



D8.1 Improvement Programme

WP 8 Improvement Plans



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List of Acronyms

LCL = Lower Control Limit

PREMS = Patient Reported Experience Measures

PROMS = Patient Reported Outcome Measures

PSDA = Plan Do Study Act

UCL = Upper Control Limit

WP = Work Package

1. Executive Summary

1.1. Overview

In this document, the output and outcomes of SCIROCCO Exchange Improvement Programme is presented with the objective to support 9 European integrated care countries and regions in their efforts to implement and scale up integrated care initiatives. The work conducted in this Programme follows the outcomes of previous SCIROCCO Exchange Work Packages including Maturity Assessment (WP5), Capacity Building (WP6), and Knowledge Transfer (WP7). This includes the framework, tools and method that were used to support the development of improvement programmes for the participating SCIROCCO Exchange regions and countries.

Working with the each of the nine regional implementation sites leads, an improvement goal was established that is aligned with local strategic priorities and informed by outcomes of the maturity assessments, knowledge transfer, and capacity building activities of SCIROCCO Exchange. This work was complemented with existing evidence and documentations of best practices, tools, frameworks, methods, and guidelines in improvement planning relevant to integrated care. To conceptualise the improvement roadmap, logic models were co-developed with each region and country to clearly identify the resources, activities, and outcomes to achieve. These co-developed logic models are meant to guide the implementation and evaluation of integrated care solutions tailored to the local context. Further on, the emphasis was put on engagement with relevant stakeholders in each country and region in order to refine the logic model, ensuring its feasibility, accuracy, and usefulness in informing implementation.

Throughout the activities of this Improvement Programme, regional and national partners remained actively engaged and found the process to be of value in improving regional integrated care work. By building regional capacity in using evidence-based methods for improvement planning, it is envisaged that the improvement work will be sustained beyond the project lifetime.

1.2. Objectives and intended audience

This report aims to highlight to a broader audience the work conducted in supporting the improvement of regional and national integrated care initiatives in nine European regions and countries participating in SCIROCCO Exchange project. The focus of this report is on logic models as a valuable tool to support improvements implementation by identifying the underlying causality, expected effect and feasibility of improvement plans. By including the specific logic models of each integrated care regions and countries spanning a variety of improvement goals, examples of case study for future work were provided. As a result, this report presents as an asset in improvement theory and tools for both regional and national partners and general public. Further, it provides the references and sources to access the necessary support and assistance to design and adopt integrated care solutions.

1.3. Methods

To set the stage for logic model construction and better understand local health system environments, contextual information of regional integrated care initiatives was collected and summarised, including the outputs from previous project' work packages. Bilateral meetings were set with each regional leads to i) build relationships; ii) construct logic model; iii) stakeholder engagement. For the purposes of this project, a combined method of concepts elicitation strategy and document reviews to co-construct logic models with stakeholders were used. To ensure the robustness of the logic model constructed, the regions were supported by conducting gap analysis and iteratively refine the logic model. The logic model was further validated through stakeholder engagement. A combined inductive and deductive approach was used when analysing contents of the logic model.

1.4. Most important findings and conclusions.

1. Logic models were effective to assist regional and national stakeholders to develop a shared vision of integrated care developments and strategies for their implementation. Additionally, regional and national partners found the process to have provided them with a better shared understanding of the underlying causal chain that guide the activities to the desired outcomes. Furthermore, partners found the output to be an engaging communication tool when deliberating on project direction with stakeholders.
2. The flexibility and adaptability of logic models demonstrate their value as a tool to guide the improvement roadmap for integrated care systems at various stages of implementation, maturity level, settings, and focus.
3. The activities planned for improving integrated care presented many commonalities across regions, indicating potential benefits for continuous coordination and knowledge exchange.
4. The outputs of SCIRICCO Exchange Improvement Programme are the key asset to kickstart the improvement process towards better integrated healthcare. Furthermore, they provide the precedent on how to conceptualise, coordinate and validate improvement plans continuously and at any level.
5. By working alongside regional and national partners, the value of using theoretically sound models for planning improvements at different stages of implementation were demonstrated. The built capacities support sustaining this practice beyond the duration of the project.

1.5. Main recommendations.

Integrated care initiatives should consider the use of logic models to guide not only improvement work, but also to consider its use in planning, and implementation from the design phase. Working with external and internal stakeholders to continuously revise and refine logic models can bring more clarity and validate its internal usability, thus enhancing the value SCIROCCO Exchange regions should continue to sustain, and revise their improvement plans beyond the scope of this project, using the capacities acquired during the Improvement Programme.

2. Introduction

2.1. Project Aim

SCIROCCO Exchange aims to support health and social care authorities in adopting and scaling up integrated care. This project is a joint collaborative between 9 participating regions and countries in Europe (pilot sites), where the approach is conceptualised and piloted. Pilot sites are at various stages of integrated care development regionally and nationally demonstrated by completed SCIROCCO Exchange maturity assessment. The maturity assessment specifies 12 dimensions that integrated care systems need to consider when scaling up of integrated care to ensure that implementation is responsive and adaptive to the local health and social care system.

Within the project, each participating region and country identified evidence-based, capacity-building assets contextualised to local needs (WP6) that is consolidated in an open-access web-based [Knowledge Management Hub](#) (WP4). Through the implementation of maturity assessment process (WP5), each region identified strengths and weaknesses in integrated care within their local context. Regions then engages in knowledge transfer activities (WP7) by exchanging best practices between regions of complementing strengths and weaknesses.

2.2. Objectives of Improvement Planning Work Package

The overall objective of this Work Package (WP) is to support regional and national partners in co-creating improvement plans to design, implement, and evaluate integrated care in their local context. This work package draws and builds on existing work from regional and national partners by analysing results from the maturity assessments, capacity building, and knowledge transfer activities to provide relevant recommendations for improving integrated care implementations locally. Implementation of WP activities concurrently increases the capacity and knowledge of regional partners in integrated care implementation.

Specific tasks in this work package include:

- a) Identify and review regional assets (repositories, good practices, tools, frameworks, and guidelines) for integrated care improvement in partner regions
- b) Review existing evidence, frameworks, and methods for improvement relevant to integrated care
- c) Analyse the outcomes of the maturity assessment, knowledge transfer, and capacity building activities in partner regions to identify goal of improvement
- d) Work with partner regions to co-develop logic models based on goal of improvement, and validate the logic model with stakeholders/

2.3. Purpose, objectives, and scope of this deliverable

This SCIROCCO Exchange Improvement Programme is based on the project Description of Work and grounded in prior work in previous WPs. This deliverable includes review of evidence-based improvement methods and an analysis of SCIROCCO Exchange regional work, the logic model implementation process, description of logic model, and reflection. The

purpose of this deliverable is to review and analyse the knowledge accumulated in the implementation of integrated care, including the strengths and challenges, and report on the work of each of the region and country in applying the logic model as a tool to implement improvements in regional integrated care. Outcome of analyses reported in this document will be used to further support regional improvement work. Further, a review of existing quality improvement tools and data strategy to inform next steps in improvement implementation are provided. The intended audience of this deliverable are project participants, stakeholders, and the broader public.

2.4. Conceptual model

Overall goal: To describe the framework, tools and methodologies that will support development of personalised Improvement Plans for integrated care, based upon the experience of 9 European regions and countries.

Target audience: Nine participating Scirocco Exchange regions

Underlying assumptions:

- Engaged regions that are responsive to improvement work
- Engaged stakeholders that provide inputs for improvement planning and support with their resources/capacities to implement improvement plan.
- Activities stipulated in the improvement plan are within partner capacities.
- Sufficient time to support regions in gaining a deep understanding of the system context and

Table 1. Overarching Logic Model for improvement planning work package

Inputs	Activities	Outputs	Partner-level outcome	Project-level outcome
1. SCIROCCO resources (Maturity assessment, knowledge exchange) 2. Bilateral relationship building 3. Quality improvement guidebook 4. Regional Stakeholders	<u>Needs Assessment</u> Analysis of regional results from previous work packages (Maturity Assessment, Capacity Building, Knowledge Transfer)	Regional summaries	Regions are aware of the underlying assumptions and the causal linkages that connects the activities to the outcomes	Regions are supported through the process of improving regional integrated care initiatives based on identified priorities and specified need
	Reviewed existing documents summarising improvement strategies Environmental scan of improvement capacity among regions	Improvement strategies identified Mapping of existing improvement methods and tools, policies and organisational improvement support per region	Regions recognise the importance of grounding implementation work in theory Regions are confident to independently review and iteratively refine logic model as initiative further develops	
	<u>Relationship-building</u>			

Conducted bi-lateral calls with nine regions	Conducted 3 calls/workshops (min) with each region Ad-hoc bilateral calls supported	Regional partners apply logic models to guide improvement implementation	
Supported regions in conducting stakeholder engagement	Continuous iterative feedback on logic models with nine regions	Region considers the use of logic model at outset for future projects	
<u>Capacity-building</u>			
Held bilateral calls to introduce logic model, walk through project logic	Bilateral calls held with each region		
Transfer knowledge on leading logic model workshops with stakeholders	Regions equipped with know-how to lead logic model		
	Workshops with each region conducted		
<u>Improvement support and analysis</u>			
Facilitate logic model workshop with each region	Logic models produced Stakeholder engagements conducted Workshops with each region conducted		
Analyse logic model results for improvement recommendations	Mapping and classification of planned improvement activities per region		

3. Regional and National Context

To set the groundwork to support each region and country in planning for improvement, all prior SCIROCCO Exchange work were reviewed and analysed within the region (detailed compilation of regional information can be found in Appendix 8.2) **Error! Reference source not found..** In collaboration with WP5, data on relevant social, economic, demographic context within each region was collected jointly in a partner profile document. Next, to best understand the political and institutional capacity for improvement work, further data were collected on national or regional policies in place that support improvement, national or regional organisations from each region that support improvement, and quality improvement methods currently utilised, if any. This information was summarised by each region, which can be found in the Appendix (8.2). Additionally, a high-level summary of prior SCIROCCO Exchange results by region was compiled, which informs subsequent improvement planning activities (Table 2).

Maturity assessment scores in Figure 11 were calculated by averaging the scores obtained for each dimension within each of the regions' self-assessment (Figure 11 in the Appendix 6.1). The resulting average score from the maturity assessment ranges from 0.75 in Slovakia to 3.5 in Basque Country in Spain and a median of 2.08 in Puglia, Italy. Years initiated (the number of years that have passed since the regional integrated care initiatives were established) was obtained from descriptions provided by regions and is also wide ranging - from 2 years in Werra-Meißner-Kreis in Germany to 17 years in Puglia, Italy. Several different strengths and weaknesses were identified by the regions and countries during the process of assessing the integrated care maturity using the [SCIROCCO Exchange tool](#) with stakeholder input. Improvement goals within the regions were informed by priorities identified and mainly fell on the broad themes of patient empowerment, process coordination, and capacity building.

Table 2. Analysis of regional summaries

Region (Country)	Maturity assessment	Years initiated	Knowledge Transfer Priorities -Strengths	Knowledge Transfer Priorities -Weaknesses	Improvement goal (s)
Basque (Spain)	3.5	11	Structure and Governance, Digital Infrastructure	Citizen Empowerment, Removal of Inhibitors	Citizen Empowerment
Flanders (Belgium)	1.16	7	Readiness to change	Population approach, Process coordination, Evaluation methods	Process Coordination
Lithuania	2.16	6	NA	Capacity building, Removal of inhibitors	Multimorbidity model
Poland	3.08	4	Digital infrastructure, Citizen empowerment	Digital infrastructure, Citizen empowerment	Citizen Empowerment
Puglia (Italy)	2.08	17	(disaggregated)	(disaggregated)	Funding
Scotland	2.33	5	Readiness to change Innovation management Citizen empowerment	Digital infrastructure Population management Citizen empowerment	Digital Infrastructure, Population Approach, Citizen Engagement
Slovakia	0.75	7	NA	Structure and governance, Population approach, Evaluation methods, Capacity-building, Breadth of ambition	Capacity Building
Slovenia	1.00	4	Digital infrastructure, Process coordination	Innovation Management	Long term care
Werra Meißner (Germany)	1.33	2	Citizen empowerment, Process coordination	Digital infrastructure, Population approach	Digital Infrastructure, Process Coordination

4. Logic Model as Improvement Tool

4.1. Logic model introduction

Logic model is an overview of a program's resources, planned or implemented activities that maps the causal pathways to achieving the intended results. It can provide a strategic road map and brings consensus among stakeholders on how to achieve conceived improvement goals in the long-term using available resources. By following a logical sequence, one can better understand how the individual components and activities may lead to the desired program goals. Benefits of logic models can be derived both from the development process and the end product (Porteous et al., n.d.). Working within a team to develop a logic model provides an opportunity for team members to revisit components of the program, including the underlying causal pathways and assumptions, and come to a shared understanding of what the scope of a program is, its reach, and what it intends to achieve. Further, a developed logic model can easily be used as a communication tool, demonstrated project logic to help identified successful components for replication, and a roadmap for program implementation and evaluation to examine congruence between planned and implemented activities.

4.2. Methods

For the purposes of this project, a combined method of concepts elicitation strategy and document reviews were used to co-construct logic models with stakeholders. The primary stakeholder included the regional and national partners involved in SCIROCCO Exchange consortium and secondary stakeholder group involved the local actors that the regions invited to provide feedback and validate the logic models on. A convenience sample of the regional partners that were part of the consortium were engaged as they were the most relevant partners to include given the knowledge of SCIROCCO Exchange and regional and national integrated care work. Using the engagement ladder (IAP2) framework (inform, consult, involve, collaborate, and co-lead), the construction of logic models was co-led with primary stakeholder group - the regional leads, positioning them as the final decision-maker of details and components of the logic models. This level of engagement was specifically chosen to encourage ownership from the regional and national partners of the logic models through the co-creation process. The secondary stakeholder group were chosen by regional partners who were involved on a "consult" basis where their feedback on the logic model was gathered to determine the feasibility most accurately.

Secondary stakeholders identified for this process were individuals involved and integral in the implementation of integrated care in the respective region. The focus was on relationship-building with regional and national partners with an objective to involve local stakeholders relevant to their integrated care implementation. The rationale was to engage regional partners at an early stage to cocreate logic models and thus ensuring its applicability, usability, validity, and feasibility. Stakeholder types that were encouraged to partners to invite included funders, evaluators, program users, program staff, leadership and financiers. To ensure that regional partners are well supported throughout the logic model development process, a short self-evaluation survey was developed to learn and iterate the agreed approach to workshop facilitation. In the survey, participants were asked

how well their expectations were met before and during the meeting, which aspects of the meeting went well, and where the improvement was needed.

The elicitation strategy draws on theoretical literature that assumes members of organisations that implement certain interventions understands the anticipated impact of such interventions through “cognitive maps” that can be elicited (Leeuw, 2003). And these cognitions influence the individuals’ behaviours and can further be used to understand the relationships between the actions and outcomes of organisations. With this in mind, an open-ended approach was applied to workshops with stakeholders when introducing each of the sections (inputs, outputs, outcomes) of the logic model. The elicitation method was chosen to construct a logic model so that the product would not have been influenced by a preconceived notion, with the knowledge that this might leave some gaps due to the open-ended probes during elicitation. To complement this method of open elicitation and ensure thoroughness of information capture, a review of documents inclusive of all prior work was also conducted within the current project including maturity assessment, knowledge transfer, and capacity building. Additionally, in collaboration with Work Package 5 (Maturity Assessment) a partner templates was designed to ensure necessary contextual information on regional integrated care system was collected. This wide range of data sources provided a diversity of perspectives and to triangulate the analyses where possible. While data sources may be limited by what was previously collected, it was aimed to balance information needs with consideration of the extra burden on regional partner’s time in data collection, which was highlighted as a priority during consortium calls.

