# ACT @ Scale

*Handbook*

Experiences on scaling
**Care Coordination and
Telehealth Best Pratices**

# Advancing Care Coordination and Telehealth deployment at Scale

The work leading to these results 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. ACT@Scale builds on the expertise and successful experiences of the ACT programme and will use tested collaborative methods and tools to implement improvements. The ACT@Scale programme is fully aligned with the European Innovation Partnership on Active and Healthy Ageing objectives to deploy integrated care for chronically ill patients.

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# ACT@Scale Consortium

ACT@Scale is a partnership of innovative European healthcare regions, industry and academia with potential to transform cure and care delivery services from pilots to scaled up, routine care practice for the benefit of the European population. The project comprises 15 partners from 8 EU and associated countries including 6 deployment sites across 6 of the countries coordinated by Philips Healthcare in Germany.



## Acknowledgements

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Southern Denmark

Northern Netherlands

Southern Germany

Basque Country

Catalonia

ACT@Scale

# Executive Summary

Building on the expertise and experience from the ACT programme[1], the over-all goal for ACT@Scale was to identify, transfer, and scale-up existing Care Coordination and Telehealth good practices with the target of reaching a total of 100,000 care recipients across programmes across Europe.

Kicking-off in March 2016, this EU-funded project included a consortium of health care authorities, clinical experts, universities, and industry partners. ACT@Scale has been fully aligned with the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA) and the scaling-up strategy of the European Commission. After having identified, deployed, and monitored best practices in the field of care coordination and telehealth in Basque Country (ES), Catalonia (ES), Gesundes Kinzigtal (DE), Northern Netherlands (NL), Northern Ireland (UK), Region of Southern Denmark (DK), and Scotland (UK), ACT@Scale now presents this handbook as a manual for other regions aiming to scale.

ACT@Scale has used tested collaborative methods (PDSA) and tools to implement improvements supporting successful scaling of programmes. These methods proved to have great impact in the regions as the methodology provided an iterative process, supporting the programme managers in implementation of the local changes. In the process of deploying and scaling-up best practices ACT@Scale focused on four drivers that were identified as essential in supporting successful scaling processes; Stakeholder and Change Management, Service Selection, Business Models and Sustainability, and Citizen Empowerment. To measure progress in the regions, ACT@Scale developed an Evaluation Framework based on experience, practice, and evidence. The framework succesfully supported the measurement of outcomes, processes, and the structure to assess the quality of care.

It has been important for ACT@Scale to support knowledge transfer across Europe and beyond. As a means to support this, a brochure[1] was published presenting the experiences with the collaborative methodology. Now, this handbook is intended to assist other regions in their efforts to scale good practices for the benefit of European citizens.

1   https://www.act-programme.eu/
2   https://www.act-at-scale.eu/wp-content/uploads/2014/08/ACT@Scale-Telehealth-and-Care-Coordination-Lessons-Learned-WHINN-2017.pdf

# Foreword

This handbook documents the advances made by the participants in ACT@Scale and demonstrates the palpable advances made in coordinated care and telehealth across Europe.

It is important not to underestimate the efforts made by the health care organisations in bringing about change in practice in health care. The coordination of care and telehealth are disruptive to many aspects of current health care practice and overcoming resistance to change and persuading health care professionals, patients, and their families as well as managers and those who finance care is not an easy task. What is heartening is how much has been achieved in those involved in ACT@Scale.

This document provides many insights and advice from the programmes for others to learn how to scale-up these types of programmes. One important issue is to have clearly defined processes that are also flexible to enable change in different areas. In tackling a region as large as Europe, it is necessary to nuance any proposed solution on the basis of local culture and the local organisation of health care to achieve the best outcomes. However this needs to be balanced to ensure cross system and cross culture learning. Fundamental to the success of ACT@Scale was having a common collaborative evaluation methodology along with an intervention on quality improvement. Although the interventions were very different, the general issues faced by programmes in scaling-up were often common. It was important that the programmes used common methods and an agreed common language that facilitated shared learning and enhanced scaling-up. This also enabled participants to see the bigger picture of coordinated care and telehealth across Europe.

This handbook contains a host of important recommendations to achieve change at scale and an impressive insight into some of the best successes in Europe in care coordination and telehealth.

Professor Stanton Newman
Vice-President (International)
City, University of London

## Introduction and purpose of ACT@Scale

*The ACT@Scale project aims to develop, test and consolidate "best practice" in Care Coordination and Telehealth in all participating healthcare regions. Key to the process was the sharing of information so that the experiences of all participating healthcare regions can be leveraged by others to expedite the scaling-up of their services. The learning of the group is also intended to inform and assist other regions in Europe and beyond who are involved in scaling-up their services.*

The project has deployed integrated care, telehealth and care coordination in two waves across 6 European regions. ACT@Scale was initiated in March 2016 with a duration of 3 years and is led by Philips Healthcare. The project has been co-funded with 3.5 M Euro by the EU Health Programme.

## Powerful partnership

ACT@Scale is an innovative partnership of leading European healthcare regions working with industry and academic partners. The partners are all highly committed to transform telehealth and care delivery services for the benefit of frail elderly and those with chronic conditions from pilots and experiments to scaled-up services that are integrated into routine care.

## Draws on successful experience of the ACT project

The previous programme, Advancing Care Coordination & Telehealth Deployment (ACT) was the first to explore the organisational and structural processes necessary to successfully implement care coordination and telehealth services on a large scale. ACT@Scale built on the expertise and experiences of the ACT programme and utilised established collaborative methods and tools to implement improvements at scale.

## Contribution to EC Strategy

The concept of scaling Care Coordination & Telehealth "best practices" applied in ACT@Scale is aligned with the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA) and the scaling-up strategy of the European Commission.
The ACT@Scale programme has been active in delivering input and knowledge to the the EIP on AHA partnership. The findings in this report are intended to support decision-making at EU policy level, and to demonstrate to payers, practitioners and providers how patient care can be scaled and improved in the context of an ageing society and care systems under restricted budgets.

## Liaison with other EU projects

ACT@Scale has collaborated with a number of European projects. These include the SCIROCCO project, which aims to further advance the EIP on AHA Maturity Model into a validated and tested self-assessment tool. ACT@Scale has used the Maturity Model[3] to monitor the healthcare system structure in the regions in the process of deploying integrated care.
Other collaborations include SELFIE[4], SUSTAIN[5], TOPICS-MDS[6], ZonMw[7], Optimity Advisors[8], where the focus has been on transferability and sharing knowledge and experiences.

## Transfer of knowledge

This handbook provides key learnings and practical recommendations in the area of scaling integrated care. The ACT@Scale partnership considered it essential to translate their experiences and key learnings into useful tools to enable easy adoption by other regions aiming to deploy integrated care. Finally, we wish to contribute the knowledge base in the area of implementation and large-scale deployment in healthcare.

**Experiences in CC&TH**     **ACT**     **ACT@Scale**

Small Scale Tests · Limited Evaluation + Evidence · Focus on Technology

Evaluation Framework · Regional CC&TH Programmes · Evaluation Engine

EU Scaling-up · Transfer/Coaching of good practices · Evaluation + Quality Improvement

**2000's**     **2013-2015**     **2016-2019**

3   https://www.scirocco-project.eu/maturitymodel/
4   https://www.selfie2020.eu/
5   https://www.sustain-eu.org/
6   https://topics-mds.eu/
7   https://www.zonmw.nl/en/
8   http://optimityadvisors.com/homepage

# Collaborative Methodology

**The collaborative approach is increasingly being used to carry out widespread improvements in care. This methodology requires multidisciplinary groups to come together periodically to exchange experiences and ideas about implementing change and quality improvements.**

ACT@Scale applied and adapted multi-organisational structured collaborative quality improvement methods to scaling-up integrated care. The key advantage of the adaptive and flexible collaborative model used in ACT@Scale is that the methodology enables similar processes to be applied in all regions whilst enabling these to be adapted to incorporate the particular features of practice at the local level.

The process for the collaborative methodology in ACT@Scale was:
· Each region selected its good practices to scale-up.
· Each region worked on at least two of the drivers: (1) Stakeholder and Change Management; (2) Service Selection; (3) Sustainability and Business Models; and (4) Citizen Empowerment.
· At least two regions used the same driver to facilitate collaborative work.

**The collaborative methodology follows 4 phases: Plan-Do-Study-Act (PDSA)**



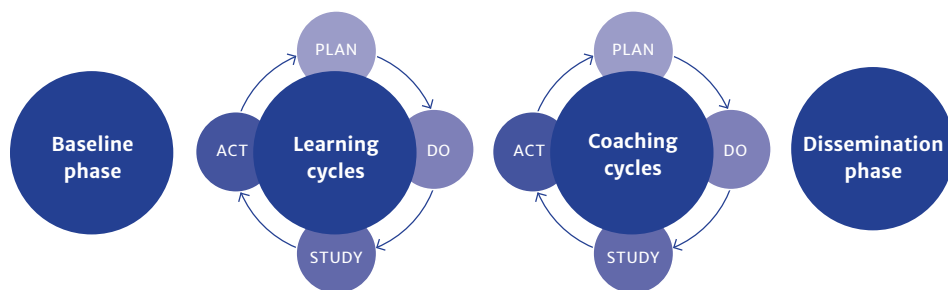The regions focused on **sustainable transformations in order to integrate the methods and the changes into routine practice**. They identified achievable targets directly related to scaling-up. Every PDSA stage was documented to ensure quality of information and to facilitate organisational learning both locally as well as to other regions. A key success factor for sustainability was to train local experts on the methodology, such that that the process is able to work autonomously when the EC funding is finished.

## Learnings from the collaborative methodology in ACT@Scale

· Collaborative methodology increases success by engaging teams in collaborative problem solving.
· It provides a well-defined structure and schedule.
· Its flexibility and adaptation to different environments allows different regions and partners to adopt it without disrupting their normal workflows.
· Use of an iterative approach enables rapid assessment and ensures fit-for-purpose solutions development.
· Results from ACT@Scale show that it has been used to address change and that it has improved healthcare in the selected areas.

