with IC: integrated care program, LS: lifestyle, TH: telehealth program, and SUP: support

Cluster	Acronym	Short Name	Description	Target Population
Basque Country				
Multimorbid	BAS MM IC	Multimorbid Integration	Multimorbid Population Integrated Intervention Program	Complex multimorbid patients
Cardiac	BAS CARD TH	CHF Telemonitoring	Telemonitoring services for Congestive Heart Failure	Heart failure patients
Catalonia				
Independent Living	CAT IL SUP	Nursing homes	Healthcare support programmes for nursing homes	Elderly living in institutionalised homes
Chronic	CAT CHRON IC	Chronic care	The Chronic Patient Programme – Badalona Serveis Assistencialis	Complex chronic and frail patients
Chronic	CAT CHRON CM	Complex case management	Support for complex case management AISBE	Complex patients that require linking tertiary care with the community
Chronic	CAT CHRON LS	Physical activity	Services promoting healthy lifestyles: physical activity – AISBE	Chronic patients in need of physical activity
Independent Living	CAT IL IC	Frail elderly	Integrated care for subacute and frail older adults PSPV	Frail elderly patients
Northern Netherlands				
Respiratory	NNL RESP TH	Asthma/COPD	Asthma / COPD Telehealth service	Patients suffering from asthma and / or COPD
Independent Living	NNL IL IC	Embrace	Embrace – Connecting health and community services	Frail Elderly
Cardiac	NNL CARD TH	Effective Cardio	Heart Failure Program	Complex heart failure patients
Northern Ireland				
Respiratory	NIRE	COPD	COPD Telemonitoring	People with COPD

	RESP TH	telemonitoring	Services	
Diabetes	NIRE DM TH	Diabetes telemonitoring	Diabetes Telemonitoring Services	People with diabetes
Pregnancy	NIRE PREG TH	Weight management telemonitoring	Weight Management Telemonitoring Services	Woman with BMI over 39
South Denmark				
Mental Health	RSD MH TH	Telepsychiatry	Center for Telepsychiatry	Citizens eligible for telepsychiatric treatment

A2: 2016 Data Collection

Survey Set	Surveys included	Type	WP	Lang
Program Manager Survey				
Done*	Stakeholder management	Process	5	EN
Done*	Change management	Process	5	EN
Done*	Service selection	Process	6	EN
Q4	Time in current role **question**	Adjust	–	EN
Q4	Stakeholder Staff engagement	Process	5	EN
Q4	Sustainability	Process	7	EN
Q4	Financial flows and business models	Process	7	EN
Frontline Staff Survey				
Q4	Current role **question**	Adjust	–	Local
Q4	Time in current role **question**	Adjust	–	Local
Q4	Staff engagement	Process	5	Local
Q4	**CSPAM**: Citizen empowerment	Process	8	Local
Patient Survey				
Q4	Marital status **question**	Adjust	–	Local
Q4	Education level **question**	Adjust	–	Local
Q4	**NPS:** net promotor score **question**	Outcome:exp	8	Local
Q4	**PAM**:Patient Activation Measure	Outcome:exp	8	Local
Q4	**MAY**:More About You (psycho-social factors)	Process	8	Local

*) These surveys have been collected in June

A3: Validated surveys

The table below presents an overview of all validated surveys with a reference to the original source.

Survey	Description	Reference
MAY	Psycho-social profile of the patient	https://digisemas-staging.ehv.campus.philips.com/demo/may_en_20_18
PAM	Patient activation measure	http://www.insigniahealth.com
CSPAM	Clinician activation measure	http://www.insigniahealth.com
SUSTAIN	Program sustainability assessment tool	https://sustaintool.org/

A4: Stakeholder Management

Indicate in which phase is your programme?

Phase 1: Planning of change, is the designing phase of the program. The case for change is built, all aspects for the program are defined (intervention, scope, timeframe, resources, etc.), and support for the program needs to be gathered.

Phase 2: Adaptation phase, in which the program is tested in a pilot implementation

Phase 3: Full scale implementation phase, final implementation of the program

Phase 4: Continuous improvement after deployment, once the program is implemented, outcomes are assessed and adaptations of the program may occur in order to improve their performance

A5: Change Management

1. Which elements of change management are you addressing?

	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
Culture. The programme is addressing the analysis of the readiness to change and innovation culture					
Strategy/re-organization. The programme is addressing tchronic care management and integrated care and implementation plans					
The programme is addressing leadership and guidance. Selection of leaders, type of leadership and sponsors of the changes					
Communications. The programme is addressing dissemination of the new strategy in the organization. Possibility of top-down and bottom-up initiatives.					
Capabilities. The programme is addressing the analysis of the new roles and capabilities required. Processing of old-role models.					
Alignment. The programme is addressing the availability of political, legal and organisational					

support/endorsement towards integrated care.					
Financing and Incentives. The programme is addressing mechanisms to promote the change and overcome resistance					
Monitoring. The programme is addressing availability of performance indicators related to integrated care in primary, secondary levels and programs. Availability of public data.					

