TransCare

New care pathways for supporting TRANSitional CARE from hospitals to home using AI and personalized digital assistance

D3.1 – Transition care challenges analysis and knowledge

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Contents

List of acronyms

Acronym	Description
EU	European Union
FAR	FARSUND KOMMUNE
GP	General Practitioner
HINS	HEART INSTITUTE “NICULAE STANCIOIU” CLUJ-NAPOCA
INRCA	ISTITUTO NAZIONALE DI RICOVERO E CURA PER ANZIANI
KRD	KARDE AS
KS	Kommunesektorens organisasjon (Norwegian Association of Local and Regional Authorities)
ML	Machine Learning
RPM	Remote patient monitoring
THCS	Transforming Health and Care Systems
TLU	TELLU AS
TUC	TECHNICAL UNIVERSITY OF CLUJ-NAPOCA
WP	Work Package

Executive summary

This is the first deliverable in work package (WP) 4 entitled “Transitional care knowledge building and care pathways design” and the task is to identify the challenges facing health and care systems in terms of transitional care. The WP focuses on analysing the challenges in transitional care and developing knowledge to improve care pathways from hospitals to home. This first deliverable has focus on mapping the *now* situation. The next two tasks will focus on analysing the data gathered in this task to redesign the care pathways for the trials in WP4 considering the innovative transitional care technology adoption done in WP2.

First, we have reviewed the national challenges facing transitional care for our project partners Italy, Romania, and Norway. In Italy, regional disparities, financial constraints, lack of integration between hospital and community services, and resistance to change among GPs are significant issues. Romania faces a shortage of social workers, limited information sharing, regional disparities, and low health expenditure. In Norway, early discharge issues, communication gaps, resource allocation challenges, and the need for better coordination and patient involvement are identified.

The document briefly describes the pilots in three locations: HINS in Romania, INRCA in Italy, and FAR in Norway. HINS focuses on cardiovascular care and refining transitional care practices. INRCA aims to bridge the gap between acute care and long-term care. FAR integrates a digital short-term unit into municipal care services to reduce readmissions and support home care.

In order to identify local challenges in transitional care we have interviewed patients, GPs, hospital, and municipal healthcare workers, as well as had workshops with the multidisciplinary teams. This work has led to the design of “current practice” care pathway matrices. We will next analyse these matrices help identify inefficiencies, redesign and standardize care delivery. The care pathway matrix for INRCA focus is not only and mainly on cardiological aspect but especially on multimorbid and possibly chronic older adult. While cardiological care is important for the Italian institute, the main core topic is focused on geriatric frail patient characterized by different co-existing pathologies. HINS addresses high bed occupancy rates and the need for better follow-up care. FAR's matrix highlights complex interactions between GPs, municipal services, and hospitals, emphasizing communication and coordination.

The deliverable also tackles some of the local challenges at pilot sites such as integrational issues, including no direct connection with the general practitioner and territorial services at INRCA, bed shortages and crowded emergency departments at HINS, and communication gaps, coordination issues, resource constraints, and the need for better training and patient involvement at FAR.

The conclusions emphasize that addressing these challenges requires improved communication, coordination, resource allocation, and training across all levels of care. The next step is to provide a comprehensive analysis of the challenges in transitional care and to outlines the steps needed to develop effective care pathways focusing on improving communication, coordination, and resource allocation to enhance patient outcomes during the transition from hospital to home.

1 Introduction

This document is the first deliverable for the work package entitled "Transitional Care Knowledge Building and Care Pathways Design." The focus of this initial deliverable is on mapping the current situation. This work package aims to analyse the challenges related to continuity of care and generate knowledge useful for optimizing care pathways from hospitalization to return home.

The purpose of this deliverable is to propose a comprehensive mapping of the current situation. The next two tasks will involve analysing the data gathered in this task to redesign the care pathways for the trials planned in WP4. This redesign will also take into account the integration of the innovative technologies for transitional care developed in WP2.

1.1 Task description

To identify locally specific challenges in transitional care, we conducted interviews with patients, primary care physicians, hospital and municipal healthcare providers, and held workshops with multidisciplinary teams to gather comprehensive insights. This work led to the creation of matrices of current care pathways, mapping out each step of the care process to represent the current practices in transitional care management in the three settings.

Next, these matrices will be analysed to identify inefficiencies, redesign, and standardize care pathways, thereby improving the quality and continuity of care. This structured approach will enable the identification of concrete solutions to enhance care pathways and foster greater integration among the different actors involved in transitional care.

1.2 Relations to other activities

We will use the information gathered in this task (T3.1) to **study, analyse and design the care pathways for patient relocation from hospital to home** (T3.2)**.** This information will be used to adapt transitional care technology defined in task (T2.1) **Transitional care technology adaptation to national and healthcare contexts.** In this WP we will refine and improve the remote patient monitoring infrastructure and ML based post discharge assessment and follow-up. We will consider the local context of each trials site, roles and responsibilities, language, etc. At the end of the longitudinal pilot, after the gathering of patient data, the neural networks models will be trained, aiming to analyse the data monitored on daily life activity data and vital signs to identify problems that require proactive intervention and adherence to the prescribed treatment. The work package members will analyse data gathered in Task 3.1 and design care pathways for the longitudinal pilots (WP4).