**8** **Tips for implementing collaborative methodology**[10]

**The tips present different aspects and lessons learned in the implementation and scaling-up of health and care services during the ACT@Scale project**

**1** Select a programme with convincing evidence.

**2** The maturity level of the service and management engagement is key.

**3** Ensure effective running of the collaborative meetings.

**4** Ensure you have ambassadors to promote the programme.

**5** Build a collaborative team representative of all stakeholders.

**6** Enable adaptation of priorities and strategies in programme's implementation process (Do Phase).

**7** Implement the programme into the existing care model using substitution of pathway elements.

**8** Make use of proven care models.

10   http://www.act-at-scale.eu/recommendations

# Drivers for Scaling

*Tackling all aspects of care coordination and telehealth is a vast challenge. ACT@Scale focused on 4 drivers; 4 areas that were considered to be the most essential to steer scaling-up and adoption of innovations. It is our view, both from the literature and extensive experience that improvements in these 4 areas largely contribute to extended coverage and sustainability of services:*

## Citizen Empowerment

Citizen-centred care is essential to deliver integrated care. This driver focused on the elements that can achieve significant engagement of users and to make the strategy self-sustaining. These included shared decision making, attention to patient journeys, development of empowerment skills and citizens networks. Satisfaction (Net Promoter Score-NPS), Patient Activation Measure (PAM[11]) in comparison to staff (Clinician Support for Patient Activation Measure – CS-PAM[12]), psycho-social profile and patient´s abilities were monitored in 870 surveys. In addition, surveys to managers were completed to provide an overview of the strategy and operational plans.
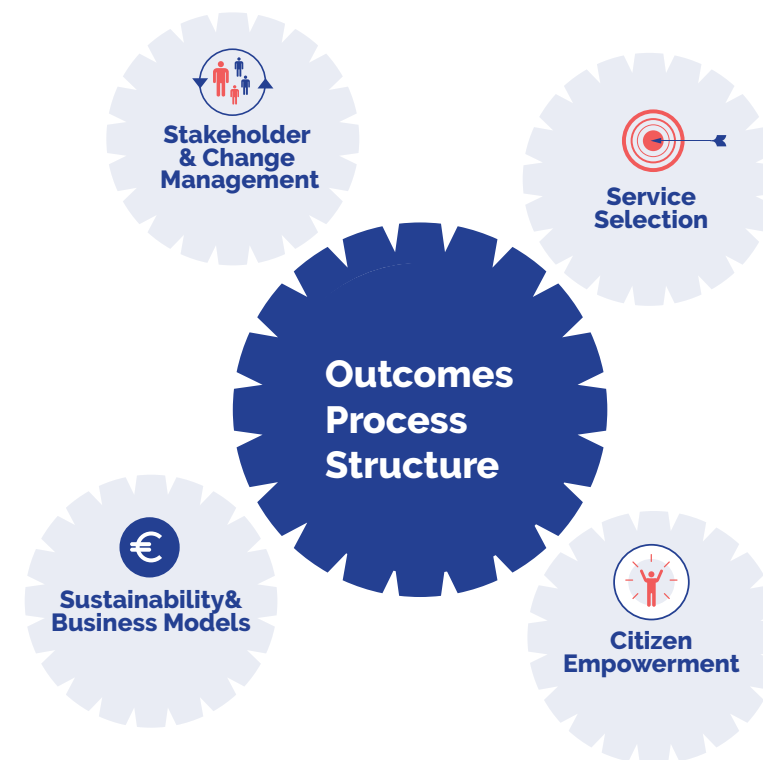
## Stakeholder and Change Management

Organisational adaptions are essential to scale-up integrated care. The main areas for this are: Stakeholder Management (SM), Change Management (CM) and Staff Engagement (SE). The EIP on AHA-B3 change and stakeholder management survey[13], quantitative regional data, and 54 responses from programme managers have been used to assess the stakeholder and change management in ACT@Scale. To assess Staff Engagement a survey designed for the previous ACT programme was answered by 354 frontline clinical staff, this collected quantitative and qualitative data, and comparative responses were elicited from managers.

## Service Selection

This driver focused on the achievement of an appropriate distribution of health and care resources to cover the dynamic needs of the patients and populations as well as enhancing risk stratification and prediction. This had three steps: Description, identification and selection of patients; Adaptation of services to respond to patients´ needs; and On-boarding required for professionals and the services.
To monitor progress on service selection, a dedicated survey was used which had qualitative indicators for scope and ambition, and quantitative indicators to represent utilisation and coverage.

## Sustainability & Business Models

For the long-term adoption and integration into routine care, we examined innovations in business models, reimbursement methods, cost-efficiency and reorganisation of care structure. Individual cost and total cost per programme were assessed.The SUSTAIN tool[14] was used to assess sustainability capacity and a typology for payment models[15] was used to monitor progress, in combination with the local cost-efficiency studies run by the programmes.

11  https://www.insigniahealth.com/products/pam-survey
12  https://www.england.nhs.uk/wp-content/uploads/2015/11/cspam-report.pdf
13  https://www.surveymonkey.com/r/B3change
14  https://sustaintool.org/

15  Stokes J, Struckmann V, Kristensen SR, Fuchs S, van Ginneken E, Tsiachristas A, Rutten van Mölken M, Sutton. Towards incentivising integration: A typology of payments for integrated care. Health Policy. 2018 Sep;122(9):963-969.

**Outcomes Process Structure**

## Citizen Empowerment
To establish patient-centered care, we focused on elements enabling significant engagement of users and on making the strategy self-sustaining, such as shared decision making, attention to patient journeys, development of empowerment skills, and citizens networks.

## Stakeholder and Change Management
To support essential organisational adaptations, stakeholder management, change management and staff engagement strategies were applied.

## Service Selection
To achieve an appropriate distribution of health and care resources to cover the dynamic needs of the patients and populations as well as enhancing risk stratification and prediction, service selection concepts were applied.

## Sustainability & Business Models
To attain adoption and integration in routine care, innovations in business models, reimbursement methods, cost-efficiency, and reorganisation of care structures were examined.

# 4 Data Collection and Knowledge Transfer

Transferability of learnings and dissemination of knowledge was a core aim of ACT@Scale so as to **contribute to the European knowledge** in the area of scaling and deploying integrated care. In ACT@Scale, as in similar projects, technology and data are the pillars for the knowledge base. The evaluation framework captured the process and outcomes of the scaling-up interventions. This was supported by the ACT@Scale evaluation engine that captures a unique set of data on experience, status, progress and success of scaling-up integrated care services. The definition of an appropriate project framework with measurements and the data collection takes significant time. It is recognised that it may take 3-5 years before impact on outcomes can be properly assessed. ACT@Scale has set the basis for the current projects to continue so that they may focus on assessing long term effects of the programmes. This will enable the regions to strengthen their evaluation strategies and embed them into routine practice.

## Key results

The ACT@Scale framework provides a **state of the art evaluation framework** for the evaluation of practical problems, based on the design principles and uses the Donabedian framework[16]  to measure processes, structures and outcomes.
The process was measured by the drivers of upscaling. The structure of the health system was measured by the Maturity Model[17]. The outcomes were linked to the pillars of the Triple Aim[18], taking staff experience into account as well. The framework provides a layered approach with core indicators (the Minimum Data Set) and optional indicators to address target population specific outcomes and programme specific outcomes. We developed an **evaluation engine** to support the data collection, storage and visualisation. It was used to deploy the surveys to programme managers, staff and patients in the regions and used a consistent way to collect and store the responses while being able to monitor the data collection process centrally. The engine provided dashboards, based on the evaluation framework, for programmes to monitor their progress.

## Conclusions & lessons learned

In healthcare practice the standardisation of data is yet to be achieved. Existing frameworks provide some suggestive examples but there remains no clear central agreed guidance for measures. Standardisation has not happened in the EU or even at national level. Currently, it requires a pragmatic approach to deal with the variety of indicators and definitions to achieve some level of harmonisation.

## Evaluation Framework
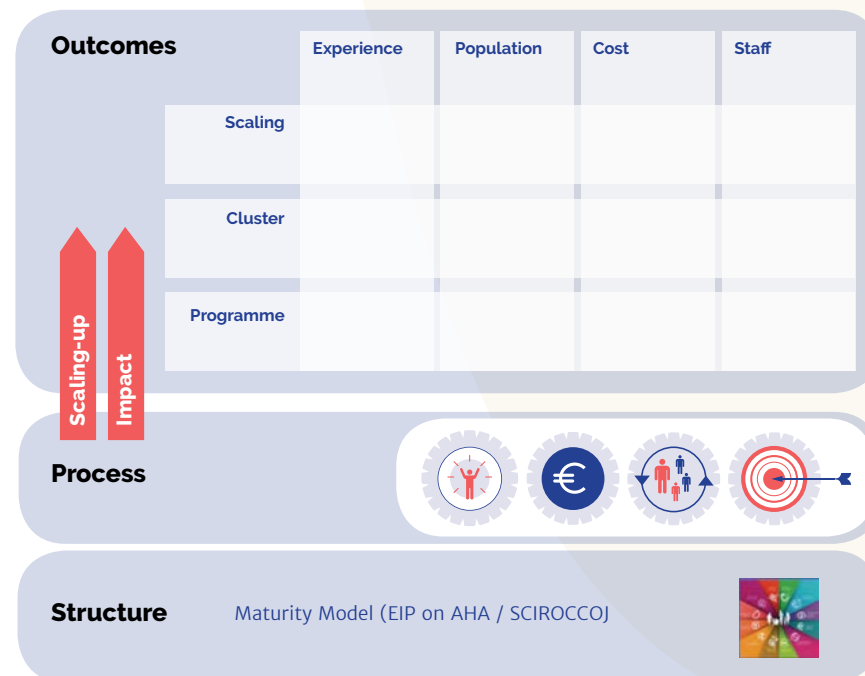


The distributed **evaluation approach** is technically possible, but in the deployment of the evaluation engine in ACT@Scale a number of non-technical barriers were encountered. Below we present an overview of the main challenges.
As expected, consent management and ethical approval procedures took time. In the distributed approach only aggregated data were shared. This required introducing an external technology (scripts) to do the aggregation. This created an additional level of complexity which began with lengthy legal processes related to the use of external software. While the feedback was that it was not hard to install the components of the engine (MySQL and R), the local IT needs to have expertise and tools to extract, transform, and load (ETL) the data. Availability and good communication with the local IT and clinical leaders was essential to transfer the correct data to the local engine. This required a relatively big effort and was treated as a one-off project, particularly so as it is not part of a continuous routine longitudinal evaluation. ACT@Scale demonstrated that these barriers can be overcome, given sufficient time and adequate resources and planning even with the increased sensitivity around privacy and data protection following the introduction of General Data Protection Regulation (GDPR).