2.- Please describe how are you addressing the previously selected elements

Culture. Analysis of the readiness to change and innovation culture.

Strategy/re-organization. Towards chronic care management and integrated care and implementation plans.

Leadership and guidance. Selection of leaders, type of leadership and sponsors of the changes.

Communications. Dissemination of the new strategy in the organization. Possibility of top-down and bottom-up initiatives.

Capabilities. Analysis of the new roles and capabilities required. Processing of old-role models.

Alignment. Availability of political, legal and organisational support/endorsement towards integrated care? At which level?

Financing and Incentives. Mechanisms to promote the change and overcome resistance

Monitoring. Availability of performance indicators related to integrated care in primary, secondary levels and programs. Availability of public data.

Section 2. CHANGE MANAGEMENT AREAS AND PHASES

3. In which step are you in the process within the following integrated care areas? (select all that apply)

	Phase 1: Planning change	Phase 2: Adaptation phase	Phase 3: Full scale implementation phase	Phase 4: Continuous improvement after deployment
a. Organisational models				
b. Workforce development				

	Phase 1: Planning of change	Phase 2: Adaptation phase	Phase 3: Full scale implementation phase	Phase 4: Continuous improvement after deployment
c. Development of population stratification tools				
d. Integrated care pathways				
e. User involvement/Patient engagement				
f. Support of technology for the new care model				

Phase 1: Planning of change, is the designing phase of the program. The case for change is built, all aspects for the program are defined (intervention, scope, timeframe, resources, etc.), and support for the program needs to be gathered
Phase 2: Adaptation phase, in which the program is tested in a pilot implementation
Phase 3: Full scale implementation phase, final implementation of the program
Phase 4: Continuous improvement after deployment, once the program is implemented, outcomes are assessed and adaptations of the program may occur in order to improve their performance

Section 3: CHANGE MANAGEMENT BARRIERS AND MAIN TOOLS TO OVERCOME THEM

4. Please indicate barriers you have faced for change management (Please tick the appropriate box)

(Please rate the following aspects, where 10 means that it can block change and 0 is irrelevant or not applicable)

	Phase 1: Planning of change	Phase 2: Adaptation phase	Phase 3: Full scale implementation phase	Phase 4: Continuous improvement after deployment
a. Lack of time	10- essential (potentially can block change) 9 8 7 6 5 4	10- essential (potentially can block change) 9 8 7 6 5 4	10- essential (potentially can block change) 9 8 7 6 5 4 3	10- essential (potentially can block change) 9 8 7 6 5 4 3

	3 2 1 0 – irrelevant /not applicable	3 2 1 0 – irrelevant /not applicable	2 1 0 – irrelevant /not applicable	2 1 0 – irrelevant /not applicable
b. Pressure for short term results	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable
c. Stakeholder resistance (specific stakeholder).	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable
d. Unstructured approach to change management	10- essential (potentially can block change) 9 8 7 6	10- essential (potentially can block change) 9 8 7 6	10- essential (potentially can block change) 9 8 7 6 5	10- essential (potentially can block change) 9 8 7 6 5

	5 4 3 2 1 0 – irrelevant /not applicable	5 4 3 2 1 0 – irrelevant /not applicable	4 3 2 1 0 – irrelevant /not applicable	4 3 2 1 0 – irrelevant /not applicable
e. Lack of recognition of need for change	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable
f. Lack of leadership	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable
g. Lack of vision	10- essential (potentially can block change) 9 8	10- essential (potentially can block change) 9 8	10- essential (potentially can block change) 9 8 7	10- essential (potentially can block change) 9 8 7

	7 6 5 4 3 2 1 0 – irrelevant /not applicable	7 6 5 4 3 2 1 0 – irrelevant /not applicable	6 5 4 3 2 1 0 – irrelevant /not applicable	6 5 4 3 2 1 0 – irrelevant /not applicable
h. Inadequate skills	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable
i. Inflexible Information technology	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable
j. Lack of funding	10- essential (potentially can block change)	10- essential (potentially can block change)	10- essential (potentially can block change) 9	10- essential (potentially can block change) 9