This information will be used to adapt transitional care technology, case pathways for understanding of current practice helping to identify where gaps in care occur. We will look at reasons for the gaps including communication, financing, transfer of responsibility between organisations, etc.

2 National challenges in transitional care

Internationally it is known that transitioning from hospital to municipal care is challenging due to communication gaps between healthcare providers, inadequate discharge planning, resource limitations in community settings, and the need for effective interprofessional collaboration. Additionally, patients and their families often feel unprepared for the transition, leading to anxiety and stress. Addressing these issues requires a collaborative approach that integrates health and social care services, focusing on best practices in discharge planning and care transitions.

2.1 Overview of challenges Italy

In Italy, the main current challenges in the transitional care include regional disparities, discharge protocol standardizations, financial constraints and lack of integration between hospital and community services [1-3]. In particular, for what concerns regional disparities in the provision of community care services, some regions have invested heavily in these services and are closer to the standards set by the central government, while others are starting from scratch. Northern regions tend to have more advanced and better-funded intermediate care systems, while southern regions have more limited resources. Moreover, financial constraints like Funding for the National Recovery and Resilience Plan (PNRR) were established before the onset of the inflationary period and almost exclusively covers capital expenditures, not considering increases in current expenditures such as personnel, drugs and medical devices. In addition, a decrease in healthcare spending is projected for 2025 compared to 2022. Then, the difficulty in staffing new community care facilities is a significant challenge. Indeed, the potential to significantly increase the health workforce is limited by financial constraints from social perspective, there is a resistance to change by general practitioner. GPs fear that the move to community centres will reduce their autonomy and oppose change. This is translated into a lack of integration between hospital and community services, complicit also the need to upgrade technology and accelerate the digital transition, still slow growing. Then, digitalization will have to face increasing aging population, often unaccustomed or unwilling to use digital services such as Electronic Health Record 2.0 (FSE 2.0 2025). Additionally, regarding older people, the discharge of patients with complex and often chronic medical conditions limits the capability of managing him/her at home. Changes in health policies, patient vulnerability, and social changes in family structure contribute to discharge difficulty. Hence, there is the need to ensure continuity of care, through multidimensional assessment, communication between hospital and community services, uniform operating modes and sharing of patient information. The need to promote innovation and the use of technology to support remote monitoring and care delivery, results a crucial aspect.

2.2 Overview of challenges Romania

In Romania, the healthcare system faces significant challenges in the transitional care stage. Most patients are sent home after various treatments that are performed in tertiary centres. There are situations when the patients do not have close relatives, and they are not able to take care of themselves, so the doctors request social services. According to Law no.448/2006, which has undergone various modifications, people with severe disabilities can benefit on demand or ex officio from social services, including a caregiver or a personal assistant, somebody who takes care of them. The person can be part of the family and is paid for his/her work. A set of documents that prove the patient's deteriorated state of health is necessary in this sense. There is a massive shortage of social workers founded by the National Health Insurance House, to the extent of being almost non-existent.

According to Eurostat, the Romanian social assistance system is the most ineffective in the European Union [4]. In these cases, remote monitoring would be a solution, but it requires a level of digital competence that most of the patients do not have. Information sharing between providers is limited and, in many cases, does not take place at all. The issue of managing and exchanging medical information and documents is an important topic in Romania. Theoretically, the general practitioner is the doctor who has the entire medical history of the patient. Therefore, the GP should be involved more actively in transitional care. The GP should be a link between the specialist doctor, social services and the patient's family. Regional disparities are another challenge, since access to healthcare is limited for rural populations. The shortage of general practitioners, particularly in rural areas, is one of the most pressing issues across the country. GPs, especially in these areas, tend to be overloaded, have long waiting lists for the patient and do not have time for involvement in other aspects of healthcare [5,6]. There are also villages without a GP [7]. Romania has increased its health spending in recent years, but it remains one of the EU countries with the lowest health expenditure, both on a per capita basis, as well as in terms of GDP percentage [8].

2.3 Overview of challenges in Norway

One of the main challenges is poor coordination between municipal healthcare services and hospitals. This disconnect often leads to fragmented care, with lack of clear responsibilities for patient follow-up after discharge. Elderly patients are particularly affected by this lack of collaboration. The National Health and Hospital Plan 2020–2023 has addressed this issue by establishing 19 health communities (helsefellesskap) to strengthen cooperation between hospitals and municipal services [9]. Another pressing issue is the shortage of healthcare professionals, especially within municipal health services. The healthcare system struggles to provide continuous and effective care transitions when there are not enough trained personnel to handle patient transfers and follow-up care. According to the National Health and Hospital Plan, this workforce shortage limits the system's ability to meet patient needs and increases pressure on existing staff, leading to potential declines in the quality of care [9]. The lack of standardized procedures also contributes to inconsistent care during transitions. Different municipalities and hospitals often use their own routines, leading to communication breakdowns and delays in treatment. The absence of uniform care pathways is a significant barrier to effective transitional care and calls for improved integration across healthcare services [10]. Patient and family involvement is another area of concern. Many patients and their families feel excluded from the decision-making process during transitions, leaving them unprepared to manage care once discharged. This can lead to unnecessary readmissions and deteriorating health outcomes. The involvement of next of kin as advocates can improve both communication and care quality during transitions [11]. The integration of technology into transitional care remains insufficient. Despite the potential for digital solutions to improve communication and coordination between care levels, many healthcare providers still rely on fragmented systems, which leads to poor information-sharing practices. The National Health and Hospital Plan 2020–2023 promotes the broader use of digital tools and welfare technology to improve efficiency and ensure that relevant patient information is accessible across care settings [9]. The follow-up care after hospital discharge is often inadequate, increasing the risk of complications, readmissions, and patient dissatisfaction—particularly for those with chronic illnesses or complex healthcare needs. The insufficient follow-up care remains a systemic issue, largely due to poor coordination between primary and specialized care providers [10].