16    https://www.nejm.org/doi/full/10.1056/NEJMp1605101        18    http://www.ihi.org/Engage/Initiatives/TripleAim/Pages/
17    https://www.scirocco-project.eu/maturitymodel/                    default.aspx

## Recommendations

Facilitate **flexible data collection approach** to support variety of measures. Here we summarise the most important design principles from ACT@Scale.

- Use the dimensions of the Triple Aim. These provide a solid base how to measure Triple Aim outcomes and give examples in each area.
- Extend this with Quadruple Aim[19] measurements to include staff satisfaction.
- Include a process-structure-outcomes approach to not only focus on "if it works", but also on "how it works" and in "which context".
- Facilitate flexibility and harmonisation by a layered approach with core outcomes linked to the strategic objectives, and optional programme specific outcomes. If needed, add a layer to capture population specific outcomes to deal with variety of target populations.
- Check local and national availability of measures and agree on measurement criteria based on standards that can be applied.
- Incorporate data collection as part of a learning system to promote a routine quality improvement and evaluation culture. Measures should be actionable.

## Co-design with end users

The distributed evaluation engine monitors and visualises the effect of quality improvement interventions of programmes. Such tools can be used at micro (operational), meso (management), or macro level (policy makers, payers).

- Identify the intended end user.
- Co-design with end users to establish their information needs.
- Train the end user and monitor usage of the evaluation tool.

## Sustainability of EU actions linked to local adoption

ACT@Scale has provided regions with the framework and methodologies to perform continuous quality improvement. This continuous improvement should become part of the culture at all levels within the organisation.

- Use in EU projects to move forward evaluation strategies.
- Develop a strategy to continue monitoring long term effects of the interventions on programme outcomes, beyond the scope of the EU project.

## Collected responses

| Iteration | Programme manager | Staff | Patients |
|-----------|-------------------|-------|----------|
| Baseline | 19 | N/A | N/A |
| Iteration 1 | 17 | 173 | 99 |
| Iteration 2 | 18 | 181 | 417 |
| TOTAL: 924 | 54 | 354 | 516 |

## Programme Dashboards



Population served
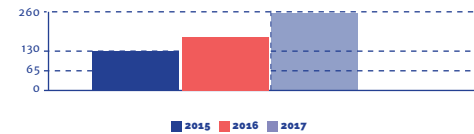


Population coverage
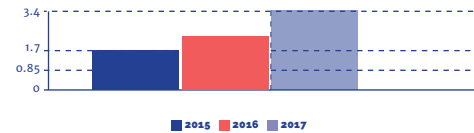


Dropout
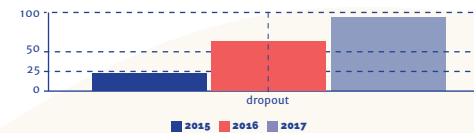


Reason for dropout
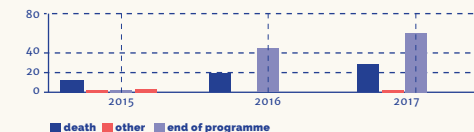
# 5 Deployment Recommendations

This section presents ACT@Scale's insights and conclusions on how to deploy care coordination and telehealth in European regions. The deployment recommendations build on the four drivers that were identified as key elements to be addressed for a successful scaling process. In ACT@Scale the drivers have proven to be useful and valuable in supporting the scaling of Care Coordination & Telehealth deployment. The 4 drivers are **Citizen Empowerment**, **Stakeholder and Change Management**, **Service Selection**, and **Sustainability and Business Models**. They have been assessed in ACT@Scale using different approaches.

## Citizen Empowerment

Citizen and patient empowerment and participation are crucial elements for the promotion of sustainable health and wellbeing. It facilitates independence, self-management, and self-efficacy, supporting patients from diagnosis onwards enabling them to have the capacity to deal with their needs along the trajectory of their condition. Citizen empowerment is still not well-defined and there is no consensus on how to operationalise or measure it. The EIP on AHA is working intensively on reaching European consensus on definition, methods, and technology as enabler and assessment tools.

Most of the interventions reported by the partners addressed patients' needs at micro or meso level. In ACT@Scale, there appeared to be a predominance of interventions targeting the provision of information as a tool for empowerment. In addition, a majority of interventions focused on self-management, followed by education and health literacy, with shared-decision making being the least represented.

Clinicians have an important role both in supporting people to self-manage their conditions, and in helping to build their level of activation. Overall, we see a very high level of the clinician activation across all ACT@Scale programmes.

ACT@Scale programmes with focus on citizen empowerment showed better results in satisfaction (NPS score) and patient activation (PAM). Participants also reported significantly higher on self-care behaviours, were better in dealing with the impact of their condition, and were more comfortable using technology. We saw greater activation levels in participants with higher education level (university, post-graduate), and the opposite for participants that were divorced or widowed.

Online training provided regularly and/or when changes were introduced, helped ensure the programme remained a focus of all impacted staff. Having a local skilled leader and involving teams within the organisation was an excellent way to ensure that training was provided and that the continuation was independent of the scope of an individual project. It was important to train and deliver educational material and communication, which are adapted to the patient's coping styles. When dealing with improvement cycles, there may be some resistance from staff. Collaborative methodologies can help to manage differences in participants' status and help to promote openness to adjustments.

### Recommendations

- Embed a method to collect patient-related outcomes and experience measures. These should be adapted to the capabilities of the target population and embedded in the workflow of the professionals.Ensure knowledge is fed back to those in practice. Collecting patient information outside a standard clinical process requires ethical approval, consent management, licenses, supporting technology for collection, storage and analysis.
- Regularly collect indicators on patient activation and/or engagement, including caregiver and informal caregiver, in order to identify those that require empowerment interventions. The findings suggest that the Patient Activation Measurement (PAM) survey might be a useful instrument for clinical practices to identify patients that are most in need of support and education.
- Define and review guidelines and perform a regular review and validation of standardised training materials for patients and professionals. There is no single best approach to engaging the public in long-term decision-making - activities such as networks need to be tailored to suit specific arrangements in regions and programmes.
- Decision makers need to be much clearer about the purpose of any specific engagement exercise and how they 'frame' the engagement activity to ensure that expectations are not misplaced. Dedicated resource and sustained governance are key enablers to citizen engagement activity.

# Stakeholder and Change Management

## Stakeholder Management

Although there is consensus that all key stakeholders should be involved in the scaling-up process, it is not fully embraced in the culture of many organizations.

- Patients are considered key stakeholders, but they are usually not sufficiently involved in the planning phase and have no or limited power to implement changes.
- Healthcare professionals were seen by managers as resistant to change.
- Most often, programmes used processes based on formal and informal networks to identify stakeholder involvement. Only few programmes analysed, mapped and prioritised national health recommendations.

### Implementation Phase
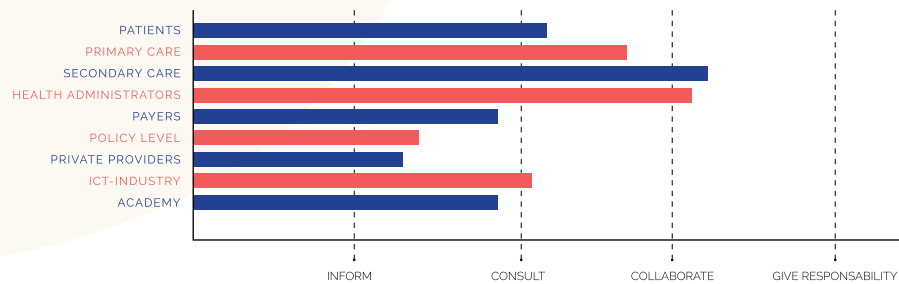
## Recommendations

- Identification of stakeholder should be based on formal and informal networks, including regional stakeholder meetings. Extend the focus beyond the classical stakeholders and include new professional profiles, roles, actors, and competences in integrated care.
- Introduce iterative participatory and co-production strategies for all stakeholders involved to improve quality of integrated care and reduce stakeholder resistance.

## Change Management

Change management is considered a key area in integrated care deployment but often there are no structured change management methodologies. ACT@Scale addressed different elements of change management to overcome resistance to change. The programme managers identified areas requiring attention and prepared new strategies for programme improvements:

- The main barriers to successful change management were stakeholder resistance, an unstructured approach to change management, and lack of time to carry out the implementation processes.

**Towards Integrated Care**

**Change Management**

**Staff Engagement**

- 'Organisational Models' and 'Integrated Care Pathways' were selected as areas for programme improvement.

## Recommendations

- Introduce internal communication strategies and tools to improve the dissemination of results and progress to stakeholders as a way to support change management.
- New engagement strategies, based on collaborative methodologies, should be embedded in organisation to advance change management. This promotes new leadership roles.
- Encourage care professionals to participate in the definition and content of training on patient management in integrated care.

## Staff Engagement

Staff plays a crucial role in the daily routines of programme interventions. The level of engagement of staff in ACT@Scale programmes was generally high, especially in the terms of awareness and motivation but some gaps were identified in organisational changes and workforce development.

## Recommendations

- Ensure quality of care by offering formal and regular training for professionals.
- Allocate sufficient time, in addition to the daily duties, to enable adaptation to new ways of working.
- Ensure that staff are empowered to identify, escalate and solve challenges in implementation early. Successes should be celebrated and drive further service enhancement.
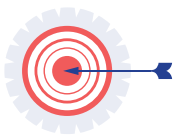
# Service Selection

Service selection had two approaches that needed to be combined: population and individual clinical level. Population-based risk assessment may be used to identify patients that either are not on the radar of service providers and/or have presently unmet needs. Despite the increasing demand of chronic care in an ageing population, the coverage of integrated care programmes is increasing at an even higher rate. Service selection has been considered a useful tool in responding to this demand by the majority of the ACT@Scale programmes.