	9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	8 7 6 5 4 3 2 1 0 – irrelevant /not applicable
k. Lack of adequate incentive schemes for change	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable	10- essential (potentially can block change) 9 8 7 6 5 4 3 2 1 0 – irrelevant /not applicable

6. Strategies/tools that you are using/have used with success to overcome the above indicated barriers. Please explain why there were successful.

a. Lack of time

b. Pressure for short term results

c. Stakeholder resistance (specific stakeholder).

d. Unstructured approach to change management

e. Lack of recognition of need for change

f. Lack of leadership

g. Lack of vision

h. Inadequate skills

i. Inflexible Information technology

j. Lack of funding

k. Lack of adequate incentive schemes for change

A6: Service Selection

Survey to Program Manager or Researcher

Description, identification and selection of patients

1. Is there a formal risk stratification approach used to formal targeting, identification and selection of patients?
    1) No
    2) Individual level
    3) Population level
    4) Both, individual and population level

2. If there is a risk stratification approach, to which extent is used to formal targeting, identification and selection of patients in real practice?
    1) It is defined but not used (not yet implemented)
    2) Used to some extent (lowly implemented)
    3) Used extensively (highly implemented)
    4) Always used (fully implemented)

3. If there is a risk stratification approach used to formal targeting, identification and selection of patients, on which criteria is based?
    1) Clinical criteria: Based on the clinician training, knowledge, instinct and experience.
    2) Descriptive method: rules-based thresholds for certain parameters or pre-established decision criteria that describe a high-risk patient (> 65 years, COPD, one previous admission).
    3) Predictive tool: It is based on predictive models that seek to establish relationships between sets of variables to predict future outcomes, events or healthcare expenditure, using statistical and machine learning methods.
    4) Mixed method: 3 and 1

4. If there is a Risk Stratification tool used, how stratification information results can be accessed and modified by healthcare professionals?
    1) Healthcare professionals are informed of the final list of their stratified patients
    2) Healthcare professionals can identify individual stratified patients on their health records.
    3) Healthcare professionals can identify individual stratified patients on their health records and suggest changes.
    4) Healthcare professionals can identify individual stratified patients on their health records and can edit and modify the stratified patients.

5. Inclusion into the program (case selection): Ratio of identified population finally included in the program.
    1) <25%
    2) 25-50%
    3) 51-75%
    4) >75%

Services responding to patients needs

6. There is an individualized Patient Care Plan?
    1) No, the program is the same for all patients regardless of their conditions.
    2) It may be some specific clinical decisions according to patients evolution but not a formal care plan.
    3) There is an individualized care plan but it does not change according to the evolution of the patient.
    4) There is an individualized care plan that dynamically changes according to the evolution of the patient.

7. If there is a care plan (answers 2,3 and 4 in previous question), which variables does it take into account to match specific interventions to the patient´s needs?
    1) Diagnosis
    2) Diagnosis + severity
    3) Diagnosis + severity + patient-level clinical requirements
    4) Diagnosis + severity + patient-level clinical requirements + specific characteristics (functional health status, pain, social/emotional support, activities of daily living, frailty, cognitive status and others)

8. If there is a care plan, please select which specific service type can be activated (integrated care plan maturity):
    1) Usual care reactive to patient demand, including full range of patient care options that a clinician could choose to provide or offer to meet an individual patient's needs, such as medication reviews, referral to specialist, social care, rehabilitation and community nursing services (episode centered)
    1) Organized care: includes (1), ensuring coordination over time between primary and specialist care, for diagnostics and for social support, as well as ensuring timely review (Process).
    2) Proactive plan care, includes (2) with based on risk stratification patient selection, according to patient-level clinical requirements, including Care management if required, self-management programs and follow-up (Care plan)
    3) Proactive shared care planning –includes (3) with goals agreed with patient and stakeholders involved, ensuring a patient-centered care plan, including changes when required (Personalized care plan)

9. If there is a care plan, which is frequency of the planned interventions revisions to match patient changing needs (service dynamic adaptation)?
   1) >12 months
   2) 1to 12 months
   3) <1 month
   4) Ongoing (continuous)

10. If there is a risk stratification approach in service dynamic adaptation, which is the adaptive case management does it allow?
    1) Just predict future events.
    2) Besides (1) guides the type of interventions offered to the patient.
    3) Besides (2), define the intensity of intervention offered to the patient.
    4) Besides (3), establish an individualized care plan.