The analytic approach to the logic model was based on grounded theory where activities were grouped into different type according to their nature. This method was chosen so as not to superimpose any pre-existing criteria to ensure that no bias is introduced. Secondly, the planned activities were specified according to the dimensions stated in SCIROCCO Exchange tool. Taken together, all analysis are synthesised into this report.

4.3. Description of process for developing Improvement plans

An improvement template aiming to identify regional and national improvement planning was created, reviewed, and refined with regional and national partners to serve as a baseline environmental scan for improvement planning. Through this template, regional and national partners identified existing, or lack thereof, national or regional policy for improvement, national or regional organisation responsible for improvement activities, and current quality improvement methods applied (Table 3 in the Appendix).

During the initial bi-lateral introductory call, an understanding of regional needs was established defined from prior SCIROCCO Exchange work, what a logic model is, how it fits with current organisational priorities, and a walk-through of overall process with regional and national partners (*Error! Reference source not found.*). One week prior to the first logic model working meeting, a preparatory document including a short explanation of logic model components and an example logic model was sent to the national and regional partners. Partners were encouraged to clearly identify an improvement goal in regard to the specific geographic scope, target population, and time horizon. Additionally, partners were encouraged to review internal program documents and reflect on programmatic components that could contribute to those stated goals. During the first logic model meeting, a 1 hour

working meeting was facilitated consisting of a core team from each regional and national partner to produce a high-level logic model based on the agreed upon improvement goal. At the end of each bi-lateral meeting, participants were asked to respond to a short evaluation survey to help to understand their experience with this process. The feedback was then provided to national and regional partners through a gap analysis of the logic model draft and support regions in iteratively refining the logic model. Once there was agreement that no gaps existed between components of the high-level logic model, regions and countries invited the stakeholders in a second logic model workshop to validate the logic model. The second workshop was facilitated (with translator support as needed) with stakeholders engaged, to stress-test the logic model and incorporate user feedback. The final logic model was further refined based on feedback received.

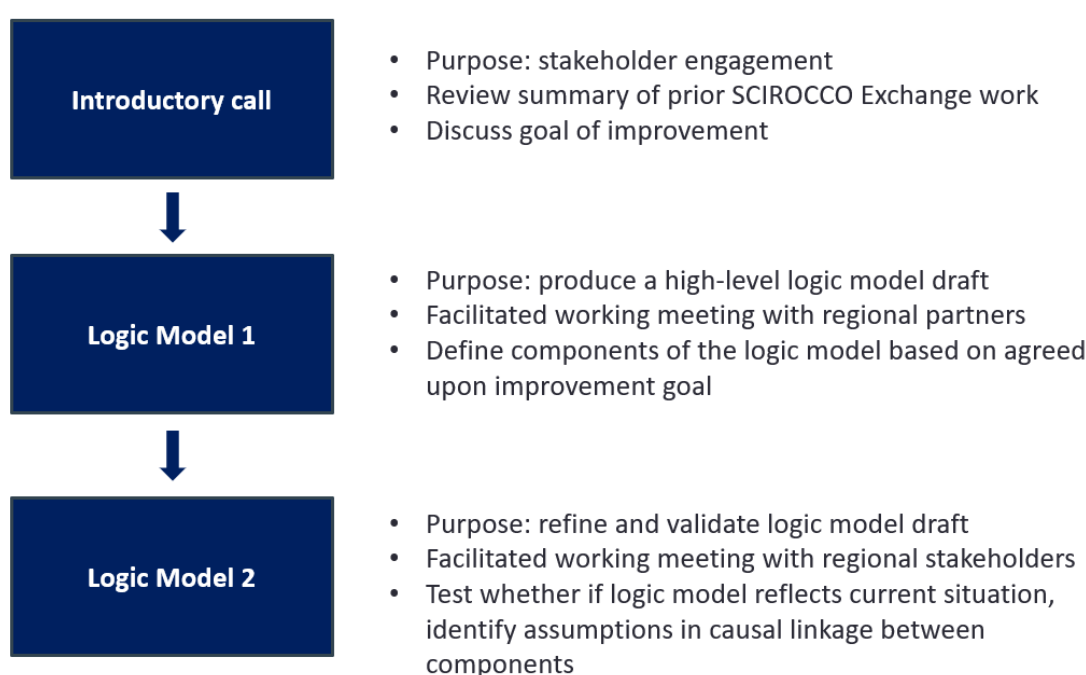


Figure 1. Overview of approach to bilateral work with regions on logic model construction

4.4. Description of logic model by region

Below a detailed overview of the logic model for each regional and national integrated care initiative is provided along with the actual logic model. Summary of contextual information on the regional integrated care systems can be found under each region's heading in the Appendix (**Error! Reference source not found.**). Workshop timelines and stakeholders involved can be found in the Appendix (Table 4).

4.4.1. Agenzia Strategica Regionale per la Salute e il Sociale (AReSS) - Puglia, Italy

Regional partner(s) defined the improvement objective as “To improve integrated care in the region by capacity building with a special focus on EU Project/fundraising/and team building of the Puglia local health authorities.” Regional partner identified financial resources as a common need across all regions and utilised the logic model construction process as an opportunity to map out how building regional capacity in grant-writing can improve financial reserve to better strengthen integrated care progress. Within the next

year(s), the region aims to train professionals specifically in grant-writing and obtaining funds under a specialised Masters program, based within each of the six local health authorities. Regional partner outlined four areas of inputs (and activities) linked to intended outcomes - data availability, human resources, organisational, financial. Outcomes included the increased awareness of available EU funding, increased knowledge, and skills to apply for EU funding, and improved access to funding across local health authorities. Assuming successful training of human resource personnel and increased financial reserve, the region identified longer term outcomes including strengthening the coordination of care and improved partnership to follow.

Taking advantage of an ongoing workshop with diverse stakeholders (including civil servants, lawyer and accountant), the second logic model workshop was facilitated on July 10th, 2021, with this group. By test-driving the logic model with users in the system, the gaps were identified including missing stakeholders that should be engaged (e.g. social sector, and Anci Puglia), value-add outputs (e.g. one stop shop for all grant funding information to improve resource efficiency and share intelligence) and building training opportunities (e.g. using the trainer model to encourage cooperate learning and spread the network).

Region: Puglia, Italy

Goal of improvement: To improve Integrated Care in the Region by Capacity Building with a special focus on EU Project/Fundraising/ and team building of the Puglia Local Health Authorities

Planned Work			Intended Results		
Input	Activities	Outputs (Sample)	Short-term Outcome	Medium-term Outcome ~ 1 years	Long-term Outcome 3-5 years
Data availability: SCIROCCO Exchange Project/Analysis	Conduct maturity assessment in Puglia Region Local Health Authorities regularly synthesize results of maturity assessments Invite social sector participants to join	Maturity Assessment accomplished by each LHA (very useful to have a cross-analysis of the IC maturity at local level but also to understand LHAs gaps, and to achieve a common vision on how to fill them through a common Regional strategy) Directory of interested participants established (incl. social sector participants) Maturity Assessment results synthesised Strategies and priorities reassessed regularly	Increased awareness/knowledge of LHA and social sector of strengths and weaknesses in the local integrated care system Use SE Tool to critically review the requirements priorities and strategies expressed by the healthcare authorities, and social sector for integrated care policy and end-users organisations, patients, associations etc	Updating and continuously feedback to program improvement (distributed responsibilities) -> cultural change Reduce variability (organisational, HR) between regional LHAs -> standardisation of practices, informatic tools and internal requirements, knowing these differences can feedback to other processes when planning	More innovative and technologically advanced public administration

Human Resources: A selected multilevel stakeholders group involved in SE project	Implement Knowledge Transfer Program in Puglia 1) virtual workshop with 6 LHA to engage on MA process 2) Analysis of Training Courses and Opportunities addressing the “Fund” dimension Implement capacity building to bridge skill and organisational gaps Transform training to a virtual platform Develop recruitment policy to recruit specialised project managers	Co-design of the Master: https://management.lum.it/master/pianificazione-e-programmazione-dei-fondi-europei/ Training is accessed by others (target: LHAs, municipalities, social sector) Train the trainer model (cooperative learning) Network creation (network of sharing training resources) b/w social and health sector More specialised project managers available	Experimentation of a one-year - recurrent - Capacity Building Path addressing the Fund dimension and focusing on IC and multilevel professional collaboration (First edition launched in April) Relationships built between different professionals, increased partnership -> increased integration of services Improved management of projects to deliver results		
Organisational/IC: Already existing project in IC such as the Puglia Care Model, FOODIANET, Talisman, ACCASA, GATEKEEPER, etc ¹	AReSS Puglia signed a memorandum of understanding with the LHAs in order to activate a systematic change based on the KT and capacity building aiming at creating a regional task force and a stronger	3 out of 6 LHAs signed the memorandum of understanding (ongoing) incl. Anci Puglia (regional representatives) works every day on integrated care Funding and dedicated activities with a strategic commitment and organisational role allocated	At regional level: a network to work with in order to launch and coordinate actions for future projects		

¹ For more information on Puglia Care Model: <https://www.sanita.puglia.it/web/aress/care-puglia-e-presenza-in-carico-delle-cronicita>

For more information on FOODIANET: <https://www.sanita.puglia.it/web/aress/foodia-net>

For more information on Talisman: <https://www.progettotalisman.it/>

For more information on ACCASA: <https://www.sanita.puglia.it/web/aress/gatekeeper>

For more information on GATEKEEPER: https://www.sanita.puglia.it/web/aress/archivio-news_det/-/journal_content/56/45631926/-accasa-la-telemedicina-pugliese-ai-tempi-del-covid

	cross-cutting institutional collaboration Intentional in early engagement of missing stakeholders (e.g. Anci Puglia)	Creation of a one-stop shop for all activities, administrative preparation for all projects for all agencies (central hub) -> make efficient use of resources and share intelligence			
Financial: SE budget, LHAs budget devoted to continuous training (In the last decade, the level of investment in integrated care increased in Puglia but not enough to meet needs; there is a funding gap compared to Northern regions. Investing in health infrastructure is only part of the solution. Financing of services, training and human resources represent the largest costs in health and long-term care. There is need to secure more private investments; making long-term investment plans can help. Freeing public resources for infrastructure can accelerate the development of integrated care models).	The memorandum of understanding with the LHAs provide economic support to train the LHAs stakeholders	Training was possible for one HR per LHAs At local level: the minimum number (1, at management level) or dedicated resources/offices dedicated to fundraising and strategic planning in each LHAs Create a network within their organisation to strategize and build collaborative culture	Increased awareness among LHAs experts of financing possibilities for integrated care and population health management solutions, including the opportunities offered by EU financial instruments.		

4.4.2. Kronikgune and Osakidetza (Basque Country, Spain)

Regional partner decided on systematic patient involvement as an improvement goal. Patient involvement will be reflected in the redesign of the care pathway for multimorbid patients. For this purpose, capacity building activities on stakeholder involvement and care pathway redesign were planned. Through SCIROCCO Exchange knowledge transfer activities, the implementation team expected to learn from the experience of the Midlothian Health and Social Care Partnership in Scotland on their patient involvement implementation strategy. Furthermore, evaluation and dissemination strategies were deployed to assess and raise awareness about improvement activities. The main objective of the improvement plan was to create “A health system that is more capable and inclusive with citizens for the co-design of processes and decision-making and therefore more efficient (and responsive)”. The intervention was carried out by the Kronikgune² team with support of the Basque Foundation for Innovation in Research and Health (BIOEF)³ in the region of Osakidetza, Basque Country (Spain). A stakeholder engagement workshop was held on November 5th, 2021, with the objective of including stakeholders input in the (re)design of the improvement plan.

² For more information about Kronikgune please visit <https://www.kronikgune.org/en/>

³ For more information on BIOEF please visit <https://www.bioef.org/es/>

Region: Basque Country, Spain

Goal: To improve care for frail patients by improving care pathways and empowering and involving patients and professionals

Planned Work		Intended results		
Inputs	Activities	Outputs	Short/Medium-term Outcome	Long-term Outcome
Organisational leadership Political support Knowledge of Osakidetza health professionals Staff of Osakidetza, Kronikune and Bioef Resources (€) for carrying out activities Infrastructures for the implementation of activities Knowledge of the Scottish Health System on this topic Citizens, patients, and carers Funding to travel to Scotland	Review of current situation and analysis Review of current pathway and experiences in relation to care of multimorbid patients: Interviews with professionals Surveys Focus groups Results of previous projects Analysis of methodologies for the design, redesign and scaling of processes together with the citizens Selection of participants Selection of a group of professionals from the system to participate in the redesign of the multimorbid patients' pathway. Selection of citizens (multimorbid patients and carers) to participate in the process of redesigning the multimorbid patients' care pathway. Creation of a joint group of professionals and patients for the redesign of the Osakidetza multimorbid patients' care pathway. Obtain information of participants	No. of patients involved in the design process No. of citizens involved in the redesign process No. of caregivers involved in the redesign process No. of healthcare professionals involved in the redesign process Multimorbid patients' care pathway redesigned, implemented, and scaled up No. citizens involved in the design of the methodology to design, redesign and scale up processes and pathways No. professionals involved in the design of the methodology to design, redesign and scale up processes and pathways No. of professionals-citizen meetings held No. of interviews and focus groups conducted	Improving PROMS in multimorbid patients Improved PREMS in multimorbid patients and caregivers Improved equity in multimorbid care Improved patient and caregiver empowerment Increased self-management of the disease (Osanaia, scale 1 to 5) Improved reconciliation and adherence to treatment Improved chronic care Reducing avoidable admissions Reduction of average length of stay Increase in home visits No. of IHOs following the route (GIP)	Improving citizens' health and quality of life Improving the quality of life of chronic patients and carers. A health system that is more capable and inclusive with citizens for the co-design of processes and decision-making and therefore more efficient.

	Interviews and focus groups with patients and carers for the development of a methodology for the design, redesign and scaling up of processes and pathways together with the citizens Interviews and focus groups with healthcare professionals for the development of a methodology for the design, redesign and scaling up of processes and pathways together with the citizens Training sessions for health professionals in the use of methodologies that include citizens in design and decision making. Selection and/or development of tools Development of tools and processes to involve citizens in process redesign and decision-making Design of evaluation system Design and implementation of a change management strategy Design of communication and dissemination strategy Exchange activities Study visits to Scotland to increase awareness of the double diamond methodology and the Midlothian (pathfinder) example.	No. of professionals trained in the use of methodologies that include citizens in process redesign and decision making Guide/manual for the design, redesign and scaling of processes and pathways together with the citizenry List of shortcomings of the current Osakidetza pathway for multimorbid patients.	No. of patients included in the pathway (GIP) No. of emergency visits No. of professionals using the pathway Health professionals more receptive to including citizens in process design and decision making Systematize the design, redesign and scaling up of processes and pathways Improved satisfaction of professionals	
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4.4.3. Vlaams Instituut Voor De Eerste Lijn (VIVEL) - Flanders Belgium

Regional partner (Flemish Institute of Primary Care) defined process coordination as an improvement goal, with the overall health system goal defined as “Goal oriented care as a practice with all healthcare and welfare organisation in Flanders. Resilient and learning healthcare systems that are responsive to population health and welfare needs.” The logic model workshop was introduced to regional partners over several calls, engaging diverse stakeholders. In the first and second call (March 26th, April 30th), a representative from VIVEL was present to best understand the activity and need; on the third call (June 2nd), an external consultant leading the organisational strategic planning attended to streamline the work; on the fourth call (July 6th), stakeholders from VIVEL were present for the working meeting to provide organisational perspective on current activities, capacity, and needs in working towards achieving goal-oriented care. A very high-level logic model was constructed with a focus on goal-oriented care. The region subsequently focused on applying this logic model tool to guide strategic planning efforts in the 60 regional primary care zones, furthermore, an interprofessional training program in 5 primary care zones will be piloted in 2022. Logic models will be used by region in guiding planning efforts as well as informing the evaluation framework. This work is ongoing and will continue beyond the duration of the project.