3 Description of the pilots

The pilot sites are comprised of northern, eastern, and southern EU and cover the entire care continuum.

Istituto Nazionale di Ricovero e Cura per Anziani Italy (IRCCS-INRCA) is a geriatric clinical and research hospital, and it is the leader of Italian Ageing Network. In the INRCA pilot, they will play an important role in transitional care by providing support and services to individuals who are transitioning from one healthcare setting to another, bridging the gap between acute care and long-term care or home-based care. Typically, the patient who will be involved is a multimorbid older adult admitted within the Geriatrics operating unit. The clinical scenario of the typical patient in the institution is very delicate and complex from a clinical point of view. In fact, it is usually multimorbid with previous chronic diseases often different from the one for which they are hospitalized. The transition from the hospital setting to home is therefore a leading and challenging issue for the institute and certainly crucial in improving the quality of post-hospital intervention in terms of personal care and support. The role of INRCA within the trial is to identify a population at risk of rehospitalization by defining inclusion and exclusion criteria. Based on these assumptions, INRCA decides on an assessment plan based on clinical, social, and technological scales to provide a consistent view of the participant's condition throughout the duration of the trial. It is then responsible for patient recruitment and conducting the technology trial.

The Heart Institute Niculae Stăncioiu (HINS) is one of the most important tertiary cardiology centres in Romania. Complex cardiovascular diseases are diagnosed and treated in patients of all age groups, ranging from children with congenital heart diseases to elderly patients with valvular heart disease or heart failure using various interventional and surgical approaches. At the same time, it is also a medical research centre for cardiovascular pathology. The institute receives patients from the north-western part of Romania both as inpatients and outpatients. The cardiology department provides 24-hour service for patients suffering from angina, myocardial infarction and other acute cardiovascular conditions. The hospital has an interventional catheterisation laboratory where all types of interventional procedures including coronarography, angioplasty, stenting or percutaneous valve procedures are performed. Monitoring is an important part of cardiovascular diseases management in all stages of primary or secondary prevention by optimising the control of risk factors, early identification of patients at higher risk of readmission that may allow for targeted interventions to reduce the readmission rate. In the HINS pilot, they will play a key role in conducting clinical trials by identifying suitable candidates from their inpatient population who meet the defined eligibility criteria and evaluating and refining transitional care practices for cardiovascular diseases. They work closely with other healthcare providers from the region to ensure seamless integration and effective delivery of transitional care services.

Farsund municipality in Norway (FAR) is a community-based care organization supporting rehabilitation and independent living. In the FAR pilot, a digital short-term unit will be integrated into the municipal care services. While telehealth is already a part of their regular municipal services, the aim is to provide patients with a safe and flexible transition from hospital to home, with close follow-up. This initiative seeks to reduce readmissions and offer care comparable to a physical short-term care unit. The objective is to support the transition of these patients to receive care at home by implementing specific municipality health services using the technology developed in TransCare, along with other welfare technologies provided by Tellu. The welfare technologies already in place in the

municipality in the Tellu platform include safety alarms, cameras, movement sensors, and GPS, among others, and will only be used it the Norwegian pilot. This enhanced discharge process ensures continuous and improved care for patients as they move from hospital to home. The management and allocation of municipal services office will be involved in the trials and will play a crucial role to ensure that patients receive the appropriate level of care and support during their transition. The image below is a flowchart titled "Digital Short term unit" (see Figure 1) that outlines the process of patient care from discharge to home health monitoring and assessment. The model describes the steps following steps:

- Patient Discharge: The process begins with the patient being discharged from the hospital.
- Administration Assessment: An administrative assessment is conducted to determine the patient's needs and the appropriate care plan.
- Technician or Nurse Activation: A technician or nurse activates the necessary equipment for home health monitoring.
- Home Health Monitoring: The patient is monitored at home using digital health tools and equipment.
- Collaboration with Home Health Professionals: Home health professionals collaborate to provide ongoing care and support to the patient.

This model emphasizes the use of digital tools and collaboration between healthcare professionals to ensure a smooth transition from hospital to home care.