Service selection expected outcomes are organised in three dimensions:

## 1. Description, identification and selection of patients

*Identification of potential candidates (case identification); inclusion into the programme (case selection) and assessment of clinical requirements (case evaluation). Identification of patients can be done by population-based health risk assessment, by individual patient identification, or by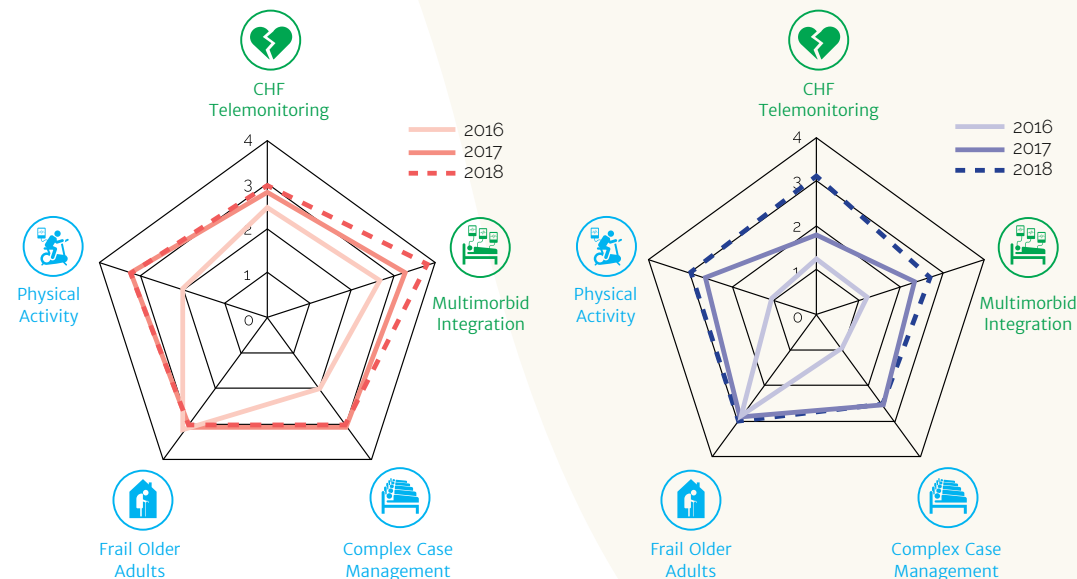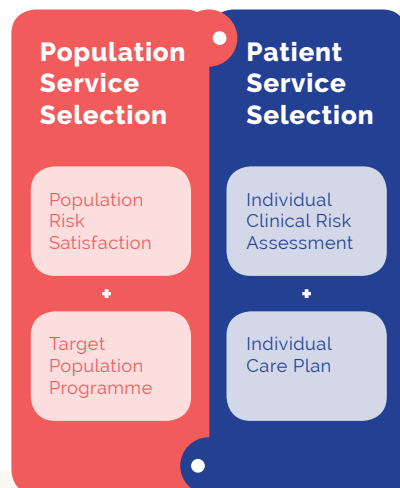 a mixed method. Selection of patients can be the result of the population based identification or the result of a specific clinical assessment.*

## 2. Services responding to patient's needs

*Services responding to patients needs is based on case evaluation, follow-up and dynamic adaptation according to the evolution of the patient. Service Selection aims to have well distributed services according to patients' needs. The perfect scenario would be to have individualised care plans that changes according to patient's evolution (ageing, disease status, patient conditions etc.).*

## 3. On-boarding the required professionals and services

*Collaboration among professionals of different healthcare levels and integration between healthcare and social support services. The coordination and integration of professionals and services has a high impact not only on patients' health outcomes but also on health care system's effectiveness and efficiency.*

**Population Service Selection**

Population Risk Satisfaction

+

Target Population Programme

**Patient Service Selection**

Individual Clinical Risk Assessment

+

Individual Care Plan



**Utilisation and Coverage**

**Scope and Ambition**

*Figure 2 Overview of 5 programmes working on service selection. An average of 32% in Scope and Ambition indicators, such as approach, tools and participant involvement. An average of 121% in Utilisation and Coverage indicators, such as coverage, frequency of usage and professional number*

The key success factor of the programmes was the combination of the Service Selection driver and the collaborative methodology to support and monitor improvement. Programmes having extra focus on service selection, expanded in scope and ambition and increased utilisation and coverage. Programmes that had population based approach in 2016, have added an individual approach to their stratification method, and used both simultaneously.

## Recommendations

- Apply the Service Selection Evaluation Framework in combination with the Collaborative Methodology to help assist in service selection and improve scaling-up programmes
- Use the combination of qualitative and quantitative indicators to monitor service selection changes on a yearly base.
- Increase staff's skills and awareness about Service selection components (case identification, case evaluation, case selection and, care plan formulation and follow-up) to improve quality and efficiency of patient care.
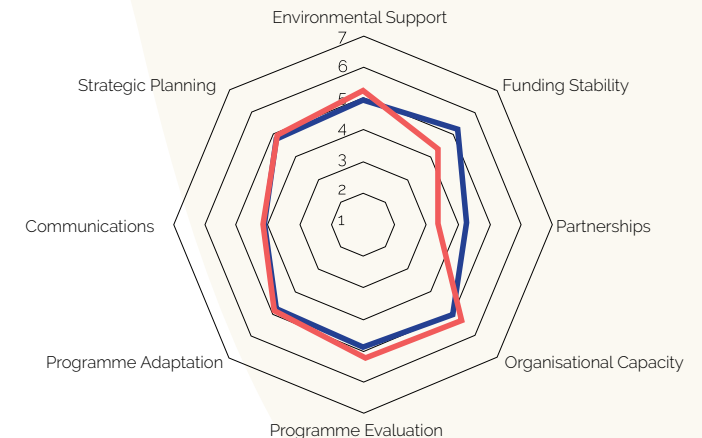
# Sustainability and Business Models

One of the main challenges for large adoption of integrated care is to find a sustainable financial model. Public and private healthcare systems use a variety of reimbursement methods and business models. Common improvement actions for sustainability are the evaluation of barriers, information on health outcomes, and costs/care utilisation. In the three years of ACT@Scale, the programmes participating in the sustainability driver published different economic evaluations.

All over Europe, there is a large diversity in the type of economic evaluation performed by programmes, depending on the local funding system and the same applied in the case of ACT@Scale. For instance, programmes supported by government budgets proved to get more value out of budget impact analyses whereas those funded by reimbursement rely more on cost-effectiveness and cost-utility analyses. Most of our programmes reported positive outcomes related to economic evaluation, except for one. These evaluations now serve as input for redesign of the services or in developing alternative business models.



**Sustainability Capacity**
Average domain score

**Survey 1:** 1st wave programmes completed in Q1 2017 and 2nd wave programmes completed in Q1 2018

**Survey 2:** 1st and 2nd wave programmes both completed in Q3-4 2018

| Programme | Year published | Authors | Comparator | Method of analysis |
|---|---|---|---|---|
| **Embrace** NNL | 2018 | Uittenbroek et al. | Care-as-usual | Cost-utility analysis/ Cost-effectiveness analysis |
| **Effective Cardio** NNL | 2013 | Veenstra et al. | Baseline Measurement | Observational before-after study |
| **Complex Case Management** Catalonia | 2018 | Hernandez et al. | Baseline Measurement | Observational study |
| **Physical Activity** Catalonia | 2018 | Barberan-Garcia et al. | Matched Control Group | Randomised Controlled Trial |
| **Gesundes Kinzigtal** Southwest Germany | 2017 | Gröne et al. | Propensity Scored Matched Control Group | Synthetic quasi-experimental study, patient experience study |

In ACT@Scale, the SUSTAIN tool was used to assess sustainability capacity. While impacts in this area are difficult to achieve within 3 years, improvements in two specific elements of sustainability were found: funding stability and partnerships.

The experience of two regions that had go/no-go decisions after long duration of economic evaluation reinforced the importance of continuous measurements accompanied by iterative redesign. Continuous monitoring and economic evaluation over time provides crucial information for programme managers, decision makers and payers (insurer or government) and should be integrated in the life cycle of the service. In order to tackle the challenges of scaling-up, programme managers should focus on an integrated approach across multiple domains. Programme managers should be provided with tools for self-assessment, stakeholder management, risk stratification, business modelling, and economic evaluation.

For programmes that do not have an integrated payment model in place, raising sufficient funding is more difficult but technically possible. Scaling-up in a health system with fragmented budgets requires a bottom-up approach with long-term commitment and perseverance, in a partnership with all stakeholders. Comparable issues have been raised in another EU project (SELFIE).

## Recommendations
· Make integrate collection of economic data into the programme management routine. This provides an opportunity to be adaptive and refine the business model.
· Provide payers with clear information for a more continuous financial decision-making. They require information to be packaged in an accessible manner. Write a business case in which all relevant information for the payers is high-lighted.
· Focus on the added value of the programme.

# Good Practices

**ACT@Scale developed, tested and consolidated "best practices" in Care Coordination and Telehealth to ensure that the experiences of all participating healthcare regions could be leveraged by others regions aiming to deploy large scale integrated care services.**

ACT@Scale has targeted integrated care in the Basque Country, Catalonia, Northern Netherlands, Southern Denmark, Northern Ireland, Southern Germany, and Scotland. All these regions were and are continuously implementing novel and innovative care coordination and telehealth processes at scale. The target groups were populations with chronic conditions and elderly with special needs including social services, frailty and psychiatric morbidities. The programmes are presented according to their level of deployment in the scaling process:

**Early deployment** is considered the initial phase of the programme deployment. In this phase, the case for change is established, all aspects for the programme are defined (intervention, scope, timeframe, resources, etc.), and support for the programme is progressing.
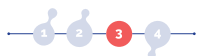
**Advancing deployment** is considered the phase were not all aspects have been fully defined yet. The programmes are in a transition between early and full deployment.
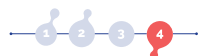
**Full deployment** is considered the final implementation of the programme. In this phase, organisations apply structural changes and the programme is part of routine care. Continuous improvements may occur.

**Redesign & improvement** is the point where the programme is implemented, outcomes are assessed, and extensive adaptations may occur to improve the performance. As part of the programme review, decisions of no-continuation may occur.