Goal of improvement: Interprofessional training on goal-oriented care

Planned Work		Intended Results			
Input	Activities	Outputs (Sample)	Short-term Outcome	Medium-term Outcome	Long-term Outcome
Funding of VIVEL Expertise of Team Goal-oriented care (GOC) and University of Ghent Cooperation with innovators and early adopters Learning collaborative of GOC in Flanders and international (Canada and America) Representatives of patient and informal care givers	Information session on GOC for the primary care boards Conduct GOC training workshops	Interested participants in training sessions from different primary care zones Selection of 5 primary care zones	Long-term process with 5 primary care zones on GOC	Health and welfare workers practicing within the framework of GOC Capacity on trainers in GOC is increased	Integrated care in Flemish primary care Improved quality of care and welfare for persons with care and support needs and his informal care giver Sustainable interprofessional collaborations Evaluation framework for GOC GOC is integrated in Belgian policy
	Exploration of cooperation with the Fund Daniel De Coninck	Learning collaborative in Belgium	Enforced exchange between partners, organisations Improved collaboration with Fund	Adapting a general mind shift on GOC Policy support and structural changes for implementing GOC (e.g. Digital care and support plan, care coordination)	
	Inspirational sessions with the learning collaboratives on how to evaluate GOC	Reflection upon evaluating interprofessional on GOC	Developing an evaluation framework on GOC for the interprofessional training Evaluation of trained health care providers in GOC	Upscaling training sessions with the other primary care zones	
	5 training sessions with primary care workers in 5 primary care zones	60 health and welfare workers are trained in GOC	awareness of the importance and basic skills on providing GOC among providers		
Public training on GOC	Communication strategy to spread online learning materials on the online training (use of social media platforms)	The public training is widely spread in the participating primary care zones	General awareness of the concept of GOC among care givers, primary care providers and patients		

4.4.4. Social Protection Institute of the Republic of Slovenia (IRSSV)- Slovenia

National partner has identified the long-term care sector as an area for improvement, with the town of Trbovlje as the pilot implementation site. Activities were grouped into relationship building, assessment of current state (uptake of integrated services, electronic infrastructure) and awareness raising. An emphasis on optimising long-term care planning to relieve the care burden on the younger generation was emphasised. Implementation of planned activities rest on the municipal government as partners; thus a shared understanding of capacity and alignment of objectives was required. The intended results were to increase the proportion of users involved in community-based care and further to optimise long-term care costs.

Stakeholder engagement was well attended with representatives from the pensioners' association, centre for social work, municipality of Trbovlje, and the Social Protection Institute. A clear need to prioritise e-care implementation was identified during the stakeholder engagement workshop. Following the workshop, the region is responding by improving awareness of this service. Additionally, calls for systematic solutions for long-term care was heard, and data analysis will be prepared as a first step to identify the services available for seniors in the region and the utilisation level.

Goal of improvement: Improved long-term care in the region of Trbovlje

Planned Work		Intended Results			
Input	Activities	Outputs (Sample)	Short-term Outcome	Medium-term Outcome	Long-term Outcome
Finance Staff	Regular meetings with local stakeholders. Conference in municipality once a year. Establishing protocols for stakeholder cooperation.	Established local platform for communication to discuss needs and challenges in the field of long-term care.	Stakeholders are aware of existing services for citizens. Improved knowledge of Long Term Care challenges (among stakeholders).	Improved coordination between different levels of care and services (i.e.. social home care and community nursing etc.)) Improved organisation of LTC.	Optimized long-term care costs. Decreased burden of supporting older family members on younger generation. Improved intergenerational solidarity.
	Scoping analysis of integrated care (# of users, financial expenditure) by municipality and stakeholders. Monitoring which professions are in short supply.	Needs assessment conducted. Estimated expenditure of each type of long- term care. Improving conditions for employees / staff development and improving working conditions.	Increased cooperation between stakeholders. Evidence based planning of LTC.	Increased proportion of users involved in community-based care.	
	Assess current e-care infrastructure. Gain knowledge of different possibilities of e-care (knowledge transfer). Promote e-care and build capacity among users to access e-care.	Understanding of existing e-care structure. Patients and caregivers have the skills to engage in e-care.	Increased uptake of e-care by patients and caregivers.		
		Establish accommodation for crisis situations.			

4.4.5. Narodowy Fundusz Zdrowia (NFZ) -Poland

Regional partners at the NFZ, or the National Health Fund of Poland, focused on citizen empowerment, with “Increased knowledge and skills in providing self-management for patients” as the improvement goal. Current activities focused on several items including conducting a needs assessment to best understand current utilisation of health services and patient’s experience through PREMs and PROMS (Coulter, 2017); building provider capacity to conduct self-management for patients through web-based resources and patient portals; investing in digital infrastructure as a platform accessible for both patients and providers and the digital electronic medical health record. Activities implemented are expected to result in empowering patients to self-managed, improved provider-patient partnerships, and shifts in care patterns towards more primary care and reductions in hospital admissions.

Goal: Increased knowledge and skills in providing self-management for patients - this table does not seem to be finalized

Planned Work		Intended Results			
Input	Activities	Outputs (Sample)	Short-term Outcome	Long-term Outcome	Impact
-finances -database NFZ -existing collaboration with providers and project management team (POZ+) -evaluation results -SCIROCCO maturity assessment results	<u>Needs assessment</u> Analyse utilisation of preventive programs and public care services financed by the public payer Public Healthcare Use Survey (Danael) Evaluation research of patients using integrated care (PREMs and PROMs) Evaluation research of entities providing integrated care - POZ PLUS (Karasiewicz et al., 2020)	# analysis # reports # recommendations provided # of articles, presentations, information (dissemination of results)	Increased awareness and utilisation of the various preventive programs on offer (patients and providers) Increased knowledge about factors influencing the use of health services by patients Increasing the knowledge about integrated care among patients and healthcare providers Disseminating information about a reliable source of data on integrated care in Poland	Community of practice formed between providers on patient self-management Improved interprofessional collaboration and care coordination Improved partnership between patients and providers Policy makers recognise the importance and value of patient self-management	Changes in law that facilitates the coordination of care in primary care Improved population health Improved utilisation of healthcare resources (care quality and cost control) Optimization of the organisation of the provision of health services (integrated care)
	<u>Capacity Building for providers</u> Organise workshops for healthcare providers to conduct group education workshops for patients' self-management Provide training dedicated to health educators "ABC of health promotion"	# of providers trained # of allied health professionals trained (<i>152 certificates issued; 295 training users</i>)	Recognise of the service provider's needs in conducting group counselling in the self-management of the disease for patients Recognise the methods of teaching and adapting methods to the needs of patients and self-management of chronic diseases	Knowledge of patient's self-management shared between providers (<i>e.g. SweetPregna</i>) Improved management of care for patients	Cost optimization of health services Increased services that are patient-centric (individual plan, portal, tools)

	<u>Capacity Building for patients</u> Organise self-management training/ group advice for patients with the same diagnosis/illnesses (for 2-6 patients each) Create web-based resources (YouTube, website) on self-management for patients Create patient portal with information on various diseases (NHF Academy; pacjent.gov.pl)	# of patients/training reached # of patients reached NHF Academy or Integrated care YouTube & website (e.g. video tutorials about physiotherapy) # of visits to the NHF website/FB (e.g. Wednesday with prophylaxis) # of visits to the governmental website (pacjent/patient.gov.pl; https://poradnia.ncez.pl/)	Increased knowledge of chronic disease self-management among patients Increased knowledge of health education ?	with chronic conditions Reduction of hospital admissions Increased percentage of patients cared in primary care (compared to specialist care referrals)	Cultural shift in the patient's central role along the care continuum
	<u>Digital infrastructure</u> Develop and distribute tools/apps/resources for physicians and patients about self-management	# of people reached # of downloads (e.g. SweetPregna, CancellCancer)	Increased knowledge, awareness and capacity of providers and patients on self- management Increased knowledge of patients and physicians on how to use modern tools to support the self-management of a chronic disease.		
	Activate IKP (Individual Patient Account) - containing EMR - individual information on health services finances by public funds (missing diagnostic results), e-prescriptions, e-referral and e-sick leave accessible by patients Create Patient Summary (IPPZ, IPOM)	# of patients access/activation (for POZ PLUS patients, monthly cumulatively) # of POZ PLUS patients with Patient Summary (AP-PKUŚ)	Increased capacity of patients to organise care Increased knowledge of patients to navigate digital platforms		

4.4.6. Pavol Jozef Safarik University (Slovakia)

Regional partner focused on building capacity of stakeholders on integrated care in the Kosice Self-Governing region. Partners focused on conducting a needs assessment to best understand stakeholders' relationships and gaps, then on providing trainings, educational material, digital tools, and lastly on dissemination of knowledge in the form of academic articles and conference attendance. In implementing planned activities, stakeholders' awareness and knowledge of integrated care is expected to increase, and interprofessional collaboration pathways will be developed, eventually establishing a different model of care to improve patient's experience and outcome. Activities will be carried out by the Pavol Jozef Safarik University in Kosice.

Goal: Build capacity among stakeholders on integrated care in the Kosice region

Planned Work			Intended Results		
Inputs	Activities	Outputs (Sample)	Short-term Outcomes	Medium-term Outcomes	Long-term Outcomes
-finances -existing collaborations -integrated care centres -SCIROCCO maturity assessment results	Trainings Webinars/Workshops for stakeholders Educational material Translation of videos, brochures into SK language	# of stakeholders reached # of translated material (brochures, videos)	Stakeholders' knowledge of integrated care increased Change in stakeholders' attitude towards integrated care and interprofessional collaboration	Stakeholders recognise the value of integrated care (shift in view of GPs as referral clerks -> coordination of patient health and well-being) Providers invite patients to engage in shared decision-making Citizens participate in shared decision-making Citizens are empowered in self-management Pathways for different professionals to work together are developed	Priority areas: long-term care, mental health care innovations, hospital reforms Cultural shift in interprofessional collaboration and integration Integrated care reflected in national, regional, and local programmes on economic and social development as well as related action plans Establishment of a different model and pathways of care to improve patient's care experience and outcomes
	Digital Tools Web-platform for stakeholders (integrating basic knowledge on integrated care concepts and examples of good practice - from Slovakia and abroad)	included in national document # of web-platform visits (monthly statistics)	Stakeholders' knowledge of integrated care increased		
	Needs assessment Stakeholder mapping and analysis (planned) Stakeholder map shared with system leaders	Stakeholder network and relationships mapped	System leaders have increased knowledge of current gaps		
	International and national dissemination academic articles conference attendance	# of scientific articles produced # of articles published in professional journals (e.g. Zdravotnicke noviny) # of conference presentations (oral/poster)	Increased recognition from <u>international</u> community on Slovak integrated care work Increased recognition from <u>national</u> community on local/regional/national/international integrated care work		

	Supportive activities (including the above-mentioned trainings, educational material, and digital tools) towards creating a culture of learning	# of organisations/ institutions involved	Increased awareness of organisations/institutions about culture of learning		
	Stakeholder engagement activities (roundtable discussions, participatory decision making, networking..)	# of stakeholders involved	System leaders come with the solutions for improvements and the necessary next steps to implement and scale up integrated care		

4.4.7. Vilnius University Hospital Santaros Klinikos (VULSK) - Lithuania

National partner engaged identified improving the existing multimorbidity care model as the objective. Partners involved in logic model development had expertise in indicators development and population health management. Regional partners showed high capability in logic model development during working meeting and were more independent in the logic model construction process. Activities to implement include capacity building on integrated care best practices for providers and primary care centres, to reorganise administrative processes to better establish a structure that encourages interprofessional collaboration including the creation of case manager role, educating patients on self-management, and building relationships between government and provider organisations. Activities as implemented are expected to lead to improved organisation of care and quality of life for patients with multi morbidity, increased access to care according to need and increased interprofessional collaboration.

Goal: Improve the multimorbidity pilot model

Planned Work		Intended Results			
Input	Activities	Outputs (Sample)	Short-term Outcome	Medium-term Outcome	Long-term Outcome
# of pilot sites Primary care centres	Capacity Building -Knowledge exchange between primary care centres (pilot sites) -Integrated care training for providers (on structure, implementation, and patient inclusion & self-management)	# of knowledge exchange occurring/year # of providers participated in the training/year	Improved knowledge of integrated care best practice and implementation (incl. care coordination across levels of care) Improved awareness and knowledge of patient-centred care (eg inclusion & self-management)	Improved care for multimorbid patients (>2 chronic diseases) Improved patient safety (due to coordinated treatment plan, eg avoiding contraindicated medications) Increased access to healthcare services according to need	Improved quality of life for patients with multimorbidity Increased healthy life expectancy
	Translation -Adapt model to local context	Model adapted	Increased number of primary care centres utilising model	Improved quality of care (measured from patient perspective) -> improved patient-centred care Improved usage of community and social services along the care continuum	
	Administration -Define case manager role and scope of practice Develop an agreed upon individual healthcare plan template - assess multimorbid patient social conditions and involve social workers in care of multimorbid patients (when needed)	case manager role created (HR) # patients assigned to case manager (max 200) # of multimorbid pts with individual healthcare plan % of multimorbid patient care with social worker involvement	Improved care coordination and decrease duplication in care provision (tests ordered etc) Providers and patients engage in shared decision-making Patients are empowered to be involved in care Social workers involved in primary healthcare teams	improved % of patient who participated in preventive programs Improved access to social care	

		% of multimorbid patient care screened for social problems	Patient social conditions assessed improved access to community services (through social care involvement)	Decreased # of hospitalisation and readmissions Improved patient self-management of chronic conditions (defined individually by GPs for specific patient demographics) Improved intersectoral collaboration in patient care and management	
	Patient Education -Training patient on self-management -Collect patient self-management resources	Resources organised and disseminated to patients	Improved patient self-care and self-management	Improved communication and coordination among providers between different levels of care	
	Relationship-building -Intersectoral collaboration between providers and health bureaus (government agency) -voluntary stakeholder meetings for dissemination of initiative (require funding by MoH)	Types (or #?) of collaborations formed # of stakeholder meetings held/year Purpose of meetings established	Improved understanding of practice scope among different providers		

4.4.8. Gesundes Werra Meissner Kreis (GWMK) - Werra Meissner Kreis, Germany

Regional partner set an improvement goal of “Improving the health and care experience of the population and unlocking monetary efficiency potential, by strengthening digital infrastructure, process coordination of self-management promotion and collaboration between local actors.” Planned activities were wide-ranging including promoting the use of digital applications for communication, telecare, prescribing quality, health promotion; capacity building for providers and patients on self-management and interprofessional collaboration; conduct regular quality improvement activities; and create a member advisory board. Implementation of these activities are intended to result in improved information flow between members, an improved digital infrastructure, empowered patients, and ultimately patient-centred integrated care.