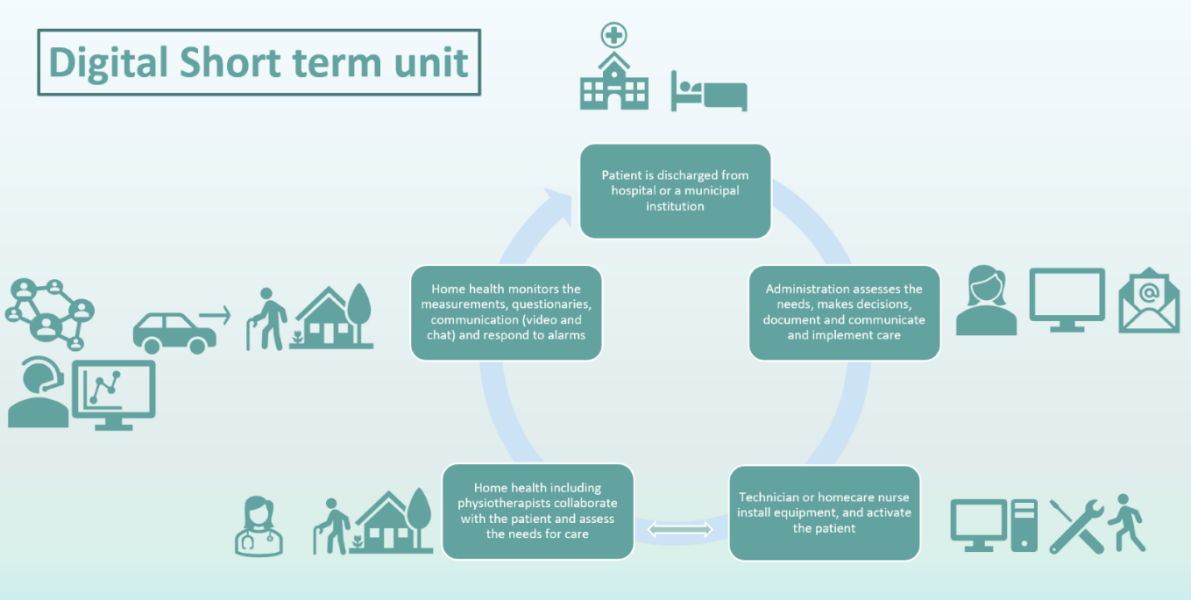

Figure 1: Digital Short-term unit.

4 Identifying the challenges faced by health and care systems in terms of transitional care

4.1 Method

The project groups have interviewed patients, GPs, hospital, and municipality healthcare workers to identify local challenges in transitional care. We have also arranged workshops to gain an interdisciplinary view on transitional care (see Figure 2). We have used this information to design the current care pathway matrix. We will further use this information to understand current practice, and this will help us to identify where gaps in care occur. We will look at reasons for the gaps including communication, financing, transfer of responsibility between organisations, etc.

Figure 2: Picture of workshop in FAR.

4.2 Tools

The creation of a **care pathway matrix** is a valuable tool for analysing and improving patient care processes. It helps standardize care delivery, minimize variations, and enhance patient outcomes by mapping out each step of the care process for specific conditions or procedures. This matrix can identify inefficiencies, deviations from best practices, and areas for improvement.

The **KS Modell for Pasientforløp** (KS Model for Patient Pathways) is a framework used in Norway to streamline patient care transitions. It emphasizes the importance of coordinated care, comprehensive discharge planning, and continuous monitoring to ensure smooth transitions between hospital and municipal care settings, as reported in Figure 3. The model focuses on:

- **Assessment and Planning**: Conducting thorough assessments of patient needs before discharge to create personalized care plans.
- **Data Sharing**: Ensuring effective communication and data sharing between healthcare providers to maintain continuity of care.

- **Patient and Family Engagement**: Involving patients and their families in the care process to enhance understanding and adherence to care plans.
- **Technology Integration**: Utilizing digital tools and remote monitoring to support ongoing care and early identification of potential issues.
- **Follow-Up and Support**: Providing post-discharge follow-up and support to reduce readmissions and improve patient outcomes.

By integrating these elements, the KS Modell for Patient pathways aims to create a seamless care experience, reduce resource waste, and improve the overall quality and effectiveness of care transitions. Model is shown in figure below. A copy of the matrix for each pilot is in annex1. They vary in complexity due to differences in the pilots.