## Maturity Level



### The programmes have been deployed in two waves

The programmes of the Basque Country, Catalonia, and Northern Netherlands were first wave deployment sites as they followed the deployment and scaling process from the beginning of ACT@Scale completing two cycles of improvements and assessments according to the collaborative methdology. Southern Denmark and Northern Ireland were originally in the first wave deployment programmes. Northern Ireland encountered political changes and withdrew as a deployment region but continued as a supporting partner to the Citizen Empowerment driver. The telepsychiatry programme from Southern Denmark encountered difficulties in aligning the upscaling activities on local level and on European level and withdrew the programme. The lessons learned from the programmes are still to be found in the first sections of this handbook. Kinzigtal, Scotland, and Video Consultation programme from Southern Denmark were the second wave deployment programmes and entered the project to replace the programmes of Northern Ireland, and have followed one cycle of improvements and assessments according to the collaborative methodology.

# Intervention

*Objective: To advise and coordinate health care services to provide the right care at the right time.*

## Implementation actions

GK cooperates with pharmacies that provide information about the programme and refer patients to My Health in order to increase the number of participants. Meetings (Quality Circles)of physicians were used to inform stakeholders about the programme and to get feedback for potential adaptations to be applied to specific patients. The Quality Circles have been organised by Gesundes Kinzigtal every quarter where physicians exchanged their views and experiences on topics related to prevention or treatment of chronic conditions. Every stakeholder who were equipped with information material about My Health, were invited to workshops and face-to-face meetings.

## Results

Even though pharmacies and stakeholders were informed and equipped with information material, the number of participants did not rise significantly. GK will examine further possible incentives to motivate stakeholders to scale-up the programme.

## Enablers /Barriers

The programme can be promoted by different stakeholder groups such as physicians, pharmacies, non-medical staff, social care institutions, and health insurance companies. However, the efforts did not fulfil the expectations of increasing the number of participants. The high fluctuation rate of My Health staff members was a barrier in the implementation success of the programme. The new staff competences and engagement and associated extra efforts and expenses made it difficult to realise the scaling within the project's timeframe.

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**Scaling**
29 > 38

## My Health
### Region of Kinzigtal, Southern Germany

**Target group:** Citizens of the Kinzigtal region who are enrolled in the integrated care model "Gesundes Kinzigtal"

Gesundes Kinzigtal's (GK) is a population service that covers up to 40,000 users in the south of Germany. My Health is health counselling service for people who are enrolled in the GK initiative. Specially trained staff supports patients by advising and coordinating health care services to provide the right care at the right time.

In ACT@Scale, GK focused on stakeholder and change management. This programme successfully modified fixed health care processes into different health care components that can be compiled and adapted to the patient´s individual needs.

Due to the different components patients are able to develop their individual health care plan together with the staff of My Health. The programme is about patient empowerment and vertical and horizontal integration of the healthcare services.

# Lessons learned

**1** In order to scale-up the programme, stakeholders must be convinced of the added value of the programme. Without the support of all stakeholders it limits the ability to achieve sustainability.

**2** As the coordination of different health care components is accompanied by extra efforts and expenses more time is required to make the programme work.

## Intervention

*Objective: To allow private podiatrists to conduct foot screenings through the MDMW Service.*

### Implementation actions

The programme designed and built a foot screening tool into the records access section of the My Diabetes My Way site. It is designed to be accessed by patients and their private podiatrist during a consultation to ensure data recorded is assigned to the correct patient record. This tool is now available to private podiatrists across Scotland to allow them to conduct a standardised foot screening when otherwise any data recorded would be lost to the wider podiatry and diabetes services. A support and training video was created to explain the process and the importance of standardised foot screening.

### Results

The training video has been viewed 27 times and 7 podiatrists operating private services have completed nationally agreed FRAME training course (http://www.diabetesframe.org/) to ensure that the process is completed using the agreed methodology. 7 private podiatrists have completed the course and registered to use the service with their patients.

### Barriers/Enablers

Barriers: Finding and contacting private podiatrists to raise awareness of the foot screening tool. Recruiting private podiatrists to use the system as many were unaware that this was available. Enablers: Presenting at the national Diabetes Foot Conference and support from the national Diabetes Foot Action Group provided validation and support for the use of the service.

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**Scaling**
Programme started in 2019

# My Diabetes Foot Screening
## University of Dundee, Scotland

**Target group** Citizens with diabetes who attend private podiatry

My Diabetes My Way (MDMW) is an online self-management platform for people with diabetes that has been running in NHS Scotland since 2008. MDMW allows citizens with diabetes to access their medical records online to allow them to manage their diabetes more effectively.
Through ACT@Scale, MDMW has scaled-out an online foot screening tool that allows private podiatrists in Scotland to record their standardised assessment for diabetes patients on a nationally approved tool.
This allows public and private healthcare organisations to conduct foot

screenings using the same standardised process, and for the results recorded in private podiatry to be automatically shared with the public health service team. This avoids duplication of effort and allows data to be shared more effectively.
To ensure that citizens are able to handle their diabetes more effectively, the MDMW programme has focused on the area of citizen empowerment in ACT@Scale. The recruitment of podiatrists started in 2018.

## Lessons learned

**1** **Support from key national stakeholder groups is highly effective in engaging the target population of busy healthcare professionals.**

**2** **Standardised foot screening is deliverable in a consistent manner across public and private healthcare.**

**3** **Data sharing is possible between public and private healthcare providers and information systems.**

**Scaling**
381 > 496

## World of Training
### Region of Kinzigtal, Southern Germany

**Target group** Citizens of the Kinzigtal region

Gesundes Kinzigtal's (GK) is a population service that covers up to 40,000 users in the south of Germany. World of Training (WOT) is a specific programme fostering physical activity to promote, maintain, and restore health. WOT targets all citizens of the Kinzigtal region but is primarily offered to those, who are members of the german insurance companies AOK and SVLFG and enrolled in the Gesundes Kinigtal initiative at the same time. WOT provides equipment such as cross trainers, treadmills, and leg presses, and owns further devices to train strength, endurance, and flexability. The excercise is supervised by trainers who operate as personal coaches. In ACT@ Scale, GK focused on the development of

sustainable business models. Even though the World of Training unit may not be profitable, the increase in levels of health and independence of its users led to a reduction in health care utilisation and thus in expenditure. Due to the shared-savings contract with two statutory health insurance companies, the savings can be used to cross-subsidise the unit. To expand the programme, not only scaling-up strategies but also scaling-out strategies were considered. WOT developed two different approaches: an outdoor training approach which addresses the same target population and an indoor training approach that targets the people aged 80 years and older.

## Intervention

*Objective: To expand the WOT programme by developing different scaling-up and scaling-out concepts.*

**Implementation actions**
To scale-up the programme, mandatory appointment allocations were established to handle the increasing number of participants, reduce waiting times and to guarantee individual support of the participants.
One of the scaling-out concepts is the implementation of the outdoor classes. For that, a new staff member has to be hired and new devices, such as Nordic Walking sticks have to be purchased. Two payment models were calculated as part of developing a sustainable business model.
Furthermore, WOT is adapting the services to the needs of older aged people, by providing either a new location or a separate training area with focus on elderly people's needs. Trainers are developing age friendly training plans including massages, cardio workout, strength, and coordination training. For people with limited mobility, transport will be organised to take them to the WOT facilities.

**Results**
Scaling-up: The mandatory appointment allocations resulted in better customer control, reduced waiting times and guaranteed individual support. Scaling-out: Outdoor classes increases socialisation promoting both an incentive to attend and loyalty of users. By organising group courses for specific conditions, patients will be able to exchange views and experiences.

**Enablers /Barriers**
Scaling-up: Staff member's own satisfaction with better coordination with participants was an enabler. A barrier was the unclaimed capacity utilisation when appointments are cancelled.
Scaling-out: Those already enrolled in WOT will be easier to attract to the outdoor classes. The existing cooperation between WOT and the physician network also enables the programme to reach older people. For people living in an ambulatory supervised flat-sharing, the costs of physical training services were covered by the German care insurance. One barrier was the training capacity of WOT, which was almost exhausted and currently, there is no possibility to expand the training area.

## Lessons learned

1  **A programme may not be efficient by itself but can still demonstrate efficiency in a system and long-term effects.**

2  **In order to expand the programme not only scaling-up but also scaling-out strategies need to be considered.**

# Intervention

*Objective: To conduct ward rounds with relatives present through video (VC), and to make this a feature of daily practice for health care staff.*

**Implementation actions**
During the implementation process, the staff asked the patients if they wanted their relative to participate in the ward round using VC. Each morning over period of three weeks, a multidisciplinary team involved all relevant stakeholders and discussed the changes, proposed ideas for facing the changes, and debated how to integrate them in daily routines. To facilitate and receive expert advice as well as to keep the momentum of the implementation process, two innovation consultants and two research assistants supported the initial implementation. They provided individual training to the staff, and offered practical advice regarding the use of the technology for the rounds.

**Results**
During the implementation phase, the patients and relatives were successfully offered the VC ward rounds. The research assistants were present for five weeks, during which time they engaged all the team members and patients or relatives. Based on interviews with focus groups and participant observations, the multidisciplinary team were able to implement the changes, and found it important to listen to the staff when implementing changes into daily routines.

**Barriers/Enablers**
One barrier was that the healthcare professionals needed to be present at a specific time for the VC. Furthermore, when the consultants ended the structured support, the implementation slowed down. The enablers were the positive feedback and engagement from patients and relatives who perceived the initiative to be a success. The patients felt more empowered and the relatives felt that they could support their relative even though they were not physically present.

## Lessons learned

**1** **Structured implementation is key even for well-known technology.**

**2** **The flexibility of the PDSA methodology enabled efficient change management.**

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**Scaling**
600 **>** 800

## Video Consultation for Relatives

### Odense University Hospital, Region of Southern Denmark

**Target group** Citizens with hematologic diseases and their relatives

Video Consultations have been implemented in several areas in the Region of Southern Denmark and this type of service is crucial to health care delivery and communication in the region for citizens, relatives and care professionals. Therefore, scaling is considered a necessary requirement as video consultations have been proven to be a good solution in many different clinical areas. This service has scaled from 8,000 to 20,000 patients.
In ACT@Scale, RSD has focused on scaling video consultations in the region with a specific focus on relatives of haematology patients at Odense University Hospital (OUH) to ensure

that the relatives can attend consultations even if they are not able to attend in person.
In the scaling process, RSD focused on empowering patients and their relatives using video consulted ward rounds. Through increased information and support, the relatives felt included in the patient's course of treatment. Another focus area was stakeholder and change management to make sure that the department is ready for the implementation.