Goal: Improving the health and care experience of the population and unlocking monetary efficiency potential, by strengthening digital infrastructure, process coordination (including by building on the work of the existing EU project ADLIFE) of self-management promotion and collaboration between local actors. - lot of missing references or abbreviations missing in this Table, some highlighted in yellow

Resources and scheduled work		Intended results			
Input	Activities	Key indicators	Short-term results	Mid-term results	Long-term results
Organisational management Staff support (9 staff positions / 7 FTE) (+ interns, bachelors, masters, medical students = tele health guides). Partnerships and collaborations with health insurance companies, local hospitals, EU projects (SCIROCCO, ADLIFE)⁴, etc. [Cooperation partner]	Training of health guides and medical students as tele-health guides Coordination of community caregivers Development and roll-out of network application MIGO for member communication and mapping of network health pathways Tele-care for multimorbid patients (Thieme TeleCare) Offer of second opinion procedure (BetterDoc) Promotion of regional and digital opportunities Overview of regional information-, advice-, support structures (DIGILO) Overview of national information- and advice structures (More Knowledge)	# Enrolled members # Enrolled „Friends of GWMK“ # Network partner # Activities on GWMK Website # Facebook likes # Health promoting events + # participants # Number of trained health guides # Number of users of MIGO	- Increased comfort and skills in using the digital platform (providers, health guides, and citizens). Establishing and maintaining relationships with experts in digital health systems through regular exchanges (Uni Kassel, IT Netzwerk e.V., BKK WM) -Use of data to identify target groups that can be supported by health programs as part of the corporate strategy (OptiMedis Data Request). Increased knowledge of gaps in regional care pathways (master's theses)	Information flow between network members, health guides and office is centralised via an app An improved digital infrastructure (hardware, software, mind set) for the integrated care system Improved cross-sector collaboration Patients feel heard and valued in healthcare decision making (shared decision making is becoming the	Quadruple Aim Improved health (quality of life) of the population Improved experience of health and medical care for patient and stakeholders (facilitation of stakeholders is sufficient condition for structural change) Lower morbidity and mortality costs (increase) Patient-centred integrated care embedded in the organisational culture

⁴ For more information on SCIROCCO, please read the introduction to this document or visit this website: <https://www.sciroccoexchange.com/>
For more information on ADLIFE, please visit: <https://adlifeproject.com/>

Shared savings contract based on health benefits as incentive structure. Third-party funding of projects (SCIROCCO, AD-LIFE, Community Caregiver) Network partnerships with local actors + individualised defined services of network partners for network members [network partners]. Emergence of a new professional profile [health guides].	Health promoting (online) courses (network partner cooperation) Public health campaigns (8.000 steps) Negotiation of health-promoting discounts Medication consults for pharmacists and physicians Workplace health promotion & management Support of the public health service Care/advice programs Recommendation of quality-assured health-promoting apps and digital health applications Developing training curricula (everyday helpers, health guides, health & me). Arrangement of care courses for family caregivers according to §45 SGB XI Innovation fund applications Recruitment of physicians and specialists to the region	# Number of courses/training sessions offered	Members who are self-managing and willing to make decisions regarding their health (Shared Decision Making) Confidence of residents, institutions, and associations in GWMK as a new type of service provider (organisational health literacy).	new norm in the region) Actors are attuned to activated patients (willing to self-manage and make decisions) Improved communication between stakeholders and patients	of regional stakeholders Resilient and learning healthcare system that can anticipate the health needs of the population
	Conduct regular interdisciplinary quality circles to address quality improvement issues.	# Number of quality circles/quarter	Continuous feedback from stakeholders (primary care physicians and hospital physicians) on the care pathway		

D8.1 Improvement Programme

	Collaborate with relevant stakeholders to develop regional care pathways (HF, COPD, psyche)	Standardised care pathways created	Care pathways are regularly reviewed and revised		
	Member advisory board for the development of the network	# Focus groups/ consultation panels, etc. for citizen participation	Regional needs and sensitivities are considered		

4.4.9. Midlothian Health and Social Care Partnership, (Scotland, UK)

Regional partner engaged invested dedicated personnel to lead three different areas of improvement - population approach, digital infrastructure, and citizen engagement. While synergies between longer term outcomes of improvement areas were identified in the initial call with leads, regional partner preferred to structure the three improvement goals separately when developing logic models. Regional partners were well-prepared prior to the initial call, with high-level draft logic models ready for discussion. Iterations were required to improve the specificity of logic models. Regional focus on citizen engagement stated a goal of “Develop a systematic approach to using what people tell us across the partnership on an ongoing basis, and report how what people tell us has influenced our actions and plans.” Activities planned included developing a systematic approach to receive patient feedback and integrate into services planning with specific focus on building staff capacity and to build engagement as part of the organisational culture. Implementation activities as outlined in the outputs section of the logic model will be implemented by the Midlothian health public engagement team.

Stakeholder engagement was well attended with representatives from Public Health, Public Engagement, Seniors planning department, Third Sector, Community Care, Performance & Improvement, and Physiotherapist and Interim Service Manager. Participants agreed that better patient involvement is key to improving services for users, and that the process of gathering patient feedback should be systematically implemented as best practice rather than ad-hoc. Some risks identified to inform the strategy for systematic collection of user feedback included how to phrase the feedback elicitation in a neutral tone, how to collect both louder and quieter feedback, and how to be flexible in user feedback collection such that it does not act as a barrier to the collection.

Region: Midlothian, Scotland

Goal of improvement: Develop a systematic approach to using what people tell us across the partnership on an ongoing basis, and report how what people tell us has influenced our actions and plans.

Planned Work		Intended Results			
Input	Activities	Outputs (Sample)	Short-term Outcome	Medium-term Outcome	Long-term Outcome
Service users Local citizens Planning Leads and staff teams Service Managers Third sector partners and community organisations Equalities officer Strategic Planning Group Public Engagement Leads Chief Nurse Quality Assurance officers IJB - Service User Representative	Develop structure for all services to gather, discuss and incorporate service user and community consultation, engagement and feedback Develop a method to analyse feedback received to identify trends Develop a communication and engagement plan to motivate and engage public and staff to support and contribute with experiences and data (highlight benefits, focus on improvement) The HSCP dedicates more resources (in people, time and budgets) to improve the	% of services producing public reports on engagement - including number and types of feedback received and changes made based on feedback (every year) % of Staff and partners report confidence in HSCP approach to using service user and public engagement % of services and planning groups which evidence that service users are involved in planning groups, decision making, co-design, development, evaluation and monitoring of services (annually) % of service users, reporting that their views are taken into account in planning and delivery of services Reduction in number of complaints?	The HSCP undertakes ongoing engagement with people and communities to ensure that services meet their needs, identify sustainable service improvements and to develop trust. Services change and adapt based on feedback from service users and public, this is communicated clearly and regularly. People representing a range of communities are involved throughout the development, planning and decision-making process for service change and strategy development. Gaps in services are identified Services and strategic plans are developed based on service user and public	All Services take account of the views, feedback, complaints and comments of service users and public on a regular basis Service users and the public know and understand to what extent the partnership has used their views and feedback in the development of services Inequalities and barriers facing people who use health and social care services are identified All Services are co-designed and developed with service users. All Services better reflect people's needs. Inequalities and barriers facing people who use	The involvement of people and communities has an impact on service change and strategy development and is planned as part of the organisation's wider engagement strategy. Robust corporate governance arrangements are followed for involving people, founded on mutuality, transparency, equality, diversity and human rights principles. People feel valued and listened to by the health and social care services they use. Health and social care services are centred on helping to maintain or improve the quality of life

	participation of people, engage effectively and inform decision making,		feedback, consultation and engagement Learning from engagement and consultation is shared and used across the partnership	health and social care services are addressed Service gaps are addressed There is a stronger relationship between service users and those providing services and between the partnership and the communities we serve	of people who use those services People who use health and social care services are safe from harm People who use health and social care services have positive experiences.
	Engagement to become a core staff objective across the partnership	% of staff received training to build staff capacity in consulting with service users and using feedback and consultations Develop training/share resources to make both gathering and reviewing and implementing feedback motivating and engaging Staff report on measures around the implementation of service user and public engagement consultations, how frequently people have been consulted, and at what stage people have been consulted	Staff more confident in consulting and in their use of service user feedback Staff report on their use of service user feedback	The approach to engagement is inclusive, meaningful and is evaluated to identify learning and the impacts.	

4.5. Synthesis of logic models

Activity classification allowed understanding of the type of activities used to improve each dimension of SCIROCCO Exchange Maturity Model for Integrated Care. In synthesising the results of logic models, all activities were categorised as described within the logic model according to the SCIROCCO Exchange dimension(s) they were aiming to address. It was found that the majority of dimensions were attended by one type of activity. Exceptions include evaluation methods, innovation infrastructure, innovation management (for which 2 activities existed), and process coordination (for which 3 activities existed). This resulted in 16 distinct types of activities for system improvement that were proposed by regional partners within the context of their logic model. As follows, the activity types are presented classified by each dimension of the SCIROCCO Exchange Model. The classification of all the activities presented in the logic models can be found in Table 5 (Appendix).

Classified by SCIROCCO Exchange dimensions, the types of activities presented by the regions are the following:

- **Breath of ambition:** Logic models attend this dimension with activities directed to integrate stakeholders previously neglected into the decision-making process of the system integrated care capacities. This includes planning regular stakeholder meetings, develop strategic and systematic approaches for capturing and utilising stakeholder input, and including non-traditional health stakeholders such as the social sector.
- **Capacity building:** Several regions presented a plan to create trainings, webinars, or workshops on 11 key topics directed at supporting the objectives stated in the improvement plan. The topics correspond to: Care fragmentation, care pathway design, change management, E-care use, EU project fundraising, goal-oriented care, health promotion, integrated care, self-management, stakeholder involvement and telehealth.
- **Demand driven (population) approach:** This dimension is represented by the implementation of special care programs for citizens who are not thriving under existing systems of care. Programs correspond to: Case management, telehealth, community care givers, social conditions assessment and self-management.
- **Evaluation methods:** The evaluation methods presented in the logic models correspond to evaluation designs for interventions and activities directed at assessing the current situation such as surveys, feedback systems, and the SCIROCCO Maturity assessment model and the use of PREMs and PROMs.
- **Funding:** The funding activities correspond to applying for funds and the alignment of stakeholder's economics responsibilities.
- **Innovation infrastructure:** The logic models presented activities involving data infrastructure, either for the creation of or the activation of existing infrastructure to manage patient healthcare data. In addition, four regions planned to create digital care tools, in the form of e-content of selected topics, and patient portals for virtual training and disseminations of ad-hoc applications and best practices.
- **Innovation management:** Activities in this dimension correspond to: Data intelligence, directed at improve system responsiveness, and intervention planning in the topics of resource adaptation, decision aid tools and ad-hoc design to meet regional needs.

- Process coordination: Activities described correspond to: Care pathway design, Communication & Dissemination and activities directed at improving healthcare system efficiency such as stakeholders mapping and regular meetings, and harmonisation of guidelines and support structures.
- Readiness to change: To improve their readiness to change, regions planned knowledge exchange activities. These show the regions willingness to learn from more expert regions in the dimensions that need improvement.
- Removal of inhibitors: The dimension is represented in the planning of interventions directed at reducing risky behaviours through public health campaigns, health promoting discounts and prevention and public care services.
- Structure and governance: Activities directed to improve the structure and governance of the system can be grouped into System organisation. This includes recruitment of professionals and assigning responsibilities to the regional figure in charge of integration (regional integrator).
- User empowerment: Activities attending this dimension focus on shared decision making, either in individual healthcare plans, second opinion procedures or a procedure to include patients' opinion in their care plans.

4.5.1. Reflections of logic model workshops

Regional and national logic model workshops brought together a wide variety of stakeholder groups including, in the order of frequency, management, IT specialists, social care, data analyst, and academic experts. Regions involved stakeholder to varying degrees based on the appropriateness and availability, with a range of 3 to 17 participants (median: 9) in the stakeholder engagements. All regions had varying scopes of ambition including the time horizon, geographical scope and who the main improvement should target (managers, providers, or patients), which was critical to establish a shared understanding prior to developing the first step of the logic model. This was particularly salient considering the wide-ranging stakeholder groups that were involved in the stage of stakeholder engagement. Overall, regions found stakeholder engagement to improve the usability of the logic model in several ways including: identifying missing components that link activities to outcomes (n=5), identifying external factors that affected or currently influence program design or implementation (n=5), identified missing activities or stakeholders (n=4), identified missing outcome (n=4), identified existing assumptions (n=3), and simplified terminology for more accessible use (n=2). Though benefits of stakeholder engagement are widely documented in literature, regional partners identified specific aspects in which the process improved the usability of the logic model in regional and national integrated care implementation. Many regions found the engagement of those responsible for implementing activities to improve the usability as they were able to identify contextual challenges and key factors that may hinder the or delay certain activities. Additionally, while regional partners found that the explicit structure of logic models was helpful in allowing stakeholders to arrive at a shared understanding of intermediate steps that leads to the ultimate goal.

Select highlights from regional stakeholder engagements are outlined below.

The Flemish region had involved stakeholders from an early stage in the logic model development process to build a shared understanding and trust. This level of engagement

was necessary considering the great ambition of the region in changing the culture and model of care towards goal-oriented care. Academic partners were engaged to inform the overall evaluation framework design and implementation, and trainings for interprofessional care provision is piloted in five regions as a follow up activity from initial logic model planning sessions. The early and close engagement with stakeholders allowed for a more cohesive development and application of logic model in the strategic planning process of subnetworks of integrated care within the Flemish primary care network.

Midlothian Health and Social Care Partnership had identified three areas of focus for improvement - population management, public engagement, and digital infrastructure. Public engagement was the focus of the improvement work and served as a pilot framework to build on for other areas of improvement. Regional partners were highly engaged in the process of logic model development and were able to arrange a stakeholder consultation to validate the logic model work, receive input on improving public engagement, and align with relevant stakeholders on relevant next steps.

The stakeholder engagement workshop in Basque Country contemplated the same participants that were involved in developing the previous SCIROCCO Exchange activities and considered key stakeholders for the improvement goals. This meant that all participants were aware of the context and had been part of the maturity assessment and defining of improvement goals. The expertise of the group allowed for a more detailed revision of the logic model, including the assignation of responsibilities for the planned activities, the revision of underlying assumptions and the consequent new strategies and activities to cover for weak links in the causal chain.

Regional and national partners found the facilitated workshops to meet their expectations in terms of the preparatory support provided, clarity of presentation, and support during the workshop (**Figure 2**). Regions particularly found helpful the support provided in the clarity of process outlined, the guided discussions and brainstorming that challenged underlying assumptions, and the connections of different components between activity to results. Aspects highlighted by a region to improve on were to provide more specific example of the different aspects that a logic model entails.

While benefits of logic models are well documented, the evaluation survey indicated that regional and national partners found this activity to be of value in improving integrated care implementation. Specifically, partners found logic models to bring a “structured and clear plan” and clearly “identified intermediate steps” on linking resources with intended goals. Additionally, as a one-page overview, partners found the model as a useful tool to communicate with stakeholders involved in integrated care implementation and in supporting conversations in consensus building. One region also noted that while the process of logic model creation was do-able over virtual meetings, the benefits may be amplified when conducted face to face, which the region will revisit once the option is available again.

Interestingly, it was found that regions who are earlier on their integrated care journey to focus more on the wealth of activities that are either planned or currently under way; regions further along the maturity spectrum tend to have clearly articulated goals, with more time was spent revisiting the activities and causal pathways that lead to the intended goals. Through the work with the nine regional and national integrated care initiatives of varying scopes, the common challenges were found that others implementing similar work

should consider: first, early engagement is key to building the trust required for stakeholder to openly discuss current challenges and opportunities for improvement and willingness to accept accountability for outputs; second, a cohesive group that have a sense of shared vision is particularly important to drive the initiative; and third, due to the level of interactions required for the logic model workshops, and in particular stakeholder engagements, in-person workshops are much preferred.

How well did we meet your expectations for this logic model working meeting?