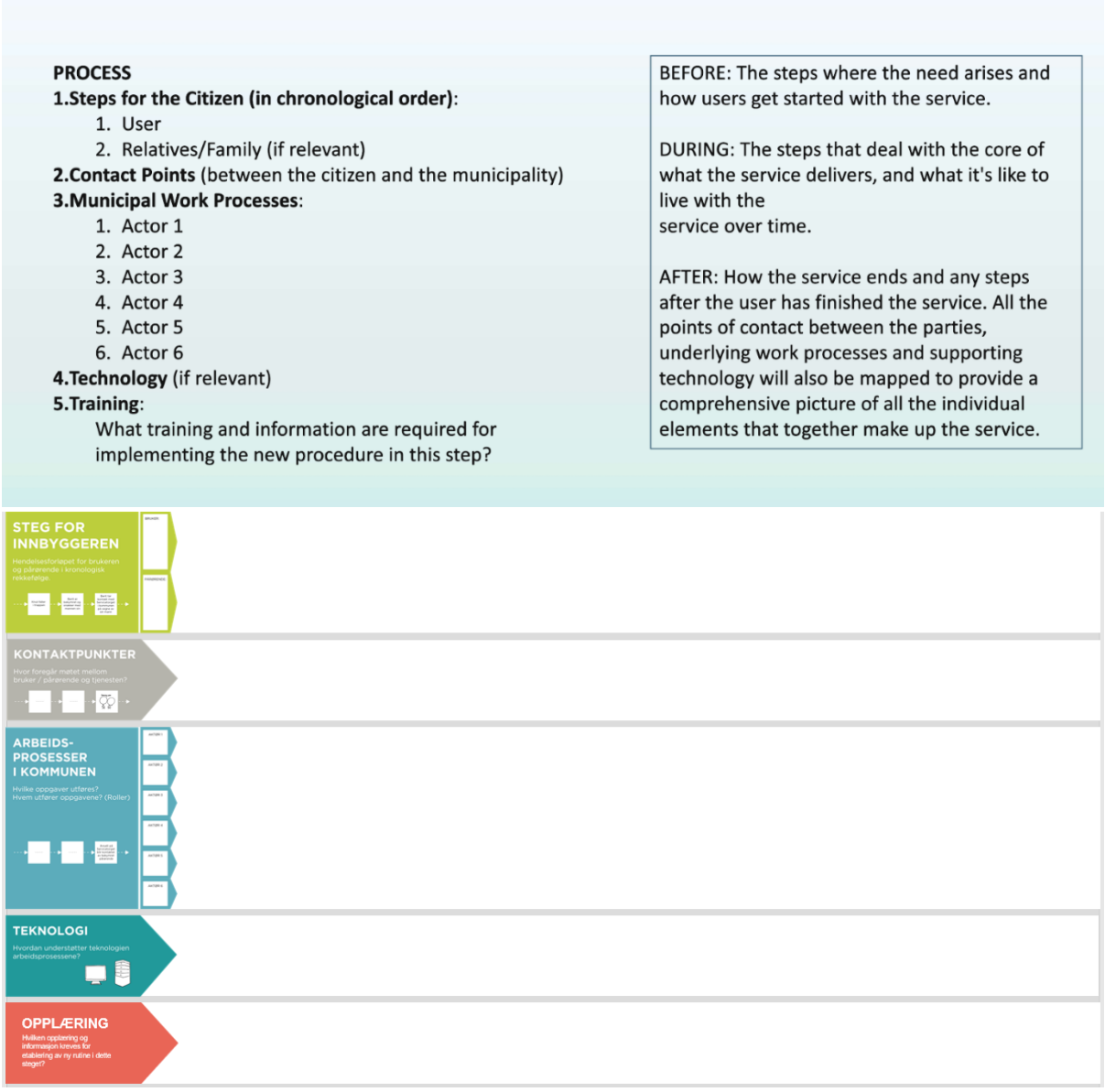

Figure 3: KS model for patient pathways.

InnoMed

KS also supports innovative programs to increase the integration of technology in the healthcare service, aiming to improve the quality of transitional care. Further to this point, Innomed is a

Norwegian innovation program aimed at improving healthcare services through technology and new solutions, and is supported by KS, and the Norwegian Directorate of Health. The Norwegian pilot has applied to InnoMed for process guidance to visualize and simplify the patient journey matrix. InnoMed offers process guidance for innovation projects in municipalities and healthcare organizations in Norway. They are in the process of helping us visualize the Care pathway matrix better by using the Mural tool[1] (se Figure 4 for example). This involves visualizing the end-to-end experience a patient has with healthcare services, capturing each interaction from initial contact to follow-up care. By mapping the patient matrix, we aim to identify pain points, improve communication and coordination, and enhance the overall quality of care. This strategic tool helps healthcare providers gain deeper insights into patient experiences and streamline processes to ensure better outcomes. We will then use the Mural tool to better visualize and solve the "pain points" in the matrix for all the pilots in the next task.