**Scaling**
241 **>** 388

## Telemonitoring services CHF

### Osakidetza, Basque Healthcare services
### The Basque Country

**Target group** Congestive Heart Failure patients

The aim of the telehealth service for patients living with congestive heart failure (CHF) is to support and improve quality of life and health outcomes through remote clinical monitoring and enhanced self-management. It provides patients with a central role in the management of congestive heart failure, promoting compliance with treatment, and assists professionals detection of early signs of deterioration. The Organisational Model includes patients, Hospital, Primary Care and an eHealth Center with well-defined roles and decision making rules amongst cardiologist, specialist nurse, family doctors, primary care nurses, and the e-Health center.

By making it possible for healthcare professionals to monitor patients with congestive heart failure in their own home, the Basque based programme focused especially on empowering the citizens. Additionally, the programme focused on service selection and stakeholder and change management. This ensured that the healthcare professionals received thorough training and that the implementation of the technology went as smoothly as possible.

## Intervention

*Objective: **To provide personalised remote care to CHF patients to enhance home care, improve quality of life, patient empowerment, and avoid unplanned hospital re-admissions and visits to the A&E department***

**Implementation actions**
An important part of the implementation was the provision of the necessary resources (technological tools, clinical guidelines, training) and create agreed and general access to personalised care plans (including patient and carer viewpoints) by all professionals. A team of healthcare professionals, along with IT technicians, collaborated to make health parameters and agreed plans which were accessible from the EHR. The implementation was delayed due to a change of the ICT Integrated management Platform used to monitor the patients remotely.

**Results**
388 patients have been monitored by telemonitoring since 2014. Telemonitoring has been included in the CHF pathway together with standard clinical care that involves primary and hospital care healthcare professionals, and the eHealth Center. The ICT Management System Platform functionalities have been enhanced, which results in the care plan being constantly updated according to patient´s needs. Patients' satisfaction and quality of life has improved. Now that the system is up and running, the implementation is well accepted.

**Barriers/Enablers**
Barriers included the complexity of the system and lack of user-friendliness of the previous ICT platform. The development and implementation of the new version took more time than initially planned. Enablers included the previous pilot results showing evidence of clinical and satisfaction gains with the telemonitoring programme.

## Lessons learned

**1**  Telemonitoring should be integrated in day to day care and pathways.

**2**  Devices and ICT platforms must be integrated with the electronic health record and must be user friendly.

**3**  Time frame for deploying technology must not be underestimated.

**4**  Confidence in the implementation is dependent on evidence.

**5**  The collaborative methodology highlighted the necessity of a structured way to proceed in the implementation process.

**Scaling**
200 > 300
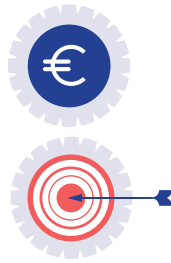
### Promoting Healthy Lifestyles: Physical Activity
**Hospital Clinic - AISBE, Catalonia**

**Target group** People in need of physical activity promotion

The main objective was to promote physical activity (PA) in the healthcare district of Barcelona-Esquerra (AISBE, 520,000 inhabitants), in the city of Barcelona. The programme seeks to show that tailored self-management services with remote professional support can induce behavioural changes sustained over time leading to healthier lifestyles.

The activity has focused on deployment of a Prehabilitation service for high risk candidates for major surgical procedures. This is a preventive intervention carried out 4 weeks preoperatively aiming at reducing complications and enhancing postoperative recovery. It combines: i) Motivational interviewing; ii) High-intensity exercise training; iii) Promotion of physical activity; iv) Nutritional supplementation; v) Psychological support. The physical activity service for multi-morbid patients based on telehealth, was scaled-up during the initiative by focusing on service selection and citizen empowerment. This was designed for patients to receive the correct care and be incentivised to do physical activities. In this way the programme contributed to a sustainable healthcare sector and a future sustainable business model.

## Intervention

*Objective: Deployment of the prehabilitation service at Hospital Clinic of Barcelona (HCB)and scalability at regional level.*

### Implementation actions
Prehabilitation has been deployed as a mainstream service at HCB. The Prehabilitation Unit was created in 2016 with a multidisciplinary team of 15 health professionals. HCB generates a potential demand of 1,300 patients per year, but the current capacity of the unit is slightly less than 300 patients per year. Three workshops were undertaken during Fall 2017 to identify barriers/facilitators for scaling-up the service at regional level, as well as to explore transferability of lessons learnt in Prehabilitation into Rehabilitation of clinically stabile chronic patients.

### Results
The service showed a significant reduction of perioperative complications, and a reduction of 30-day hospital readmissions. Prehabilitation-induced enhancement of exercise capacity and daily physical activity remained statistically significant at the end of the 3rd and 6th months during the postoperative follow-up period. The mean cost of the programme was €389 per patient and did not increase the total costs of the surgical process. Effectiveness and health value generation of the service was demonstrated during the 2016-2018 period. There is a need for evolving towards a modular perioperative care programme encompassing a broader health risk spectrum of patients.

### Barriers/Enablers
While self-sustainability of the Prehabilitation service at HCB has been demonstrated, identification of appropriate business models and reimbursement incentives constituted the main constraint for large-scale deployment of rehabilitation services for chronic patients.

## Lessons learned

**1** Cost-savings generated by Prehabilitation should cover the operational costs of the service. Investments to launch the service, as well as reimbursement incentives, could be covered by innovative public-private procurement models.

**2** Creation of a capillary network of healthcare/wellness centers to enhance accessibility and use of mobile apps fostering patient empowerment for self-management, as well as remote monitoring, are key elements to foster scalability.

## Intervention

*Objective: To perform a cost-effectiveness study supporting recommendations regarding the business model for further scaling-up and implementation of the programme.*

### Implementation actions
Implementation actions focused mainly on recruiting a larger portion of the patient population into the telemonitoring programme. Following inclusion, The system regularly checks patient vital signs (blood pressure, pulse, weight) and sends the data to the hospital via a secure internet connection. The nurse practitioner evaluates the measurements daily using a dedicated clinical user interface and can perform actions based on the results collected. Also, research fellows and assistants were appointed to support collection of historical data on health outcomes and costs to support economic evaluation and development of innovative business models.

### Results
In the implementation phase, an increase in the number of patients recruited into the programme was achieved.
The scaling-up occurred predominantly through organic growth with good clinical leadership and was supported by the activities to provide an economic evaluation of the service. The results are based on historic data and demonstrated that telemonitoring can substantially reduce care consumption and reduce the workload of care professionals.

### Barriers/ Enablers
Key elements for successful implementation are full integration into the care pathway and extended responsibilities for nurse specialists to support some of the task normally performed by the cardiologist. Barriers include sufficient capacity and resources to collect data to enable continuous economic evaluation and business model development.

**Scaling**
100 > 230

## Effective Cardio
### Treant Zorggroep, Scheper Hospital, Northern Netherlands

**Target group** Heart failure patients

The Effective Cardio programme run by the Scheper Hospital in Emmen, the Netherlands, currently treats around 230 patients a year with the use of telemonitoring. Its activities are targeted at patients with congestive heart failure (CHF). Telemonitoring is used to assist in the management of this chronic disease of patients at home. In the Effective Cardio programme the hospital uses IT to assist in the management of the long-term medical condition of a patient at home. This allows monitoring of a large group of CHF-patients in a fast and efficient way. In this case a nursing practitioner with extended

medical responsibilities were in charge of running the programme.
In the scaling process this programme focused on the drivers sustainability and business models and stakeholder management as improvement approaches. A cost-effectiveness study was aimed to support the body of evidence to provide convincing evidence to all stakeholders to encourage adoption of this new way of working. In also provided detailed insight into changes in costs and revenue streams after implementation that serves as a precursor for the development of alternative business models.

## Lessons learned

**1**  **Continuous monitoring of cost data and care data must be in place to support economic evaluation and business model development. This requires sufficient capacity and resources.**

**2**  **Successful implementation is supported by appointing a local champion leading the change and assigning extended responsibilities to nurse practitioners to support care pathway redesign.**

# Intervention

*Objective: **To expand the home hospitalisation and early discharge service (HH/ED) at Hospital Clinic of Barcelona (HCB) to the entire health district.***

## Implementation actions

The programme workforce was increased considerably to cover the expansion from the initial 12 beds per day (2016), 400 patients per year, to the current 50 beds per day, 1,200 patients per year (2018)(73% full substitution of in-patient care). Significant management adaptations and staff training activities were implemented. Transitional care strategies and care coordination between specialised and community-based services were refined.

## Results

Health outcomes showed the effectiveness of the service. Systematic assessments of patients and relatives experience of care were found to be highly satisfactory (95-100%). High staff engagement was documented. Financial sustainability of the service, both at provider and at health system levels, was demonstrated. Enhanced clinical predictive modelling and innovation in assessment methodologies have been implemented.

## Barriers/Enablers

The high level of acceptance of the service by patients/relatives, as well as staff training activities, was a key facilitator of changes required during the period. Privacy-related regulatory constraints were a barrier for comprehensive data management required for evaluation and clinical predictive modelling purposes.

**Scaling**
400 > 1,200

## Support for Complex Case Management
### Hospital Clinic – AISBE, Catalonia

**Target group** Complex patients that require linking tertiary care with the community

The Complex Case Management programme addressed the deployment of home hospitalisation as part of an integrated care service in the health district of Barcelona-Esquerra (AISBE – 520,000 inhabitants), in the city of Barcelona (ES). It provides acute, home-based, short-term complex interventions aiming at substituting conventional hospitalisation fully or partially. The programme is responsible for transitional care strategies, within a period of 30-days after hospital discharge, and fosters care coordination between specialised and community-based services. The Complex Case Management programme is based on the hypothesis that appropriate transfer of individuals with selected care complexities from specialised to community-based care, within an integrated care scenario, can increase health value both at provider and at health system levels. The scaling process of the implementation of supporting telehealth services in complex case management focused on citizen empowerment and stakeholder and change management. The programme also focused on preparing the departments to use the telehealth services and on the patients receiving healthcare in their homes, in the hospital and in the community wherever they were staying This was also done with a clear focus on making the solution a sustainable one that could be used as a business model in other regions.