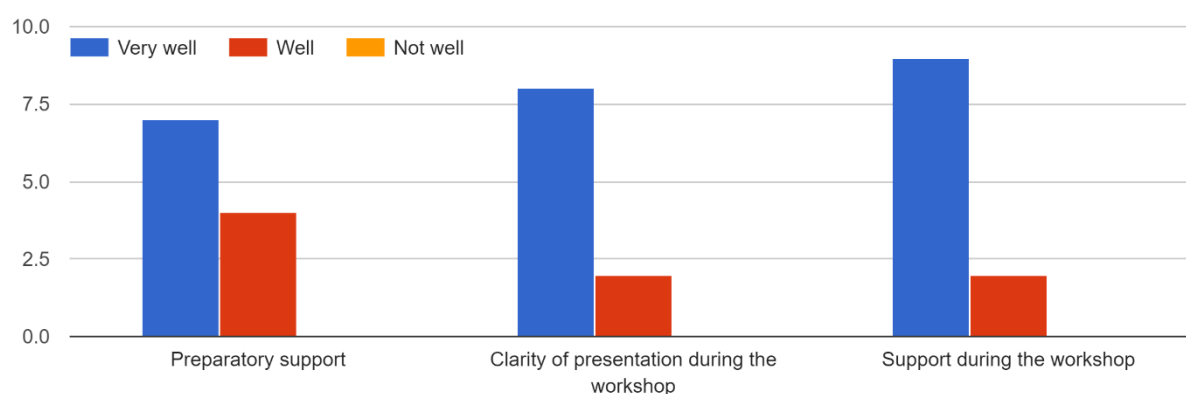
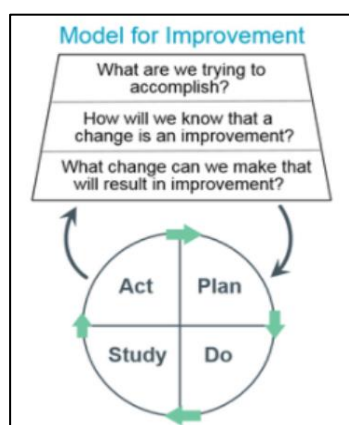


Figure 2. Improvement planning support met regional expectations in the three phases of logic model planning (n=9).

5. Review of recommended quality improvement tools and data strategy

Logic models provide a strategic road map and brings consensus among stakeholders on how to achieve conceived improvement goals in the long-term with identified resources available. The review of existing policies and strategies on quality improvement in regional and national work revealed that most do not currently leverage quality improvement and measurement strategies in their integrated care work. Going beyond the logic model framework, we reviewed further quality improvement tools and provide a suggested framework for development of organisational data strategies that facilitates an environment ripe for improvement in this section.

In the seminal quality improvement framework, Donabedian outlines three factors - structure, process, and outcomes for measuring quality (Donabedian, 2005). Structure measures the accessibility, availability and quality of resources includes the quality of management systems and availability of human resources; process refers to the process of care delivery; and outcome indicates the result of care delivery. While improvement necessarily requires change, but not all change efforts result in an improvement (Berwick, 2008; Hughes, 2008). Continuous measurement not only allows detection of whether the implemented change led to an improvement in the primary end point, but also whether unintended consequences arose and whether additional efforts are required to bring a process back within an acceptable range of variation (Varkey, 2007).



The most used tool in healthcare for rapid cycle improvement, Plan-Do-Study-Act (PDSA) cycles entail a “trial-and-error” approach where a change idea is defined, tested, and refined in a small-scale pilot prior to system wide roll-out. The purpose of PDSA efforts is to establish a functional relationship between change processes and outcomes. As shown in *Error! Reference source not found.*, there are 4 distinct steps that may be carried out in repetitive cycles of improvement. In the “Plan” phase, the study team convenes to align on the aim of the QI initiative, design measurement tools, brainstorm change idea, and select appropriate indicators. Change is implemented and data

corresponding to selected indicators are collected in the “Do” phase. In the “Study” phase, any deviation from plan and variation outside the acceptable range is further investigated with results informing next steps in the “Act” phase.

Figure 3. Model for Improvement - PDSA cycles.

5.1. QI Measurement Tools

Prior to engaging in quality improvement initiative within an organisation though, it is important to consider the following: 1) Ensuring adequate financial resources for upskilling staff capabilities; 2) Ensuring adequate human resources to support the change initiatives; 3) Gain the confidence and support of senior leadership; 4) Ensure that a sufficient time

horizon is allowed for results to be measured and interpreted. In reviewing the number of tools below (Sahni, 1998), one should be guided by the data collection systems that are available to them, the level of expertise in using the tools, and the level of engagement of staff (Hughes, 2008). Below is a selection of tools and methods were highlighted to consider as next steps in the implementation and measuring of change initiatives.

a) Driver diagrams (aka. Tree diagrams)

A visual that maps the team's theory of what contributes to the improvement aim. It shows the relationship of the overall project aim, the primary drivers that drive the aim, the secondary drivers that contributes to the primary driver, and associated change ideas.

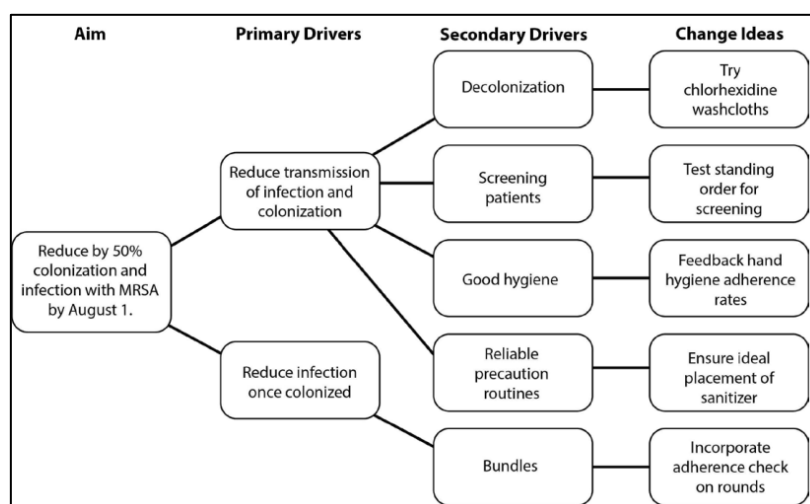


Figure 4. Driver diagrams (IHI, 2017)

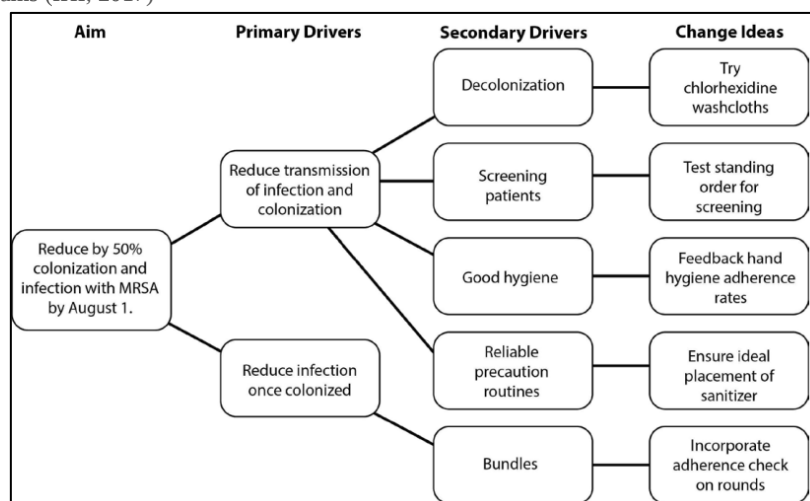


Figure 5. Driver diagrams (IHI, 2017)

b) Pareto diagrams

Based on the principle that 80% of the problems are caused by 20% of the potential sources, a Pareto diagram orders various factors that contribute to an overall effect based on its magnitude of contribution. This ordering helps to identify the few factors with the largest contribution and therefore warrants action.

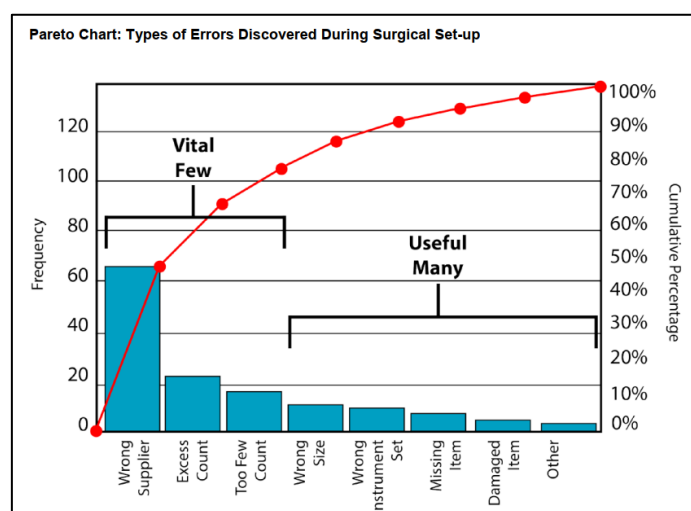


Figure 6. Pareto diagram (IHI,2017)

c) Fishbone diagrams (aka. Ishikawa diagrams, cause and effect diagrams)

This diagram displays all contributing factors for an effect and its relationship to each other. Potential causes fall under the categories of materials, methods, people, measurements, machines, and design. Root cause is identified through analysis and elimination of each cause.

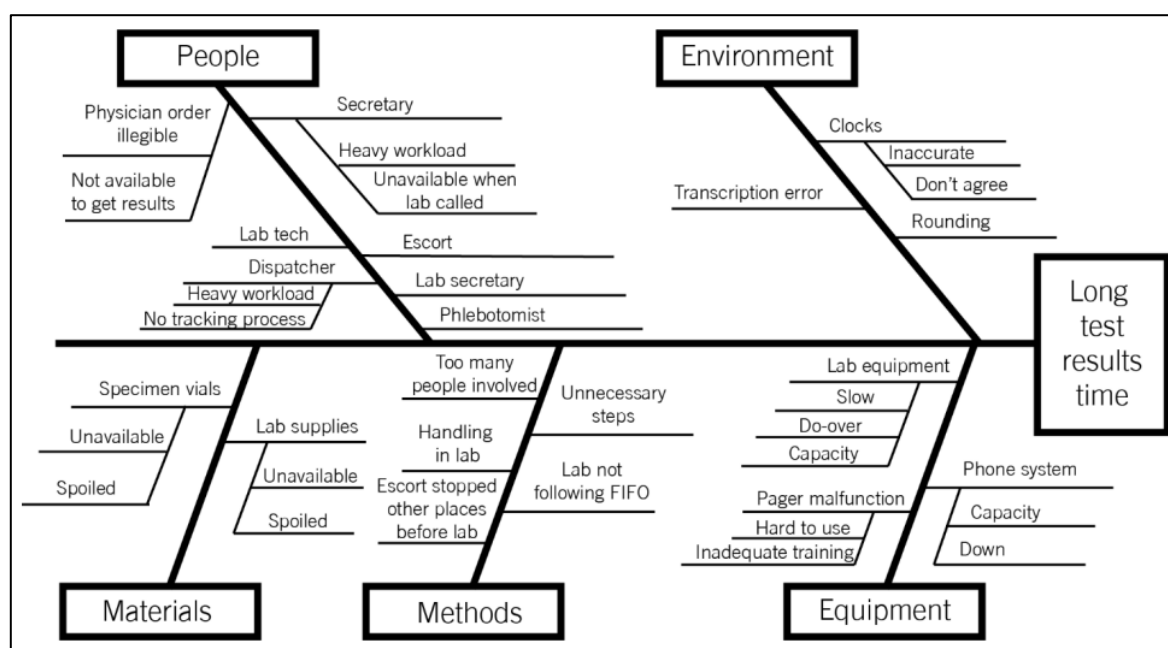


Figure 7. Cause Effect diagram (IHI, 2017)

d) Run charts and Control charts (Shewart type)

A chart that graphs your primary outcome of interest over time and detail when changes are implemented. Additionally, with horizontal lines indicating the baseline and the goal, one can easily understand how the change process is performing and determine whether the changes are leading to an improvement.

A control chart includes an upper control limit (UCL) and a lower control limit (LCL) that can further help teams distinguish between common-cause variation and special-cause variation within a process. A mean is plotted in the middle, scaffolded by 2 horizontal lines 3 standard deviations above and below the line (UCL and LCL, respectively). This tool is particularly useful for detecting short runs of unusual outcomes (such as data generated from PDSA cycles).

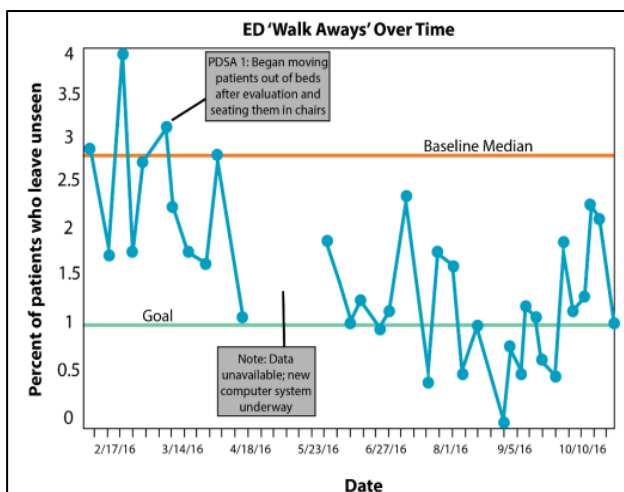


Figure 8. Run Chart (IHI,2017)

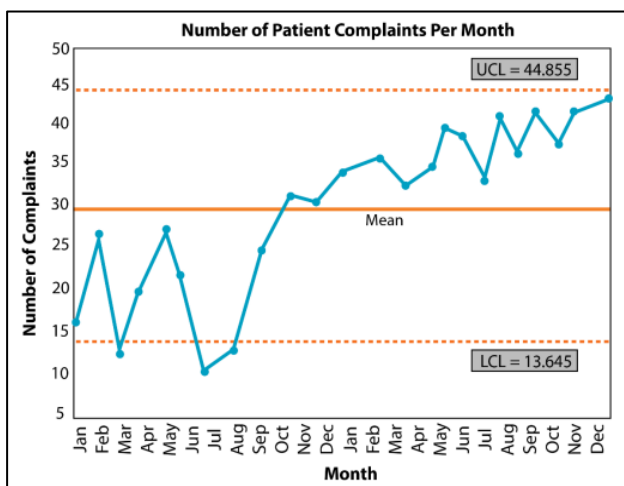


Figure 9. Control chart (IHI,2017)

e) Scatter diagrams

This graph represents the relationship between two variables to further explore their association - either positive, negative or no association.

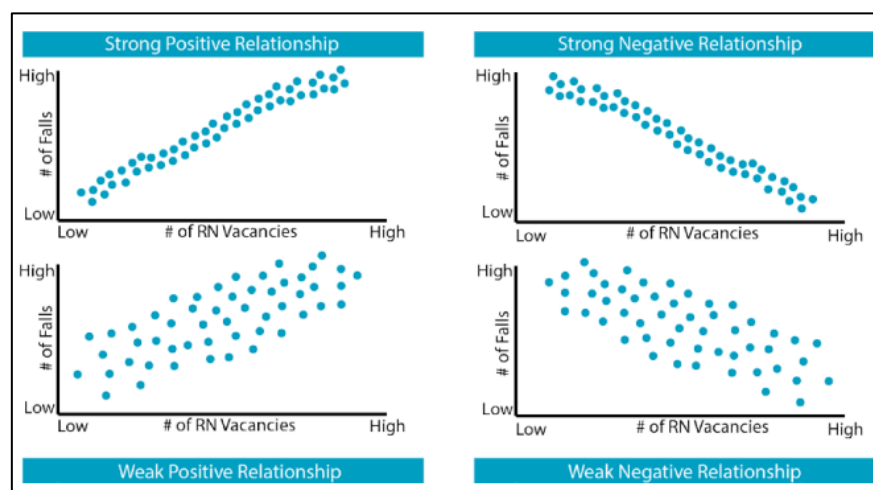


Figure 10. Scatter diagrams

f) Histograms

This is often used to display the variation of continuous data, enabling users to easily recognise patterns in data that is not be apparent in a table format.

5.2. Data strategy

While data strategies are often not explicitly stated, they are an essential part of best practice integrated healthcare systems. Improvement planning projects with our regional partners did not allow sufficient time to explore the data holdings in depth bilaterally. However, in an effort to provide regional partners with a guideline to develop a data strategy able to sustain the planned system improvements, an overview of considerations is summarised with key levers to develop a successful data strategy in an integrated healthcare system.