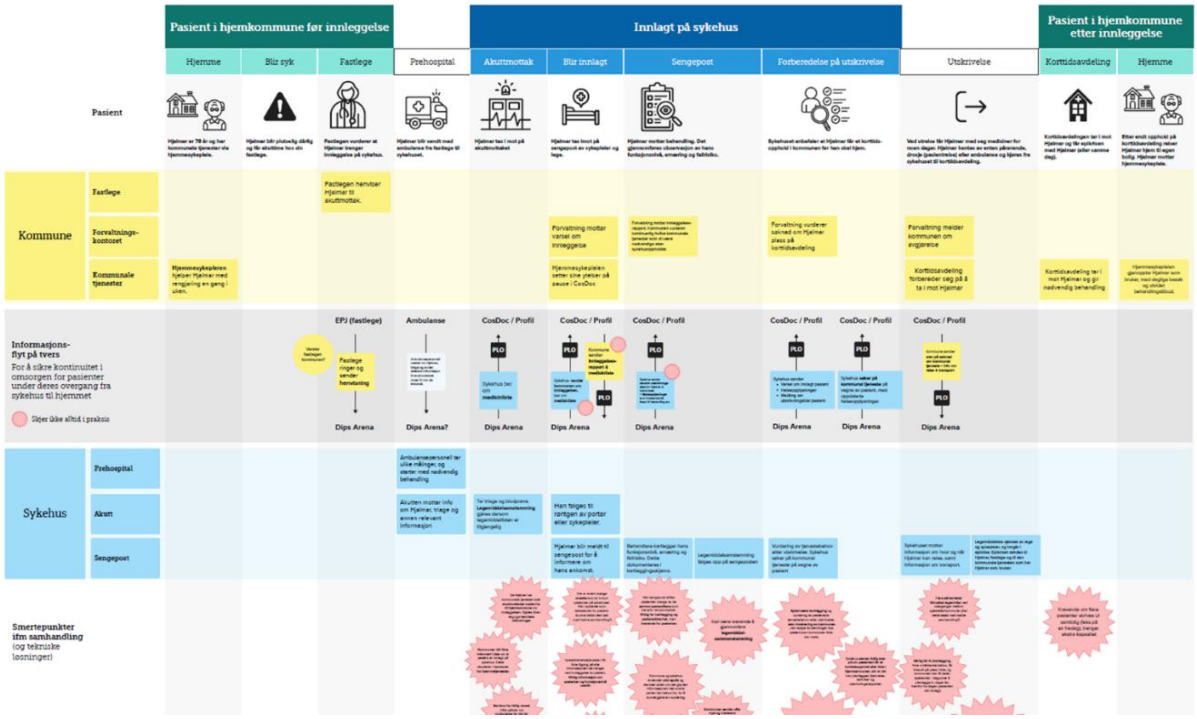

Figure 4: Example from FAR`s use of the Mural tool.

[1] https://www.mural.co/

5 Overview of the Care pathway matrix

5.1 Care pathway matrix INRCA

The first medical contact for patients experiencing symptoms of illness in Italy is generally with the GP. In some cases, patients choose to go directly to the emergency department, especially if the symptoms are severe or if they want to avoid waiting time for a visit to the GP. If the GP deems it appropriate, he or she may perform an initial evaluation and prescribe treatment, or refer the patient to a specialist, such as an internist or cardiologist, through the outpatient service. The specialist will perform more extensive tests and make a definitive diagnosis. Depending on the severity of the condition, the patient may be treated with medical therapy or, in more complex cases, invasive procedures. If necessary, hospitalization will be arranged. During hospitalization, the patient undergoes a comprehensive geriatric evaluation as well as periodic examinations to monitor nutritional and cognitive status and blood parameters. If indicated, an early rehabilitation course is initiated to prevent the risk of immobilization and its complications. The healthcare staff, consisting of physicians, nurses, and rehabilitation therapists, work as a team to ensure optimal management of the patient.

When the patient is considered clinically stable and at low risk of complications, he or she is discharged. At the time of discharge, he receives a discharge sheet with therapeutic indications and prescription of necessary medications and drugs. In addition, he is asked to visit his general practitioner to update the hospital-prescribed therapy and continue follow-up.

After discharge, the patient may be followed up by the GP for health status monitoring and periodic prescription of medications, usually on a monthly or quarterly basis. In some cases, follow-up visits are scheduled with the specialist to reassess the progress of the condition and modify the treatment plan, if necessary. If required, the patient may be transferred to a rehabilitation facility or assisted living residence for post-hospital care.

Family members or caregivers play a key role in the care pathway, supporting the patient in daily activities, facilitating communication with health care professionals, and providing information on medical history and drug therapy. In case of emergency, they can contact the emergency number or the attending physician for immediate assistance, mediating between healthcare structure and his/her assisted one. Finally, the integration of hospital, territory and technology can facilitate care coordination, improving the effectiveness of the care pathway and the quality of life of patients.

5.2 Care pathway matrix HINS

The first medical contact for patients who experience cardiac symptoms in Romania is the general practitioner. There are situations when patients choose to go to the emergency department because of the severity of their symptoms or just because they do not want to wait for an appointment at the GP. GPs may establish the diagnosis and recommend treatment, but mostly the patient is referred to a cardiologist from an ambulatory department. The cardiologist will perform additional investigations and will make the final diagnosis. Depending on the disease, medical therapy or invasive procedure will be recommended. Patients with indications for invasive procedures are admitted to hospital. Medical therapy may be followed as outpatient if the disease is not at an advance stage when admission may be necessary. Patients who underwent interventional procedures are discharged after a varying length of time, when they are considered stable and at low risk for complications. After

discharge, patients are followed by a GP who prescribes medication each month or every three months and carries out periodic reassessment. At set intervals the patients are re-evaluated by a cardiologist from the ambulatory department.

5.3 Care pathway matrix FAR

The FAR matrix is complicated due to interaction with GP, municipality and hospital The patients first medical contact is with their designated general practitioner or the municipality health services, who consults with the GP. The general practitioner provides comprehensive care, including preventive services, diagnosis, treatment, and follow-up care. It is the municipality`s responsibility that all citizens have a GP. When the GP refer the patient on to hospital services, he/she will arrange for admission and ensure that all necessary medical information, including health history and current medications, is sent to the hospital. If the patient has municipal services, the municipality is responsible for ensuring that relevant health information about the patient is communicated to the hospital via e-messages. This includes ongoing treatments, medications and care plans. Municipal health services maintain communication with the hospital to stay updated on the patient's condition and treatment plan. The hospital gives an estimated discharge date already at admission. This ensures that the municipality can prepare for the patient's discharge and subsequent care needs. The municipality arranges for home care services, such as nursing visits, physical therapy, and assistance with daily activities, to support the patient’s recovery at home. When there is a need the patient is admitted to a short-term facility, which is a high-cost solution for the municipality and is generally overused due to lack of information about the patient. After discharge, the municipality is responsible for providing follow-up care to ensure the patient continues to receive the necessary medical and social support. This includes regular check-ins, medication management, and any other required services.

6 Overview of local challenges at pilot sites

While working on the matrix to map today's practice, we have discovered many weaknesses in todays practice many “pain points” for improvement which is the projects next task.