ACT @ Scale

Handbook

## Lessons learned

**1** **Structured and well-planned management change is needed.**

**2** **Systematic assessment of patient experience contributes to service design.**

**3** **Fully integrated technological support of the service is a key facilitator.**

**Scaling**
17,000 >
19,500

## Asthma/COPD Telehealth Service
### University Medical Center Groningen, Northern Netherlands

**Target group** Patients suffering from asthma and/or COPD

The telehealth management support service assists General Practitioners (GPs) by examining patients and providing detailed advice to pulmonologists. The aim is to provide an accurate and easily accessible service for GPs and patients, including also rural areas. Every patient suspected of having asthma, Chronic Obstructive Pulmonary Disease (COPD), Asthma and COPD Overlap Syndrome (ACOS), or who show pulmonary symptoms of unknown origin is eligible for inclusion. A web based Electronic Diagnostic Support (EDS) system supports the processing of data, communication between care providers, and optimise the management of asthma and COPD.

In ACT@Scale, the focus for the programme was to scale out the service to other regions and to support further development of sustainable business models. In the programme, the clinical effects of the telehealth service were evaluated but the data on costs and revenues were not routinely collected. Therefore, the important element of developing a business case for scaling-up, needed to be addressed.

## Intervention

*Objective: To scale out the programme to other regions and to evaluate care consumption.*

**Implementation actions**
GPs in new regions were encouraged to refer patients with respiratory problems for single or yearly follow-up assessment. Local pulmonologists assessed the data online and provided diagnosis and treatment advice to the GP. Patients were assessed in the laboratory according to a strict protocol including questionnaires and spirometry.
An evaluation of the current financial model was discussed, including barriers in terms of data availability and how to overcome these. The engagement of professionals in new regions and the development of innovative business models was supported by research assistants and innovation consultants.

**Results**
The project team successfully obtained primary care organisations participation and agreed which data to be collected. Professionals in new regions were successfully engaged in providing care. The research assistants and consultants facilitated regional meeting with stakeholders and the development of the innovative business model. Data collection underlying the analyses is still underway and could not be finished within the timeframe of the project.

**Barriers/ Enablers**
The one barrier encountered was that sufficient local staff expertise and capacity should be available in the programme to support local data collection, as this can lead to substantial delays. Continuity in staff available to support local analyses should be in place, as the researchers involved with the clinical evaluation of the telehealth service, were employed in other departments. The enablers were strong ownership to support adoption of innovations in new regions.

## Lessons learned

**1** Data on costs and revenues are crucial for developing a business case for upscaling, collecting, and analysing and should therefore be a daily routine.

**2** Continued evaluation of programme goals should be supported by securing long-term staff support.

**3** Scaling-up programmes require other skills and expertise of team members than the clinical skills for running the programme.

**Scaling**
9,071 **>**
9,685



## Healthcare Support Programmes for Nursing Homes
### Mutuam, Catalonia

**Target group** Elderly living in institutionalised homes

Teams of care homes (EAR) have developed a Healthcare Support programme for Nursing Homes launched in 2009 in Barcelona. It comprises medical professionals and those with healthcare expertise in serving older people in nursing homes, with an understanding that these are the older peoples' homes. The aim of the programme is to provide comprehensive care, focusing on the individual and continuously improve this care. It seeks to adapt health and social resources and improve pharmaceutical services. EAR teams work with the nursing homes' healthcare professionals, with

primary healthcare professionals, and other healthcare resources, to ensure continuity of healthcare to this population.
In providing comprehensive care for the elderly living in nursing homes, this programme focused on empowering the elder citizens. This is achieved through technological advancements that make it easier for health providers to attend to the citizen's needs in terms of pharmaceutical services and personal care.

## Intervention

*Objective: **To improve the Advanced Care Planning for users and families.***

**Implementation actions**
An intervention to improve the communication between healthcare professionals, patients and users, was implemented Focus groups and specific training were carried out to detect the health professional needs. Planning transitions have been defined and provided to healthcare professionals.
In addition, to support the face-to-face training, a web platform has been created. To improve the workforce development continual training processes took place and scientific meetings were held. In order to improve the relationship between health professionals, residents and families, a multidimensional geriatric interview took place in the first meeting. This interview contributed to improving the quality of the Advanced Care Planning respecting the decision-making of the resident and their families.

**Results**
Communicational and informational meetings between health care professionals and patients were adopted integrated into the daily routine. All stakeholders received the same information and the value of shared decision-making was respected.
The time allocated and the quality of the meetings between the resident's family and health professionals to deal with the issue was improved. Further meetings were scheduled, if necessary, in order to reach the agreed goal.

**Barriers/Enablers**
Barriers included: Too much information for the resident to assimilate, taboos related to discussions regarding the end of life, high level of dependency and cognitive impairment of residents. Enablers to highlight: Respect of health care professionals to the decisions made by residents and family, and implementation and agreement of Advanced Care Document.

## Lessons learned

**1** In a population that is not able to make decisions, it is important to investigate the laws regarding data collection and data ownership in relation to the new GDPR rules.

**2** The implementation of the Advanced Care Planning Transition in Nursing homes residents requires consideration on preferences and respecting the decision making at the end-of-life, involving citizens, families and health care professionals.

1 2 3 4

## Intervention

*Objective: **To improve the self-manage-ment and awareness of self-care in chronic disease in patients and caregivers.***

### Implementation actions

An online tool (eConsulta) to ensure communication between patients/care-givers and Primary Health Care professionals was been provided.

A mobile app to raise awareness about chronic conditions was implemented into care. A health training information repository was developed and deployed to improve the self-management in patients and caregivers. To enhance the communication and care coordination between BSA's health care professionals at the Emergency Department and Nursing Homes a specific communication process was designed based on inter-operability between the two Electronic Medical Records.
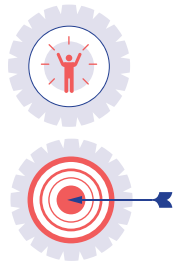
Brochures were prepared to explain to patients how to use eConsulta and administration desk staff were trained to teach patients how to access and use it. The contents and methods of the health-related information repository, Blog and APP have been readjusted according to the recommendations of different working groups to bring clarity to how information was displayed.

A multidisciplinary team was created in Nursing Homes (EAR team). In addition, some new circuits of internal commu-nication between professionals was incorporated, especially within professio-nals in Nursing Homes and Emergency Care Practitioners.

### Barriers/Enablers

Barriers included: Citizens difficulties in understanding some content because of the use of technical vocabulary. Enablers included: Participants in Health Councils were motivated and engaged, and proactive meetings were instituted. Assigning roles to the different stake-holders ensured engagement, mutual respect, and appreciation of different opinions and perspectives.

### Results

A pilot implementation was carried out and during May 2018,following which the intervention was scaled-up to all the other six Primary Care Centres

## Lessons learned

**1**  **The importance of bringing together new professionals, existing front-line clinical staff and citizens in co-production and implementation processes of the programme.**

**2**  **Stakeholder resistance can be overcome by a variety of methods and in particular providing an online tool to ensure communication be-tween patients, care professionals is valuable.**

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**Scaling**
648 **>** 1.854

## The Chronic Patient Programme
### Badalona Serveis Assistencials, Catalonia

**Target group** Complex chronic and frail patients

Badalona Serveis Assistencials (BSA) is an integrated private care organisation, entirely funded by public funds. BSA manages a hospital, an Integrated Homecare Service, an Intermediate Care Centre "El Carme", seven Primary Care Centres, six Community Mental Health Centres and a Centre for Sexual and Reproductive Health, providing care to a population of 535,667 inhabitants. Social services provision began in 2000 with full integration of health and social services in 2003.

The programme focuses on identifying, preventing and treating advanced acute episodes to avoid further hospitalisa-tions; designing and implementing individual integrated care plans based on the evaluation of particular need

throughout the use of the geriatric evaluation; promote independent living for patients while maintaining good quality of life; and coordinate the work of the interdisciplinary teams doing the interventions.

To prevent patients returning to the hospital for treatment the BSA fo-cused on citizen empowerment. This was done by preventing and treating advanced acute episodes and making it possible for the patients to live an independent life at home with a high quality of life. Focusing on sustainability and developing a sustainable business model for the publicly funded BSA, BSA attempted to minimise the costs associated with patients returning to hospital for care.

## Intervention

*Objective: To improve quality of care transitions led by Transitional Coaches shared with patients and caregivers and based on medication management, promoting healthy lifestyle and improving the care coordination after discharge.*

### Implementation actions
The programme implementation focused on 1) medication, ensuring a correct understanding of treatment and adherence. Some adapted guides and informational brochures were created and health education sessions were developed with patients and caregivers (e.g. inhaled therapy and insulin therapy), 2) Some guides were adapted to address health habits and tools to promote healthy lifestyles were provided, 3) Transitional care levels, the discharge notification document (PREALT) to the Primary Health Care team were implemented. PREALT issues the medical discharge, describes the health state and provides the contact with members of the team.

### Results
The transitional PREALT document was intergrated into the daily routine of the programme. The implementation of the PREALT and the Transitional Coaches improved the coordination between the transitional care levels, especially with the Primary Care. To empower patients and caregivers, a focus group was initiated and some adapted guides and tools were created This addressed issues related to a healthy geriatric diet, promotion of physical activity and attempting to prevent health conditions such as Heart and Breathing Failure and Diabetes.

### Barriers/Enablers
Although the coordination between the health care levels improved, in some instances the coordination was difficult. Complexity of the health conditions, especially for those with cognitive impairments is high. Geriatric training enabled to empower and to detect specific needs in frail older adults.

**Scaling** 670 > 700

## Integrated Care for Subacute and Frail Older Adults
**Parc Sanitari Pere Virgili (PSPV), Catalonia**

**Target group** Subacute and frail older adults

Parc Sanitari Pere Virgili (PSPV) is the largest specialised geriatric post- and sub-acute resource in Catalonia. It is the reference facility in Catalonia for acute admission avoidance for those at risk of unnecessary hospitalisations and readmissions, such as older adults having exacerbations in their chronic diseases or experiencing minor events superimposed to complex conditions such as dementia. PSPV promotes the coordination between the different health care levels thorough integrated care pathways which allow direct admission from the Emergency Department

of two major University Hospitals in Barcelona (Vall d'Hebrón and Clinic University hospitals), and from specific primary care areas.
PSPV has focused on service selection in their scaling process. By enhancing the precision in providing health care to frail older adults, this programme has focused on benefiting both health care professionals and the individual citizen. This programme has had a strong focus on empowering the individual citizen in the implementation process.