A data strategy is the structured set of choices an organisation takes regarding how data is identified; stored; provided; processed and governed (Levy, 2018). Identifying data relates to understanding the meaning of all the organisation's data. Storing data relates to organising data in a structure and location that enables easy and parallel access to data for processing, analysis, performance assessment or decision support. Data provision relates to how data is packaged and presented so it can be used and shared. Processing data are the activities required to evolve data from information into a usable resource. Finally, data governance are the explicit rules governing the data, who owns it, how and who processes, manipulates, shares, and keeps it safe.

Integrated systems are characterised for the use of data as an asset to actively create value, on contrary of traditional healthcare where data is used to minimise downside risk (DalleMule & Davenport, 2017). This means that one of the key objectives of an integrated system's data strategy must be to transform data into actions that create value for the health system.

In the working paper of Larrain et al (Larrain et al., 2022), authors followed Nelson's Data Strategy guide (Nelson, 2017) to identify 7 key components of a data strategy for integrated healthcare systems. Afterwards, they investigate about the data strategies of best practices integrated healthcare systems identified in the highest level of integration by the report of the World Innovation Summit for Health (WISH) Accountable Care Forum (McClellan et al., 2013, 2016). A summary of findings to guide the development or improvement of the SCIROCCO Exchange regions' data strategies is presented as follows.

Data scope and purpose: Relates to defining what data will and will not be managed, identifying the essential data to run the organisation's activities what it's worth and what are the objective of the organisation's data. Best practices integrated healthcare systems pursue a basic data unit of a per patient characterisation of costs and healthcare use, linked with a detailed patient (electronic) medical history and associated socio-demo-economic determinants of health. The granularity of this level of data collection meets the objective of integrated healthcare systems to be accountable for costs per patient. Additionally, it allows for performance evaluation at every level of the organisation, including impact assessment of health interventions. Furthermore, it can be used to derive feedback mechanisms in care provision, especially focused on supporting clinical decision making. Finally, health intelligence capabilities at the population level including needs identification, prioritisation of health interventions, population risk characterisation and predictive analytics of medical events can be realised.

Data collection, standardisation, and cleansing: Relates to the data sources used by the organisation, how the data is collected and integrated between sources for organisational use. Given the wide range of goals and interventions of integrated systems there is a need for several data types. We distinguish: Health service administrative data, clinical data, population health data (including health status and behavioural and physiological factors), experience data, socio-demo-economic data and claims or costing data. Sources are varied according to context but include care providers, health system managers, patient records (where Electronic Health Records provide an immense advantage for a successful data strategy), patient recorded outcomes (PROMs), specific surveys or questionnaires, patient recorded experiences (PREMs), public records and health system payors (national health funds, health insurance companies). Claims data can be largely comprehensive and can even partially substitute clinical and administrative data and construct patient records to provide health status and healthcare utilisation information. Typically, this substitution is closely related to morbidity and healthcare use information but lacks behavioural and physiological information.

Data architecture, virtualisation, and integration: Relates to the software and hardware the organisation will use to store, access and process data. It also includes the methods used to integrate data coming from different sources. Commonly, the integration will be made at patient level using a unique patient identifier. However, there are no clear guidelines for this element, and the decisions will be largely influenced by the contextual factors of the organisation, namely the size and number of patients accounted for and the size of the organisations data. Nevertheless, some key issues must be attended - i) data should be easily accessible for data users, that in time should have access to the data they need to create value; ii) not replicating data and ensuring that every user has access to the same

information; iii) Data should be updated and delivered to data user promptly according to their capacities and functions.

Data access and distribution: Related to the previous element, it relates the strategy to deliver data to the correct data user in a prompt manner. Considerations include which front-end software to use, and what analysis format and software will the organisation use. The main objective of this element is to lay out the roadmap guiding how will every person that needs data in the organisation will have access to the data the specifically need.

Data insight and analysis: Relates to the key analysis the organisations make to function correctly. For integrated systems these are typically; Needs identification, performance assessment and impact evaluation of interventions. Information constructed for these analyses include per patient costs of care, KPI of population health and care utilisation, and workflow analysis. Segmentation and risk stratification of the population is a common element in best practices integrated systems. It is used to predict costs and health events, create personalised care plans and planning care provision and health interventions.

Data governance and quality: As we said, data governance are the explicit rules governing the data, who owns it, how and who processes, manipulates, shares, and keeps it safe. It also includes determining the responsibilities and rules for metadata management and overall performance, how will data quality be assured and how long are we required to keep data. Data governance within the context of national health system data strategies is a great challenge of integrated systems. Particularly when the data needs of the organisation are higher than of the standard model of care.

Data regulation, privacy, and security: Very much related to the legal framework for data management in the context of the organisation, it will detail the protocols to comply with the legal framework and to protect data as an asset of the organisation.

6. Conclusions

Within this work package, the main objective was to cocreate a logic model with each of the implementing integrated care regions. To achieve this, each region conducted a comprehensive review of current assets and contextual information that could inform the region's improvement work; followed by facilitated structured 3-step process that included an introductory call to gain buy-in and ensure a shared understanding, a facilitated workshop with regional leaders to develop a high-level logic model and supported a stake-holder engagement workshop. Through this work, the intention was to build regional and national capacity in identifying the underlying assumptions and causal linkages that interacted to drive the intended results as specified by each region and country. Further, the objective was to demonstrate the flexibility and adaptability of logic model as a tool that can serve as an improvement roadmap for integrated care systems at various stages of implementation. The work in this report was conceptualised with the logic model specified in Table 1, and the activities could be broadly grouped into four interacting and complementary components: needs assessment, relationship-building, capacity building and improvement support and analysis. The needs assessment and relationship-building activities set the groundwork for success of logic model implementation. The hands-on workshops ensured the sustainability of this work by demonstrating the value of logic model to each participating region and building their capacity to further build on this work. By building on the synthesis of maturity assessment and knowledge transfer results, the roadmap to improvement was constructed for each region and country that responded to the strengths, weaknesses, and priorities specified by SCIROCCO Exchange partners.

An important finding of this work is that despite the vast literature specifying the importance of grounding program implementation in theory, SCIROCCO Exchange experience working with regional and national implementation teams demonstrated that this remains to be common practice. While few teams were familiar with the concept of logic model and theory of change at the start of this work package, all teams expressed that they found this process, support and guidance, and the output to be useful in their local implementation work. It is concluded that by working alongside regional and national partners in this work, it is possible to demonstrate the value of thinking through the program logic at different stages of implementation and build regional and national capacity in sustaining this practice beyond the funded period of this work. Further, through the thematic analysis, it was found that despite the different stages of implementation, most regions focused on activities that broadly fell under the themes of process coordination and patient/citizen engagement. This finding may suggest that regardless of the maturity level of integrated care systems, these are two dimensions that should be prioritised.

In conclusion, SCIROCCO Exchange has demonstrated that logic models can be adapted for use in integrated care system of varying maturity levels, different settings, and focus. Its logical sequence can guide teams in implementing changes that are based on a pre-specified causal chain, connecting the inputs, activities, and outputs, to the intended results. Finally, its use as a communication tool can serve integrated care implementation well due to the complexities involved.

6.1. Strengths and Limitations

A strength of utilising the logic model for improving integrated care work is the relevance, applicability, and use of the direct outputs (e.g., the logic models) for each of the regions. Regions provided feedback that the logic model will be used internally for strategic planning and evaluation, and or as a communication tool to gain buy-in from local actors required to drive improvement implementation. Additionally, by investing the time in bilateral coaching with each region individually over a year long period, it was possible to work with regions to align this work with the local priorities and empower regional leaders to build on the momentum and continue this strand of improvement work. Furthermore, the analysis of the logic model revealed that the planned activities within the regions converged on 16 distinct types of activities, which paved the way for coordination and continuous knowledge exchange between the regions.

This work reached 9 different regions each with different languages, level of authority of partner organisation, resources, and stages of integrated care implementation. While the diversity of improvement goals and areas of work was evident, it also limited the depth of logic model development in some regions. For example, regions whose role is to inform local integrated care implementation were unable to commit specific measurable activities that is under the purview of local authorities; other regions identified improvement goals that aligned seamlessly with strategic priorities and thus had more time and personnel invested to participate in logic model cocreation activities in-depth. Due the limited time on hand, compounded with the need to conduct this work virtually, we recognised that more detail will be needed to implement the activities as specified in the logic model. The data collected to generate regional summaries and contextual background were comprehensive, but nevertheless gathered within a time limitation. While regions can use the output to kickstart the improvement process towards better integrated healthcare, the roadmap will have to be revised along the improvement process as challenges arise at the point of implementation. This weakness is particularly salient given the constant evolution of healthcare systems. Given the time and resources through the duration of the project the current output (i.e., logic models) provide the precedent on how to conceptualise, coordinate and validate improvement plans at any level. Further, it is believed that this weakness is addressed through the work in building regional and national capacity in revising the logic model as new challenges arise. This allows regions to best leverage the value of this joint improvement planning work.

6.2. Recommendations.

1. Integrated care initiatives should consider the use of logic models to guide not only improvement work, but also to consider its use in planning, and implementation from the design phase.
2. Working with external and internal stakeholders to continuously revise and refine logic models can bring more clarity and validate its internal usability, thus enhancing the value

3. SCIROCCO Exchange regions and countries should continue to sustain, and revise their improvement plans beyond the scope of this project, using the capacities acquired during the Improvement Programme.

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8. Appendix

8.1. Tables and figures.

Maturity Assessment results summary

Region	Years initiated	Readiness to change	Structure and governance	Digital infrastructure	Funding	Process Coordination	Removal of inhibitors	Population approach	Citizen empowerment	Evaluation methods	Breadth of ambition	Innovation management	Capacity building	Overall
Basque	11	XXXX	XXXX	XXXX	XXX	XXXX	XXX	XXXX	XXX	XXX	XXXX	XXX	XXX	3.5
Flanders	7	NA	XXX	NA	X	X	NA	XX	XX	X	XX	NA	XX	1.16
Lithuania	6	XX	XX	XXX	XX	XX	X	XXX	XXX	XX	XX	XX	XX	2.16
Poland	4	XXX	XXX	XXX	XXX	XXXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	3.08
Puglia	17	XX	XX	XXX	XXX		X	XXX	XXX	XX	X	XX	XXX	2.08
Scotland	5	XXX	XX	X	XX	XX	X	XXX	XX	XXX	XXXX	XXX	XXX	2.33
Slovakia	7	X		X	XX	X	X		X			X	X	0.75
Slovenia	4	X	X	XXX		X	X		X		XX	X	X	1.00
GWMK	2	X	XX	XX	XX	X	X	X	XX	X	X	X	X	1.33

Years	0-5	6-10	10+	X	XX	XXX	XXXX	XXXXX
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Figure 11. Summary of SCIROCCO Exchange maturity assessment results. The number of “X” indicates the score provided by each region during the self-assessment.

Table 3. Existing quality improvement policies, organisations, and methods or tools in SCIROCCO Exchange Regions and Countries.

Country	National/ regional policy for QI	National/ regional organisation	Existing QI methods/ tools applied
Basque (Spain)	Strategic framework developed by Basque Department of Health and Osakidetza,	Kronikgune Institute for health services research. Directorate of Innovation and Management of FIOEF (Basque Foundation for Health Innovation and Research) Integration and chronicity of the General directorate of Osakidetza	Framework contract defines type and volume of activity performed and budget allocated. Preferential offer: includes all preventive and disease control interventions prioritized. PDSA
Flanders (Belgium)	Flemish Decree on primary care organisation acts as basis for primary care reform.	VIVEL (Primary Care Institute of Flanders): improve primary care by supporting primary care boards and regional care platform. Responsibility: collect and share data, develop methods, coach, support and advise on quality improvement.	Goal-oriented care.
Lithuania	Lithuanian health strategy for 2014 to 2025: main goals are to reduce healthcare disparities and improve healthy aging	- Ministry of Health - Vilnius University Hospital Santaros Klinikos	Implement a multimorbidity care model
Poland	National Health Programmes (NPZs) developed three models of integrated care (2017): 1) expanded primary care services, 2) outpatient managed care, 3) Home care centre	POZ Plus, launched at select healthcare facilities by the National Health Fund. Introduced primary healthcare teams (physician, nurse, midwife, physical therapist to organise care.	Patient satisfaction surveys are used to monitor quality. No specific QI activities mentioned.

Puglia (Italy)	Puglia Care 3.0 (Regional) - introduced since 2004 and sets the basis for horizontal and vertical integration	AReSS Puglia (Puglia Regional Agency for Health and Social Care): experimental organisation that implements Value-based Healthcare	PDSA, LEAN/Six Sigma
Scotland	- Statutory guidance on health and social care integration (2014) - Health and social care integration - localities guidance (2015) - National Health and Wellbeing outcomes guidance (2015) - Health and social care integration - core indicators (2015)	- Healthcare improvement Scotland - National Improvement Hub - Health and Social care improvement Scotland	- PDSA - Model for Improvement - Process mapping - Communication tools - Technological innovations
Slovakia	The National Quality Program of the Slovak Republic (2017 to 2021): supports quality improvement through collaboration, building capacity and identifying improvement opportunities. Master plan for integrated health care centres in Kosice	- The Slovak Office of Standards, Metrology and Testing: coordinates state quality policy - The Ministry of Health: implements the strategic framework for health - Kosice self-governing region	NA
Slovenia	No policy exists.		
Werra Meißner (Germany)	Krankenhauszukunftsgesetz (KHZG/hospital future law): supports hospitals in IT System development through funding	Arbeitsgemeinschaft 1 (AG1): interest association of different organisations with limited capacity to drive improvement. No formal QI organisation exist.	Process mapping, decision trees and PDSA. Working towards benchmarking.