11. The adaptive care plan includes (tick all that apply):

    a) Patient care well-defined Goals
    b) Pharmacological interventions
    c) Immunization
    d) Nursing care
    e) Rehabilitation activities
    f) Medical Devices and appliances
    g) Referral to specialist(s)
    h) Surgical procedures
    i) Health Promotion activities (exercise, nutrition, other habits…)
    j) Health coaching –health literacy, patient activation, adherence to care plans, and self-management skill building.
    k) Social care
    l) Community resources
    m) Clinical assessments and metrics (physical exams, Lab Tests, diagnostic procedures)
    n) Planned encounters and follow up
    o) Logistic support
    p) Others:_____

12. Level of patient / caregiver involvement in the care plan.

    1) Does not include results of patient assessments
    2) Includes results of patients assessments, but not self-management goals
    3) Includes results of patient´s assessments and self-management goals agreed by healthcare professionals and patient.
    4) Includes results of patient´s assessments, self-management goals agreed by healthcare professionals and patient, and patient follow-up
    a) healthcare and social-care

On-boarding the required professionals and services

13. Degree of healthcare tiers accessibility to the patient care plan?

    1) Primary Care Clinician/nurse
    2) Primary Care Clinician + nurse
    3) Multi-level clinicians (Primary Care and hospital)
    4) Multi-level clinicians + social and other resources

14. Please indicate the number of healthcare professionals involved in the program:
    - Primary Care Clinicians: _____
    - Community Nurses: _____
    - Specialist/Consultants: _____
    - Hospital Nurses: _____
    - Social workers: _____
    - Managers: _____
    - Other: _____

15. Awareness amongst staff evaluated regularly and findings acted upon appropriately
    1) Never evaluated
    2) Evaluated but no action taken
    3) Evaluated and findings acted upon sporadically
    4) Evaluated regularly and findings acted upon appropriately

16. Proportion of healthcare professionals involved that has been formally trained in case identification, case evaluation, and case selection?
    1) <25%
    2) 25-50%
    3) 51-75%
    4) >75%

17. Proportion of healthcare professionals involved that has been formally trained in care plan formulation, evaluation, follow-up and adaptation?
    1) <25%
    2) 25-50%
    3) 51-75%
    4) >75%

18. Healthcare professionals influence the process of change *(tick all that apply)*:
    a) Can modify the selected stratified patients
    b) Can choose a wide range of patient care options to meet patients' needs
    c) There are formal participation mechanisms to develop or change the intervention/program
    d) They are involved in training or supporting their colleagues

e) There is a strategy to share good practices or outcomes.
f) They are involved in the design and implementation of PDSA cycles as active.

A7: Staff Engagement for program managers

1. Please describe which stakeholders are involved in your progamme currently? (please select all that apply)

- Patient/users
- Health professionals – primary care
- Health professionals – secondary care
- Health administrators
- Payers
- Politicians
- Private health providers
- Other stakeholder (please specify)

-

2. How did you involve stakeholders in your programme? (please select all that apply)

	Phase X
Patients/Users	1 – inform (give info) 2 – consult (ask for info) 3 – collaborate (work with) 4 –Give responsibility to stakeholder
Health professionals – primary care	1 – inform (give info) 2 – consult (ask for info) 3 – collaborate (work with) 4 –Give responsibility to stakeholder
Health professionals – secondary care	1 – inform (give info) 2 – consult (ask for info) 3 – collaborate (work with) 4 –Give responsibility to stakeholder
Health administrators	1 – inform (give info) 2 – consult (ask for info) 3 – collaborate (work with) 4 –Give responsibility to stakeholder
Payers	1 – inform (give info) 2 – consult (ask for info) 3 – collaborate (work with) 4 –Give responsibility to stakeholder
Politicians	1 – inform (give info) 2 – consult (ask for info) 3 – collaborate (work with)

	4 –Give responsibility to stakeholder
Private health providers	1 – inform (give info) 2 – consult (ask for info) 3 – collaborate (work with) 4 –Give responsibility to stakeholder
ICT Industry	1 – inform (give info) 2 – consult (ask for info) 3 – collaborate (work with) 4 –Give responsibility to stakeholder
Academy	1 – inform (give info) 2 – consult (ask for info) 3 – collaborate (work with) 4 –Give responsibility to stakeholder
Other stakeholder	1 – inform (give info) 2 – consult (ask for info) 3 – collaborate (work with) 4 –Give responsibility to stakeholder

3. What attitude do the various stakeholders have towards the programme? (Mostly in favour of change) (Mostly against change).