## Lessons learned

**1** Transitional Coaches in frail older adults improved the situation and discharge at the patient's home, giving a rapid intermediate care admission and a Comprehensive Geriatric Assessment bed (<24 h), and finally a direct admission from the Emergency Department.

**2** An Inter-disciplinary geriatric assessment and approach, for prevention and treatment of crises should be continuously provided to patients and caregivers.

**Scaling**
15,894 **>**
22,142
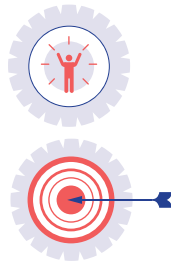
## My Diabetes My Way
### University of Dundee, Scotland

**Target group** Citizens with diabetes

My Diabetes My Way (MDMW) is an online self-management platform for people with diabetes that has been running in NHS Scotland since 2008. MDMW allows citizens with diabetes to access their medical records online to allow them to manage their diabetes more effectively.
Through ACT@Scale, MDMW has focused on upscaling the awareness of the records access system and the number of active users on the system. In the scaling process we focused on citizen, health care professional and clinical network outreach. Increased focus on citizens' empowerment, included writing out to citizens directly to make

them aware of the service, awareness seminars and training sessions for patients and professionals and by producing quarterly reports to allow health boards to track progress.

## Intervention

*Objective: To raise awareness of the MDMW service and increase the number of active patients.*

**Implementation actions**
MDMW engaged with GP practices to offer a "free" mailout to any of their patients who had not registered with the service. The practice reviewed the list of potential recipients and removed those deemed unsuitable, before MDMW sent a letter on the practice headed paper. MDMW identified patients that had completed the onboarding process but had never logged on to access their records. We contacted them to ask if they were having difficulty logging in. MDMW now sends quarterly uptake reports to all 14 health board regions in Scotland to allow them to monitor progress and to promote awareness activities. Promotional materials (leaflets, business cards, etc) are now available in bulk for regions to use to raise awareness of the MDMW service.

**Results**
There has been a significant increase in the number of new registrations and active users of the MDMW system. We have reached out to thousands of patients directly to inform them of the service which has been one of the main drivers behind our increase of active users.

**Barriers/Enablers**
Barriers: Traditionally, we have had high levels of support and signposting from secondary care but support from primary care has been variable.
Enablers: Providing quarterly aggregate stats containing uptake figures to all health boards encouraged healthy competition. Local Managed Clinical Networks provided a credible route to contact practices and encourage engagement. Direct patient contact is effective in encouraging registration and active service use.

## Lessons learned

**1** Providing evidence of service benefits encourages the health care team to signpost their patients to MDMW. Health providers across all specialties are very supportive of approaches that enhance self-management.

**2** Enhanced support has been achieved by providing quarterly aggregate statistics to promote healthy competition between regions.

**3** Direct patient contact is effective in encouraging registration and active service use.

## Intervention

*Objective: **To offer integrated care to patients with complex health and social care needs in the Basque Country.***

### Implementation actions
The multidisciplinary team defined and established a common pathway to follow and help multimorbid patients in their journey through the health care system. The actors, activities and level of coordination in each care level were defined. A procedure for periodical review the pathway as well its adaptation to patients changing needs was agreed. Online training sessions for professionals were provided to explain the theory supporting population stratification, its methodology and application in Osakidetza.

### Results
The patient empowerment level was assessed and specific training intervention was designed. The programme was established on a Programme Management Platform available to all Integrated Care Organisations. The team structured and launched training programmes for health care professionals and generated scorecards to evaluate the whole process. They scaled-up and deployed the intervention in the whole Basque Public Health care Provider (Osakidetza) with common objectives, structure, decision rules and evaluation framework.

### Barriers/Enablers
Barriers include overcoming different local practice organisations, resource allocation and decision rules to agree on a common framework. Enablers include alignment with Osakidetza strategic objectives and management at different levels and ensuring health care professionals were actively involved in problem analysis and solving.

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**Scaling**
4,944 **>**
16,000

## Multimorbid Integration Programme
### Osakidetza, Basque Health Care services, The Basque Country

**Target group** Complex multimorbid patients

The programme aims to provide complex patients with several co-morbidities with coordinated multi-level and multidisciplinary care supported by distinct Information and Communication Technology (ICT) solutions in all Integrated Care Organisations of The Basque Country. This is designed to enable multimorbid patients with complex health and social care needs at high risk of hospital or care home admission, to lead fulfilled lives and improved clinical outcomes. This is achieved through ICT enabled health and social care service coordination, monitoring, care involvement, and patient self-management. ICT-based platforms have the potential to improve treatment compliance; enhance self-management, and increase patient and health care professionals understanding of the issues in multimorbidity. Throughout the scaling process, the Multimorbid programme focused on stakeholder and change management as well as on empowering the patients. In order for the programme to be a success, it was critical to ensure that patients and health care professionals were well integrated in the implementation process. A further focus was service selection, to ensure that the implementation of the technology went very well for the health care professionals.

## Lessons learned

**1** **Sharing the diagnosis and agreeing on common aims assists the scaling-up of an intervention.**

**2** **Having professionals and managers sharing the collaborative meetings facilitates and guides the decision-making process.**

**3** **It is important to ensure that an established infrastructure, including ICT support is available prior to the intervention.**

**4** **Scaling-up and deploying the intervention in the whole System requires alignment with the overall strategic objectives of the organisation.**

## Intervention

*Objective: **To scale out programme activities to other regions and perform a database analysis of long-term costs outcomes leading to business model recommendations.***

### Implementation actions
New regions were approached to adopt the Embrace programme. Following inclusion of GP offices, annual screening and stratification was performed, and older adults aged 75 years+ were assigned to one of three risk profiles (robust, frail, or complex care needs) with corresponding care and support intensity levels. Next, a multidisciplinary elderly care team offered appropriate personalised, pro-active, and preventive care and support. The analysis of long-term cost outcomes was completed and the results were used as input for the evaluation of a contract in Groningen and design of a programme in Drenthe.

### Results
Scaling-up of the programme was successful and led to a substantial increase in recruitment. Results were supported by a positive business case, and a strong local champion. A research fellow and assistant supported the analyses of the cost-effectiveness study. The programme did not demonstrate cost-effectiveness and the contract with the dominant health care insurer in Groningen was not continued and lead to a scaling down.In Drenthe, an integrated care programme for older adults has been developed based on Embrace adapted to the local context.

### Barriers/Enablers
Sustainable funding of the Embrace programme is technically possible by combining the payments and budgets from different reimbursement sources and organisational budgets. However, the fragmentation end up with different stakeholders and makes it a challenge to ensure sustainable funding. Not all reimbursement sources were allowed by legislation to finance preventive activities. Scaling-up requires a bottom-up approach with long term committment from all stakeholders.

**Scaling**
2,900 > 4,287

## Embrace
### University Medical Center Groningen, Northern Netherlands

**Target group** Older adults (75+)

The Embrace programme aims to improve the well-being of community dwelling older adults above the age of 75 in the region of Northern Netherlands (Provinces of Groningen and Drenthe) This region had approximately 1.7 million inhabitants with an increasing number of people above 75 years old. Embrace is a population-based integrated care model based on the Chronic Care Model and the Kaiser Permanente Triangle. The essence of Embrace is the integration of the various policies, approaches, and resources present in the care for older adults. Embrace connects the health system with community services, and reflects the four key elements of the Chronic Care Model (CCM): self-management support, delivery system design, decision support, and clinical information systems.

In the scaling process this programme focused on the drivers sustainability and business models and stakeholder management as improvement approaches. Development of alternative business models are considered necessary to support sustainable implementation and scaling out of the programme to other regions.

## Lessons learned

**1** To qualify for structural funding, payers need clear information for financial decision-making.

**2** Monitoring and evaluation of long term outcomes, including economic outcomes, provide a strong base for the (re)design of business models for integrated care.

**3** Integrated care programmes with fragmented budgets and reimbursement sources require a bottom-up scaling strategy to adapt to the local context of regions.

# 7 Closing Remarks

After three years with ACT@Scale and the previous three years with ACT, it is incredible how integrated care has advanced in Europe.

When I look back, I remember that at the beginning we could only share our struggles. In all the places in Europe, we were advancing at a very slow pace, at least much slower than what we were dreaming of in the last decade. We started as a group of innovators, regional managers, and researchers with the idea that the core challenge was not technology but the complexity of process redesign in health care: how to transform the way we deliver health and care to more demanding populations, without putting in danger the quality of the regional systems?

...from an idea, it developed into a **structured methodology for assessment and improvement**,

...from an intuition into a **common language** to talk to each other about our differences and similarities,

...from a group of ambassadors into a **shared vision** that is not only accepted but embraced globally, and supported top-down too,

...from emerging services into **routine care for more than 100.000 patients all over Europe**,

...from how to build or improve care models to how to **sustain** them in the long term.

There is still a long way to go, but I can say now that I am very proud of the generosity of the team and the work performed. Putting together the most advanced reference sites, with the leading industry and academic partners, has proven to be a unique way to progress in digital health in Europe and has paved the way for other regions and health care systems to follow.

And remember, you may start small, but always ACT AT SCALE!

*Dr. Cristina Bescos*
*European Program Manager – ACT@Scale Coordinator*
*Philips Healthcare – Population Health Management*

ACT @ Scale

# Programmes

My Diabetes Footcare

My Diabetes My Way

Video Consultation for Relatives

Asthma / COPD

Effective Cardio

Embrace

World of Training

My Health

Multimorbid Integration

CHF Telemonitoring

Nursing Homes

Chronic Care

Frail Older Adults

Complex Case Management

Physical Activity

**Scotland**

**Southern Denmark**

**Northern Netherlands**

**Southern Germany**

**Basque Country**

**Catalonia**

## Partners

**PHILIPS**

**kron+kgune**
research centre on chronicity

Agència d'Informació,
Avaluació i
Qualitat en Salut

**OptiMedis** AG

gesundes
**Kinzigtal**

**ID BAPS**
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D'Investigacions
Biomèdiques
August Pi i Sunyer

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EST 1894

Region Syddanmark

**Osakidetza**

**umcg**

UNIVERSITY OF **Hull**

**HSC** Public Health
Agency

**University**
**of Dundee**

**Universitätsklinikum**
Würzburg
U<

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