While working on the matrix to map today's practice, we have discovered many weaknesses in current practices and identified numerous “pain points” that need improvement. These local challenges refer to specific issues faced by each pilot site in their transitional care processes. These challenges are distinct from the broader national challenges facing transitional care, as they highlight unique, site-specific problems. Addressing these issues is the project's next task. By understanding and contextualizing these weaknesses, we can develop targeted solutions to improve patient care and management.

6.1 Challenges at INRCA

In addition to the challenges encountered at national level, the main problem in transitional care at INRCA level is that, unless the patient is discharged from the acute care unit and then admitted to the post-acute INRCA-intermediate care, the INRCA hospital has no direct connection with the general practitioner, territorial services and with the residences, where different teams operate, often lacking competence geriatric, using different methodologies and tools. This creates gaps in continuity of care that often cause patient care and management issues.

Hence, when the patient is (re)admitted, this results in a lack of information about the state of the health and treatment of the patient; when discharged, INRCA department produces a discharge letter that is shared with the general practitioner, but there is no guarantee that the therapies and recommendations are acted upon, once the patient has left the hospital.

6.2 Challenges at HINS

In addition to the challenges encountered at national level, at HINS we are faced with another issue: constantly having bed occupancy rate of above 90%. This shortage of beds is made worse by the absence of palliative centres where patients with terminal stages of various disease could be monitored. Due to the high number of patients, it is difficult to schedule the follow-up visits, which are very important, particularly for patients who underwent interventional procedures. The emergency department is also very crowded, most likely due to the long waiting lists at GP or a cardiologist from an ambulatory department.

6.3 Challenges at FAR

Significant communication gaps exist between hospitals and municipal health services. The recent switch to a new journal platform by hospitals has exacerbated these issues, causing delays in sharing critical patient information. This can lead to inadequate preparation for patient discharge and follow-up care. Additionally, the outdated and suboptimal municipal medical journal system is time-consuming and further complicates information sharing. Coordination between different healthcare providers is often fragmented, both between hospitals and municipalities and within interdisciplinary teams in the municipality. This fragmentation results in a lack of continuity in care, where patients might not receive the necessary services promptly after discharge from the hospital. The rural placement of the community presents significant resource constraints for both hospitals and municipal health services. These include staffing shortages and limited access to necessary medical equipment and welfare technology, such as safety alarms, cameras, and door alarms. These

constraints hinder the ability to provide comprehensive care to frail elderly patients. The accumulation of patients in short-term wards, who cannot be accommodated at higher service level placements, leads to quick institutionalization and an inability to return home. This is compounded by insufficient access to assistive devices, which are often not available until after hospital discharge, placing a burden on home care services. Older houses in rural areas are often not built to accommodate the needs of elderly residents, with multiple levels and no elevators. This lack of suitable housing further complicates the transition from hospital to home care. Patients and their families often feel excluded from the decision-making process. They may not receive adequate or accurate information when the hospital and municipality are not coordinated about the needs for further care. This lack of involvement can lead to unnecessary readmissions and deteriorating health outcomes.

7 Conclusions

This project group has successfully achieved the task of mapping the current situation in transitional care across Norway, Italy, and Romania. By identifying the challenges such as poor coordination between healthcare services, resource constraints, and the need for better communication and patient involvement, we have laid the groundwork for the next steps in improving transitional care.

The pilot projects in HINS, INRCA, and FAR highlight the importance of tailored approaches to address local challenges. By leveraging digital tools, improving communication, and involving patients and their families in the care process, these pilots aim to enhance the quality and continuity of care during transitions from hospital to home.

Having mapped the current situation, the next task involves analyzing the data gathered to redesign care pathways for the trials planned in WP4. This redesign will also take into account the integration of the innovative technologies for transitional care developed in WP2. Addressing these challenges will require a collaborative effort across all levels of care, with a focus on innovation, training, and the integration of digital solutions to support ongoing care and early identification of potential issues. By doing so, we can improve patient outcomes and reduce the risk of complications and readmissions, ultimately enhancing the overall quality of transitional care.