- Patient/users
- Health professionals – primary care
- Health professionals – secondary care
- Health administrators
- Payers
- Politicians
- Private health providers
- Other stakeholder (please specify)

4. What power do the various stakeholders have towards the programme? (Has the power to influence change) (Has no power or limited power to influence change)

- Patient/users
- Health professionals – primary care
- Health professionals – secondary care
- Health administrators
- Payers
- Politicians
- Private health providers
- Other stakeholder (please specify)

A8: Financial Flow & Business Models Survey

Survey to Program Researcher

1. The policy increases efficiency in chronic care.

Strongly Agree Agree Neutral Disagree Strongly Disagree

2. There are adequate financial incentives for the stakeholder (e.g. patients, providers, insurers) to participate/adopt the policy.

Strongly Agree Agree Neutral Disagree Strongly Disagree

3. The policy imposes budgetary constraints on the healthcare system.

Strongly Agree Agree Neutral Disagree Strongly Disagree

4. The policy promotes the integration of financing of different care sectors involved in chronic care.

Strongly Agree Agree Neutral Disagree Strongly Disagree

5. Risk selection of financially "unattractive" chronic patients to health insurers is decreased following the implementation of this policy.

Strongly Agree Agree Neutral Disagree Strongly Disagree

6. The growth of the chronic care expenditure decreased after the introduction of this policy.

Strongly Agree Agree Neutral Disagree Strongly Disagree

7. Care consumption is collected?
   i. Yes
   ii. No

8. What were the total costs of the program (in 2015)?
   ..... euro

9. What were the average costs of the program per user (in 2015)?
   ..... euro

10. Is integrated CC&TH delivery embedded in your strategic plan?
Rank importance from 1 (least) to 5 (highest):.....

11. What is your organizations' mission and vision? Does it need to change to included integrated care elements? (please elaborate in text box).

Rank importance from 1 (least) to 5 (highest):.....

please

Rank importance from 1 (least) to 5 (highest):.....

der to

support your integrated care vision? (please elaborate in text box).

Rank importance from 1 (least) to 5 (highest):.....

Billing

15. Are you billing for all possible behavioral health services provided? Primary care visits? (please elaborate in text box).

Rank importance from 1 (least) to 5 (highest):.....

h step

please

elaborate in text box).

Rank importance from 1 (least) to 5 (highest):.....

vities?

Rank importance from 1 (least) to 5 (highest):.....

18. Have you identified the baseline caseload for both primary care and behavioral health clinicians? (please elaborate in text box).

Rank importance from 1 (least) to 5 (highest):.....

please

2.http://www.bmg.eur.nl/fileadmin/ASSETS/bmg/Onderzoek/Promoties/Promoties_2015/Apostolos_Tsiachristas_-_Thesis.pdf

A9: Staff Engagement for Health Care Professionals

The survey has two main sections. Section 1 explores your views and thoughts on your own involvement in the programme and section 2 is an opportunity to provide some more detailed feedback on your experiences.

Section 1: Your thoughts on your own involvement in the programme.

Please mark the response that most closely represents your thoughts on the statement.

I have a clear understanding of what this telehealth/co-ordinated care programme is trying to achieve					
I feel I am able to influence the way in which the programme is delivered					
I was consulted about the implementation of the programme					
I believe patients are benefiting from this telehealth/coordinated care programme					
The implementation of the programme was well planned					

I was given appropriate training and education to support my role in the programme					
My views about the programme are gathered and acted upon regularly					
I was actively involved in the development and delivery of the programme					
I believe that the approach to CC/TH used in the programme is now part of 'normal' practice					
I have been supported to develop the skills and knowledge necessary to deliver the service					
My involvement in the implementation of this programme has positively changed my views on TH and/or CC					

	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
The contents and teaching methods are tailored to the needs of staff					
All different categories of staff have the same access to training and education					
There is sufficient staff time available to support the training and education to enable delivery of telehealth or coordinated care projects					
The training and education is linked to a formal academic award					

Frontline staff are quite involved in training or supporting (e.g. through mentorship) their colleagues in relation to the project					

Section 2: could you also tell us;

1. What do you consider to be the most positive elements of the telehealth/co-ordinated care programme (for you, patients and/or the organisation)?

2. What do you consider to be the most negative elements of the telehealth/co-ordinated care programme (for you, patients and/or the organisation)?

3. How are you made aware of the programme's aims, benefits and progress?

4. Are you actively encouraged to provide feedback on how the programme is developing? Is this feedback acted upon?

5. Have you got any suggestions for how staff engagement with the programme could be improved?

6. What training or education have you been given to help you deliver the new programme? How has it been presented (e.g. e-learning, face to face or workshops)? To whom was this training most directed towards?