Table 4. Workshop dates and stakeholders present (last update: Oct 12th, 2021)

Regional Partner	Introductory call	Logic model 1	Logic model 2
AReSS, (Puglia, Italy)	Mar 9 th , 2011 N=1	Apr 1 st , 2021 N=3	Jul 10 th , 2021 N=13
Kronikune (Basque Country, Spain)	Mar 17, 2021 N=1	May 3, 2021 N=2	Nov 5 th , 2021 N=4
VIVEL (Flanders, Belgium)	Mar 26 th , 2021 N=1 Apr 30, 2021 N=2 June 2, 2021 N=2	Jul 6 th , 2021 N=6	TBD
IRSSV (Slovenia)	Apr 1 st , 2021 N=2	May 21 st , 2021 N=2	Nov 9 th , 2021
NFZ (Poland)	Feb 15 th , 2021 N=2	March 8 th , 2021 N=2	Dec 9 th , 2021
Pavol Jozef Safarik (Slovakia)	Feb 22 nd , 2021 N=3	May 4 th , 2021 Oct 6 th , 2021 N=3	Nov 25 th , 2021
VULSK (Lithuania)	Mar 2 nd , 2021 N=4	Mar 30 th , 2021 N=4	Oct 8 th , 2021 N=4
Midlothian government (Scotland, UK)	Apr 26 th , 2021 N=2 May 27 th , 2021 N=4	June 11 th , 2021 N=5	Sept 14 th , 2022
Gesundes Werra Meißner Kreis (Germany)	Dec 11 th , 2021 N=1	June 17 th , 2021 N=2	July 14 th , 2021

Table 5. Synthesis of logic models: Activities classification

Region	SCIROCCO Dimension	Activity type	Activities stated in Logic Models
Basque Country	Capacity building	Training/Webinars/workshops: Care pathway design	Capacity building in care pathway redesign (Including stakeholder's input)
Basque Country	Capacity building	Training/Webinars/workshops: Change Management	Capacity building for change management
Basque Country	Capacity building	Training/Webinars/workshops: Stakeholder involvement	Capacity building in stakeholder involvement (selection and input extraction) for care pathway redesign
Basque Country	Evaluation methods	Intervention Evaluation	Design of evaluation system
Basque Country	Process coordination	Care pathway design	Multimorbid care pathway revision, including evaluation using stakeholder inputs, evaluation of previous interventions.
Basque Country	Process coordination	Care pathway design	Multimorbid care pathway revision, including evaluation using stakeholder inputs, evaluation of previous interventions.
Basque Country	Process coordination	Communication & Dissemination	Design Communication & Dissemination strategy
Basque Country	Readiness to change	Knowledge exchange activities	Knowledge exchange with advanced region (Scotland) in stakeholder engagement
Belgium: Flanders	Capacity building	Training/Webinars/workshops: Goal oriented care	Providing training tools on goal-oriented care (w/ Ghent university) Target: primary care boards
Belgium: Flanders	Evaluation methods	Current situation assessment	Sustainability: continuously monitor needs of training, report to primary care boards
Belgium: Flanders	Evaluation methods	Current situation assessment	Involve experts by experience (patient) in the training Further explore role of patients in full cycle
Belgium: Flanders	Evaluation methods	Current situation assessment	Implement maturity assessment at the primary care board local level
Belgium: Flanders	Evaluation methods	Intervention Evaluation	Continuously evaluate training

Belgium: Flanders	Funding	Funding	Apply for funding regionally
Belgium: Flanders	Innovation infrastructure	Data Infrastructure	Work with (Flemish Agency for Health and Care) organisation to develop data infrastructure. -support defining variables -support capacity building for database system -Identify other data systems housed within other organisations
Belgium: Flanders	Innovation infrastructure	Data Infrastructure	Design and implement a digital and care plan (common platform for all to access patient information, clinical and preferences)
Belgium: Flanders	Innovation infrastructure	Digital Care: tools	Knowledge clips short videos that explain goal-oriented care for patients
Belgium: Flanders	Innovation management	Data intelligence	Primary care boards (providers, patient reps, informal care givers, local authorities etc.) regularly monitor population health data to be responsive to population health needs
Belgium: Flanders	Innovation management	Intervention planning	Use logic models and implementation plan know how at primary care board local level
Belgium: Flanders	Innovation management	Intervention planning	Implementing interventions to meet regional needs
Belgium: Flanders	Structure and governance	System organisation	VIVEL involved as a partner in a project that: come together as needed. informal caretaker providers, patient,
Germany: GWMK	Capacity building	Training/Webinars/workshops: health promotion	Developing training curricula (everyday helpers, health guides, health & me)
Germany: GWMK	Capacity building	Training/Webinars/workshops: health promotion	Health promoting online courses / Workplace health promotion & management
Germany: GWMK	Capacity building	Training/Webinars/workshops: Self-management	Arrangement of care courses for patients (self-management) and family caregivers
Germany: GWMK	Capacity building	Training/Webinars/workshops: telehealth	Training of health guides as telehealth guides
Germany: GWMK	Demand driven approach	Implementation of special care program: Case management	Strong heart- Heart failure

Germany: GWMK	Demand driven approach	Implementation of special care program: Community care givers	Community care givers
Germany: GWMK	Demand driven approach	Implementation of special care program: Self-management	"Easy breathing, despite COPD" -COPD
Germany: GWMK	Demand driven approach	Implementation of special care program: Telehealth	Telehealth for comorbid patients
Germany: GWMK	Innovation management	Digital Care: tools	Recommendation of quality assure health promoting apps and digital applications
Germany: GWMK	Innovation management	Intervention planning	Medication consultation for pharmacists and physicians (FORTA)
Germany: GWMK	Process coordination	Care pathway design	Network application (MIGO) mapping of health pathways
Germany: GWMK	Process coordination	Healthcare system efficiency	Guidelines & support structures (DIGILO)
Germany: GWMK	Process coordination	Healthcare system efficiency	Harmonisation with national guidelines & support structures
Germany: GWMK	Removal of inhibitors	Intervention planning	Public health campaigns
Germany: GWMK	Removal of inhibitors	Intervention planning	Health promoting discounts
Germany: GWMK	Structure and governance	System organisation	Recruitment of physicians and specialist to the region
Germany: GWMK	User empowerment	Shared decision making	Second opinion procedure
Italy: Puglia	Breath of ambition	Stakeholders' involvement	Invite social sector participants to join
Italy: Puglia	Breath of ambition	Stakeholders' involvement	Intentional in early engagement of missing stakeholders (e.g. Anci Puglia)
Italy: Puglia	Capacity building	Training/Webinars/workshops: Care fragmentation	Implement capacity building to bridge skill and organisational gaps

Italy: Puglia	Capacity building	Training/Webinars/workshops: Eu project/Fundraising	Webinars workshops to train stakeholders (providers & patients) in self-management
Italy: Puglia	Evaluation methods	Current situation assessment	Maturity assessment in Puglia Region, synthesize results
Italy: Puglia	Evaluation methods	Current situation assessment	Virtual workshop with 6 LHA to engage on MA process
Italy: Puglia	Funding	Funding	The memorandum of understanding with the LHAs provide economic support to train the LHAs stakeholders
Italy: Puglia	Innovation infrastructure	Digital Care: tools	Virtual training platform
Italy: Puglia	Readiness to change	Knowledge exchange activities	Knowledge exchange topic of EU Project/Fundraising/ and team building
Italy: Puglia	Structure and governance	System organisation	Develop recruitment policy to recruit specialised project managers
Italy: Puglia	Structure and governance	System organisation	AReSS Puglia signed a memorandum of understanding with the LHAs in order to activate a systematic change based on the KT and capacity building aiming at creating a regional task force and a stronger cross-cutting institutional collaboration
Lithuania	Breath of ambition	Stakeholders' involvement	Establish process to involve social workers in patient care, special focus on multimorbid patients (Interdisciplinary teams)
Lithuania	Process coordination	Healthcare system efficiency	Intersectoral collaboration between providers and health bureaus (gvmt agency)
Lithuania	Capacity building	Training/Webinars/workshops: Integrated care	Integrated care training for providers (on structure, implementation, and patient inclusion & self-management)
Lithuania	Capacity building	Training/Webinars/workshops: Self-management	Training patient on self-management
Lithuania	Demand driven approach	Implementation of special care program: Case management	Define case manager role and scope of practice
Lithuania	Demand driven approach	Implementation of special care program: Case management	Assess multimorbid patient social conditions
Lithuania	Innovation infrastructure	Digital Care: tools	Develop and distribute tools/apps/resources for physicians and patients about self-management
Lithuania	Innovation management	Intervention planning	Adapt model to local context
Lithuania	Process coordination	Communication & Dissemination	Voluntary stakeholder meetings for dissemination of initiative (require funding by MoH)

Lithuania	Readiness to change	Knowledge exchange activities	Knowledge exchange between primary care centres (pilot sites)
Lithuania	User empowerment	Shared decision making	Develop an agreed upon individual healthcare plan template
Lithuania	User empowerment	Shared decision making	Establish process for providers to include patients in decision-making (care goals etc.)
Poland	Capacity building	Training/Webinars/workshops: Health promotion	Webinars workshops to train stakeholders (providers & patients) in health promotion
Poland	Capacity building	Training/Webinars/workshops: Self-management	Webinars workshops to train stakeholders (providers & patients) in self-management
Poland	Evaluation methods	Current situation assessment	Survey implementation: Public Healthcare Use survey (DANAEL)
Poland	Evaluation methods	Current situation assessment	Evaluation research of patients/entities using integrated care (PREMs and PROMs)
Poland	Innovation infrastructure	Data Infrastructure	Activate IKP (Individual Patient Account) - containing EMR - individual information on health services finances by public funds (missing diagnostic results), e-prescriptions, e-referral, and e-sick leave accessible by patients. Create patient summary
Poland	Innovation infrastructure	Digital Care: tools	Create web-based resources (YouTube, website) on self-management for patients
Poland	Innovation infrastructure	Digital Care: tools	Create patient portal with information on various diseases (NHF Academy; pacjent.gov.pl)
Poland	Innovation infrastructure	Digital Care: tools	Develop and distribute tools/apps/resources for physicians and patients about self-management
Poland	Removal of inhibitors	Intervention planning	Design introduction of prevention programs and public care services.
Scotland: Midlothian	Breath of ambition	Stakeholders' involvement	Develop an end-to-end approach for all services and service managers to incorporate service user consultation, engagement, and feedback
Scotland: Midlothian	Breath of ambition	Stakeholders' involvement	Develop a strategic approach to capturing, sharing, and using service user and public engagement strategically across the partnership
Scotland: Midlothian	Capacity building	Training/Webinars/workshops: Stakeholder involvement	Develop/implement training and staff toolkits to build staff capacity in consulting with service users and using feed-back and consultations
Slovakia: Kosice	Capacity building	Training/Webinars/workshops: Integrated care	Webinars workshops to train stakeholders in integrated care
Slovakia: Kosice	Innovation infrastructure	Digital Care: tools	Digital tools: Web platforms for stakeholders. Topics: Integrated care, best practices, innovations.

Slovakia: Kosice	Innovation management	Intervention planning	Translation of videos, brochures into SK language
Slovakia: Kosice	Process coordination	Communication & Dissemination	Design Communication & Dissemination strategy
Slovakia: Kosice	Process coordination	Healthcare system efficiency	Stakeholders mapping and analysis
Slovenia: Trbovlje	Capacity building	Training/Webinars/workshops: E-care use	Promote e-care and build capacity among users to access e-care
Slovenia: Trbovlje	Capacity building	Training/Webinars/workshops: Integrated care	Scoping analysis of integrated care (PHM capacities)
Slovenia: Trbovlje	Evaluation methods	Current situation assessment	Assessment of e-care infrastructure
Slovenia: Trbovlje	Innovation management	Healthcare system efficiency	Regular meetings with stakeholders
Slovenia: Trbovlje	Readiness to change	Knowledge exchange activities	Knowledge exchange topic of e-care

8.2. Regional Summaries

Summaries of regions as compiled from previous work packages.

8.2.1. Midlothian Health and Social Care Partnership, Scotland

Regional Summary

Maturity Assessment Results	Knowledge Transfer Activities	Improvement planning
Integrated care in Scotland: - “Health and Social Care Partnerships” provides structure for integrated healthcare system (2014) - integrates governance, planning and resourcing of adult social care services, primary care and community health, and hospital services. Maturity assessment: Goal: Capture stakeholder perceptions regarding governance, strategic planning, operational Process coordination is in place for some initiatives but no systematic. Digital infrastructure is complex, fragmented, and disjointed from the service design. Risk stratification is used, but not systematically. Citizen empowerment is recognised but not implemented systematically. 1. The self-assessment outcomes reflect the actual maturity of Midlothian HSCP, showing progress towards integrated care in a number of dimensions. The outcomes provide a diverse picture of maturity,	Weakness: - Digital infrastructure - Population management - Citizen empowerment Strength: - Readiness to change - Innovation management - Citizen empowerment Planned activities - Analyse outcomes of Maturity assessment to identify dimensions for twinning and coaching - Propose learning activities from SCIROCCO exchange to align with internal improvement processes	National or regional policy • Statutory guidance on health and social care integration - https://www.gov.scot/collections/public-bodies-joint-working-scotland-act-2014-statutory-guidance-and-advice/ • Health and social care integration - localities guidance - https://www.gov.scot/publications/localities-guidance/ • Guidance framework on the national and health and wellbeing outcomes (February 2015) - https://www.gov.scot/publications/national-health-wellbeing-outcomes-framework/ • Health and social care integration - Core indicators - https://www.gov.scot/publications/health-social-care-integration-core-suite-indicators/ Organisations in charge of improvement: • Healthcare improvement Scotland - http://www.healthcareimprovementscotland.org/ • National Improvement Hub - https://education.gov.scot/improvement/ • Health and Social Care Improvement Scotland - https://ihub.scot/ Formal QI methods applied: - Plan do study act

ranging between “1” to “4” in all dimensions. No results were particularly surprising. 2. Q2 - Structure and Governance; Q3 Digital Infrastructure and Q6 - Removal of Inhibitors: highlights the deployment and use of digital services at a national level which not always meet the local needs and requirements. 3. The greatest strengths were observed in the number of dimensions: Q1 - Readiness to Change, Q7 - Population Approach, Q10 - Breadth of Ambition, Q11 - Innovation Management and Q12 - Capacity-building. 4. Room for improvement has been recorded for the dimensions: Q2 - Structure & Governance, Q3 - Digital Infrastructure, and Q6 - Removal of Inhibitors.		- Model for improvement - Process mapping - Communication tools - Technological innovations
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8.2.2. Kosice, Slovakia

Regional Summary

Region	Maturity Assessment Results	Knowledge Transfer Activities	Improvement planning
Kosice (Slovakia)	- Conducted by the Department of Social and Behavioural Medicine - Stakeholders were diverse and inclusive: Primary care, academia, state, gvmt, patient groups, health and social care - Low participation (30%) due to concurrent COVID priorities - Findings: • Low maturity levels on various dimensions - averaging between 0 (in 4 dimensions) and 1 (in 7 dimensions). ○ Structure and governance (both scored 0) important starting point • Process coordination had a score of 2 • Low level of general awareness for integrated care among populations, thus no pressure on the government to find solutions - Lack of effective communication, coordination and effective leadership between the MoH, the Ministry of Labour, social Affairs and Family - Most initiatives grassroot - No systematic actions or policy are currently in place to address this - The SCIROCCO MA tool presents a great asset to facilitate further development in integrated care	Weaknesses: 1. Structure & governance: 2. Population approach: No tool to identify high-risk populations Lack of community services -> high hospitalisation 3. Evaluation methods No WG to advise on measures & evaluation for integration process at the national, regional, and/or municipal level. 4. Capacity building Driven by bottom-up initiatives and non-governmental organisations. Inadequate understanding by senior providers on importance of interdisciplinary collaboration needs to be addressed 5. Breadth of Ambition Activities Planned Main Objective: To raise awareness about the importance of the integrated care in Kosice 1. Collect existing resources and evidence on integrated care 2. Develop educational material	1. National Health Programs a) The National Quality Program of the Slovak Republic: aims to improve the overall quality of products and services in public and private organisations b) Strategic framework for health for 2014 to 2020: lists key priorities for the system 1) Public Health 2) integrated outpatient care 3) inpatient healthcare: reorganise range of service provision, regional scope, infrastructure etc c) Master plan for establishment of integrated health care centres in Kosice Increase primary care providing and connection between health and social service infrastructure. Also focused on provider retention, strengthening public health, decision-making processes etc. 2. National or regional organisation that leads improvement Slovak Office of Standards, metrology and testing: responsible for National Quality Program Kosice self-governing region: responsible for (re)building integrated care centres in the Kosice region 3. Formal QI methods - Communication tools: platform for peer exchange etc - process mapping: patient journey mapping for the long-term care system

	• Communication at the regional and national level	3. Develop an online educational platform of integrated care Workshop with relevant stakeholders	- Clinical audit: evaluate whether clinical and social care meets defined quality standards
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8.2.3. Puglia, Italy

Regional Summary

Region	Maturity Assessment Results	Knowledge Transfer Activities	Improvement planning
Italy	Overall: Regional managers and clinicians score higher on maturity progress than citizen's perspective. This may be due to the fact that not all information is accessible to the patient Strengths across regions: Population approach, process coordination, citizen empowerment, and digital infrastructure Weaknesses across regions: Removal of inhibitors, finance and funding, evaluation methods Next steps for Puglia: - knowledge sharing across regions - Identify common strengths and weaknesses across regions - take part in twinning and coaching activities across regions - implement capacity building at regional level (Puglia)	Weakness: Bari: (1) Finance and funding (2) Digital infrastructure (3) removal of inhibitors Brindisi: lack of information and communication on multiple levels Barletta-Andria-Trani: (1) Finance and Funding (2) Removal of inhibitors Foggia: (1) Removal of inhibitors (2) Evaluation methods (3) Breadth of Ambition Lecce: (1) Readiness to Change (2) Structure and Governance (3) Innovation Management Taranto: (1) Finance and Funding (2) Removal of inhibitors (3) Breadth of Ambition Strengths Bari	1. National or regional policy for improvement • Integrated care started in 2004 • Goal: to improve the disease and care management of chronic patients • Type of integration: ○ Vertical: specialised care and primary care ○ Horizontal: among professionals in the same care setting • Priority: patient-centred, team-based care ○ Define care pathways based on patient pathology, promotes patient empowerment, utilisation of digital systems to support care delivery and facilitate communications • focus of integration: • risk stratification • individual care plan developed • IT platform that supports patient care management, information sharing, etc • GP payment based on specific health goals • continuous professional development • empowering patients and caregivers National or regional organisation in charge of improvement

	(1) Citizen empowerment (2) Breadth of ambition (3) Process Coordination <i>Brindisi</i> (1) Structure and governance (2) Digital infrastructure (3) citizen empowerment (4) breadth of ambition <i>Barletta-Andria-Trani</i> (1) process coordination (2) population approach (3) Breadth of ambition <i>Foggia</i> (1) readiness to change (2) population approach <i>Lecce</i> (1) digital infrastructure (2) finance and funding <i>Taranto</i> (1) digital infrastructure (2) process coordination (3) population approach (4) citizen empowerment (5) capacity building Planned activities 1. Organise workshop with 6 LHAs to build consensus of priority for action (for KT) 2. Organise webinars on funding opportunities to enhance capacity building and encourage collaborations	ARESS Puglia (Puglia Regional Agency for Health and Social Care) - has an “exploration” function that complements the implementation function of health departments Agency focuses on reorganising Apuglia’s healthcare system towards value-based systems. Experimentation done through “value labs” 3. Formal quality improvement methods applied • PDSA cycles: used to introduce and test potential QI on a small scale within the Puglia Care 3.0 • Process mapping: ○ used to map the patient journey for quality improvement opportunities ○ CoReMAR - Coordination of the Puglia Rare Diseases Network) - data gathered centrally in Puglia into an information system to identify needs, skills offered, and bridging the gaps. Monitoring of measurable indicators to define pathways of patients with rare diseases • CoROP - Coordination of the Puglia Oncological Network- define QI projects • Lean/Six Sigma: LEAN Lab ○ Launched in 2017, the only one of its kind in Italy • Launched a cultural and managerial process to identify operators involved, recovery of waste, improvement and safety, and organisational simplification • Performance Benchmarking: Drive QI through performance targets (YOU MAN LAB) ○ Objective: improve the humanisation component of health services • Organisational climate (collab with Pisa) • Humanisation of services: patient and citizen involvement, has 140 indicators and improvement interventions are being implemented
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8.2.4. Trbovlje, Slovenia

Regional Summary

Region	Maturity Assessment Results	Knowledge Transfer Activities	Improvement planning
Slovenia	Priority for health system: efficient, high-quality and financially sustainable long-term care system for seniors. - 2004: gvmt adopted a framework for reforming the LTC system emphasising the need for insurance to take care of an aging society - National report on social protection 2008-2010 highlighted current gaps: 1. existing services and benefits are not integrated into a single system 2. poor coordination b/w services providing different services 3. impedes access to services and diminishes their quality 4. users are not given equal access to quality services <i>MA process</i> N=8 (LTC, gvmt, health centres, community services) Dimensions with largest differences: 1) highlighted the lack of trained staff as an obstacle the IC implementation 2) although digital infrastructure was rated highly, there is still space for improvement	Weakness: <i>Innovation management:</i> integrated care innovations are formalised under the EU Cohesion Policy documents. Pilot projects are just starting with long term care system planning. Strength <i>eHealth Services:</i> technological service that provides 24hr user monitoring, automatic help calls, and organised help from help centres (Trbovlje specific) - e-appointment services (referrals and appts) - e-prescription - health care data registry <i>Standardisation and simplification:</i> Web portal for citizens Planned activities 1. Exchange with Basque Country & Scotland - Identify assets from Knowledge Management Hub - Seek recommendations from host - Identify assets with local stakeholders - Raise awareness of the importance of integrated care and increase buy-in	Introductory meeting: Focus on Long-term care planning improvement

Dimensions to highlight: 1) <i>Evaluation methods</i> - no formal evaluation structure in place for integrated care 2) <i>Process coordination</i> - lack of common database for efficient data transfer and sharing 3) <i>Population approach</i> - no clear distinction between social care and health services - MA provided an opportunity for cross-sectoral collaboration, and to identify challenges to integrated care implementation		
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8.2.5. Poland

Regional Summary

Region	Maturity Assessment Results	Knowledge Transfer Activities	Improvement planning
Poland	● 39/41 Primary Healthcare Centres took part in the self-assessment ○ All sites have implemented electronic timetable of visits, electronic patient documentation, participation in preventive programmes ● All sites were in varying levels of development ● MA used to negotiate and build consensus internally ● Most dimensions scored on average 3 / 4 -> reflective of current system. ○ However, keep in mind that assessment was made by those who were more open to change (self-selection bias!) ● Areas to improve: process coordination, digital infrastructure, citizen empowerment ● Citizen empowerment: strengthened in recent years due to implementation of e-prescriptions, e-referrals, planned visits to doctors, and e-sick leave. ● Buy-in from stakeholders on the process of MA achieved. Agreed to the importance of re-evaluating after implementation of integrated care interventions	Weakness: 1. Digital infrastructure: Structure in place, however, EMR not interoperable across primary/outpatient/inpatient care 2. Citizen Empowerment: Patients have partial access to info. Requires more encouragement to empower self-management Strength 1. Digital infrastructure: Introduced a national digital platform so all patient has access to historical data on healthcare services (public) - prescriptions & visits included. Planned activities Focus on patient empowerment (?) 2. survey to understand provider needs, patient needs 3. Search for good practices to disseminate internally and externally	1. National Health Programmes (NFZ): development of 3 models of integrated care (since 2017, codeveloped with World Bank): a) expanded primary care services (incl. nurses, midwives, physical therapists) b) outpatient managed care (outpatient specialist care, comprehensive preventive services, ambulatory rehabilitation) c) improved integration b/w healthcare and social care for seniors 2. National Health Fund in collaboration with World Bank running the PHC Plus model 3. Current/ongoing improvement activities: a) Quality and efficiency of PHC PLUS monitored by means of periodic patient satisfaction surveys (Patient activation measures, PROMs and PREMs, % of patients hospitalised) ➔ Focus on citizen empowerment

8.2.6. Werra-Meißner-Kreis, Germany

Regional Summary

Region	Maturity Assessment Results	Knowledge Transfer Activities	Improvement planning
Germany	Priority for health system: efficient, high-quality and financially sustainable healthcare system by improving health literacy and care coordination Key initiatives of the Gesunder Werra-Meißner Kreis include: - health guides consisting of allied health professionals that act as a low threshold point of contact for insurers - establish intersectoral care pathways - virtual care offers - self-management courses <i>MA process</i> N=6 (Management, pharmacist, GP, lawyer, allied health professional) Dimensions with largest differences: - scoring between health insurance managers and physicians showed large discrepancies with the former scoring dimensions much higher than latter Dimensions to highlight: - Digital infrastructure score quite high compared to reality. There is currently no integrated digital platform that allows the flow of information between different professionals and healthcare areas. It was agreed that this dimension is closely linked to various other dimensions (such as process coordination)	Weakness: <i>Digital Infrastructure:</i> Germany and the region do not have access to electronic health records (EHR). The German EHR is due for introduction in January 2021 with yearly releases of new features. <i>Population Approach:</i> In Germany over 100 health insurances exist up to this day. This divides the population in small intervention subgroups. At the moment the GWMK management covers two cooperating health insurances 24% of the regional population. Negotiations with the biggest regional health insurance are planned. The three health insurances would cover around 60-70% of the population. The currently cooperating health insurances do not have automated risk stratification of their members. In cooperation with GWMK a risk stratification assessment is in development. Strength <i>Citizen Empowerment:</i> Implementing health guides as a new support structure to help patients navigate complex healthcare systems <i>Process Coordination:</i> GWMK has access to an experienced integrated care management board	1. Krankenhauszukunftsgesetz, Krankenhauszukunftsgesetz (LHZG) Based on the external event of COVID-19 and the realisation that the level of German hospital IT in relation to its European neighbours is subpar, the national legislation released a law that is supposed to get hospitals ready for the future. Attached to the law is a fund that will be used to support hospitals development of IT systems. In June 2021, every hospital must report the level of IT readiness. Based on local factors the hospital will then receive funding to implement or improve IT systems. 2. Arbeitsgemeinschaft 1 (AG1) AG1 is an interest association of various organisations that inform and network actors of the regional social and health care system. While they are not independently responsible for improvement efforts, they can advise on improvements. 3. GWMK employs process mapping, communication tools, decision trees, plan-do-check-act. Moreover, GWMK would like to develop to a stage where performance benchmarking is used to check improvement activities. However, the time lack of crucial population level data of >9 month is very big and limits the potential to react.

	and the lack of investment hinders further development. - Citizen Empowerment was perceived as a strength, however further work is required to increase the maturity of this dimension.	Planned activities 4. Exchange with Basque Country on digital infrastructure and population health management	
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8.2.7. Flanders, Belgium

Regional Summary

Region	Maturity Assessment Results	Knowledge Transfer Activities	Improvement planning
Belgium	Integrated care: (since 2014 reform) - Flanders engaged in integrating primary care (health and social), mental, hospital and rehabilitation. (2019) - established VIVEL (Flanders Institute for Primary Care) to support Regional Care Platforms and 60 Primary Care boards in strengthening collaboration and coordination between local authorities and primary care. MA: used in every PC board to better policy development & planning and enhance new opportunities. First MA: 12 respondents (varied stakeholders) Most divergent scores: 1) Structure and governance 2) Breadth of ambition Groupings: Challenges:	Weakness: Population approach - weakened by system fragmentation - should stress patient orientation rather than financially drive Process coordination - basis: care processes > social processes - like to move towards goal-oriented care Evaluation methods - evaluation system not yet harmonised Strength Readiness to change: Integration journey is one of ownership and created confidence across stakeholders. While change management is ongoing, the willingness and understanding to adopt different ways of working is present. Planned activities - Map good practices on providing support to decision-makers on data usage in primary care - Webinar on goal-oriented care	National/Regional policy for improvement: The overarching legal frame is the Flemish Decree about the organisation of the primary care, the regional care platforms and the support to primary care providers (26/04/2019) Organisation in charge of improvement: VIVEL (Primary Care Institute of Flanders): Mandate is to improve care for people. They support the care boards and the care platforms, collect and share data, develop methodologies, coach, conduct innovation, support quality and advise the Flanders agency for care and health. Quality improvement methods: - Goal oriented care- developed by university of Ghent, applied to 60 primary care boards (social and health professionals, local authorities and local organisations of patients and informal carers). - Planning for an integrated community care together with King Baudouin Foundation (https://transform-integratedcommunitycare.com/)

- outcomes of assessment reflect the stakeholder perspective (& their jurisdictional scope - Flanders/ Flanders&Brussels/ Federal) - Change management difficult due to status quo of working in silos - healthy system remains disease oriented - Belgium's distinct governance structure (regional and federal both have responsibilities towards integrated care adoption)		
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8.2.8. Lithuania

Regional Summary

Region	Maturity Assessment Results	Knowledge Transfer Activities	Improvement planning
Lithuania	- Variety of participants from providers, governments to patients - Goal: "to better expose the weaknesses of the local environment of integrated care in Lithuania" - Self-assessment performed twice to gain buy-in from larger group of stakeholders Results: - Analysed according to the differential stakeholder groups - Priorities highlighted from consensus building workshop: - Process coordination - Removal of inhibitors - Capacity building - Taken together: "digital infrastructure" and "population approach" ranked highest (although population approach ranked 0 among pts) -> digital infrastructure considered a strength - process coordination - finance and funding, evaluation methods, breadth of ambition ranked lowest - PHCC (Primary Health Care Centres) + specialist medical doctor. Discrepancies:	- Webinars: - To identify primary users (patients with chronic diseases that benefit most from integrated care) - To present integrated care as an option for addressing the needs of multimorbid patients - Trainings: - Align intervention depending on local needs and direction - Increase knowledge and understanding of integrated care by presenting the integrated multimorbidity care model Change package: - What are we trying to accomplish - What changes can result in improvement? - How will we know that a change is an improvement - Specify the KPIs to assess - Improve continuity of care and communication among healthcare	- National Health Policy that governs integrated care - Aimed to address priority public health concerns and social vulnerabilities (reduce disparities in healthcare and improve healthy aging) - Within the scope of integrated care region, is there a national or regional organisation in charge of improvement? Minister of Health of the Republic of Lithuania https://sam.lrv.lt/en/ Vilnius University Hospital Santaros Klinikos https://www.santa.lt - Application of formal quality improvement methods in the context of integrated care?

• Breadth of ambition: • Evaluation methods: viewed as not systematic by specialists • Patients vs. MoH: no similarities, highlights miscommunication and misperception ○ Result of differing perspectives -> MoH defines and implements the priorities, patients have a practical view based on their own individual experiences. • Identification of 3 priorities for action 1) Process coordination: Key priorities with guidelines and recommendations for multidisciplinary approach inc: a) Horizontal and vertical integration b) Patient transition (paediatric to adult) c) Inter-professional cooperation 2) Removal of inhibitors: (current bottleneck) d) Identify weaknesses in legal framework and organisation of services and actively participate in drafting legal documents (regular meetings required) e) Should clarify specifically which inhibitors? 3) Capacity building f) "lack of communication and collaboration with services... sharing innovations within services exists but not between services" g) Limited know-how in cooperation for integrated care	professionals and levels of care by introducing case manager guidelines and presenting patient care coordination	• Design care models for people with multimorbidity (system shift from acute -> chronic orientation) • Current pilot projects testing integrated care models: ○ Integrated multimorbidity care model (application in primary healthcare setting) ○ Testing components of the care model (case manager and others) ○ Proposes 16 components for improved care of multimorbid patients. Framework inc: • Delivery of care, decision support, self-management support, information systems and technology and social and community resources.
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8.2.9. Basque Country, Spain

Regional Summary

Region	Maturity Assessment Results	Knowledge Transfer Activities	Improvement planning
Basque Country	- Basque health system is made up of 13 integrated healthcare organisations, established to integrate primary and hospitalised care - 3 pillars: 1) integrated governance 2) population approach (incl. HER integration) - MA - 9 stakeholders - outcome served as basis for multi-stakeholder discussion, negotiation and consensus-building - large discrepancy between how healthcare providers rated vs. citizen -> empower citizens - identified “removal of inhibitors” and “citizen empowerment” as priority (lots of structural changes to raise awareness and training)	Strengths 1. Population approach - stratification of whole population based on morbidity risk (frailty and health determinants currently not factored in) 2. digital infrastructure - both for professionals and patients. Also implemented in the social sphere (at nursing homes) Weaknesses 3. Citizen Empowerment - digital tools for empowerment (e.g. Personal Health Folder), other initiatives “Paciente Activo” / “KronikOn”. Citizens not involved in decision-making processes on service delivery and policymaking 4. Removal of inhibitors - cultural change to barriers removal 5. Process coordination - Activities: 1. Search for good practices on citizen empowerment 2. Health system resiliency in times of COVID	Organisation that leads improvement: • Kronikgune Institute for health services research, focused on research in organisation and management of health and social-health services, and oriented towards the generation and application of knowledge and social and economic value for the Basque healthcare system: https://www.kronikgune.org/en/ • The Directorate of Innovation and Management of BIOEF- Basque Foundation for Health Innovation and Research through https://www.bioef.org/. Bioef collaborates on the establishment of health and inter-sectoral programmes and policies, with the aim of making the Basque Health System more competitive. • The integration and chronicity service of the General directorate of Osakidetza lands the innovations from BIOEF and the deployments/piloting/tools developed in the research projects by Kronikgune: https://www.osakidetza.euskadi.eus/ Quality Improvement Tools used - Mainly PDSA - Multipathology patient care pathway, telemonitoring in health failure