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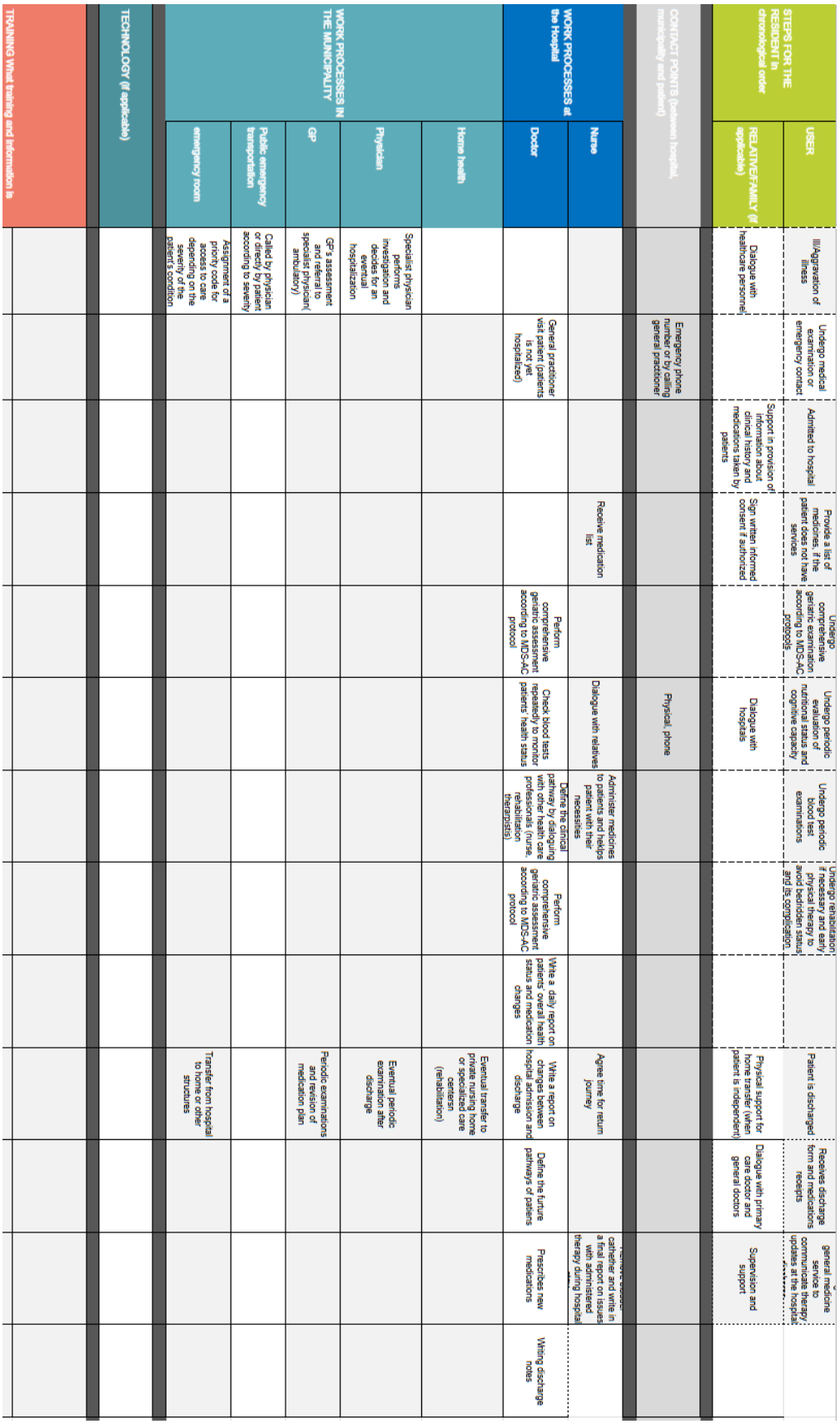
Annex 1 - care pathway matrices

INRCA



HINS

	Assessment/Clarification	Admission to hospital	During hospital stay						Discharge from hospit.	After leaving hospital
Steps for the citizen (in cronological order)										
User	signs and symptoms of heart disease aggravation of illness	admission to hospital								
Relatives/Family (if relevant)	bring the patient to the hospital	hetero-anamnesis							elderly patients who live far from hospital-the family collect them from the hospital after they are discharged	supervision, return to daily activities
Contact points (between hospital, municipality and patient)										
Work processes at the hospital										
Actors: Nurse			medication administration, monitoring blood pressure, heart rate and blood oxygen saturation							
Physician	the initial assessment and management during the acute phase of a cardiovascular disease	dialogue with the family physically or by phone	comprehensive patient assessment including laboratory and imaging tests and making the final diagnosis	Heart Team discussion in managing patients with complex cardiovascular disease in order to indicate the optimal treatment	health with a family member presenting the risks and benefits of the procedure and signing the informed consent form by the patient and	monitoring blood pressure, heart rate, respiratory rate and blood oxy gen saturation	for the patients who undervent complex interventional procedures: heart rate, blood pressure,	procedures will be monitored for 24-48 hours in the cardiology department: heart rate, blood pressure,	pregnaring for discharge	hospital discharge summary providing information about the treatment and future care needs
Work processes in the municipality										
Home health						performing interventional procedures under local or general anaesthesia depending on their complexity	confirming or denying illness reported by nurses			private care centres for elderly
Patient Physician	GP's assessment and referral to a cardiologist									GP prescribes medication each month or every three months, periodic reassessment
public ambulance service	call the emergency number and ask for an ambulance								transport from the hospital by public ambulance	
Work processes in the municipality										
cardiologist from an ambulatory department	A cardiologist from an ambulatory department will perform more investigations. Admission to hospital can be recommended.									at set intervals the patient are re-evaluated by a cardiologist from an ambulatory department
emergency room	medical assessment, depending on the results of the assessment a prescription will be given or the patient will be admitted to hospital									
Technology (if relevant)			cardiac telemetry monitoring for patients with advance stage of the disease							24-48 hours Holter ECG monitoring

FAR

		Assessment/Clarification		Admission to hospital			During hospital stay				Discharge from hospital				During stay at Kottidsvdeling				Considered transfer to homehealth		
STEPS FOR THE RESIDENT in chronological order	USER	Ill/Aggravation of illness		Will be admitted to hospital	Provide a list of medicines, if the patient does not have services							When does the patient become involved?	Prescriptions for new medicines, they get something with them from the hospital								
	RELATIVE/FAMILY (if applicable)	Dialogue with healthcare personnel					Dialogue with hospitals					next of kin? Contact with administration									
CONTACT POINTS (between hospital, municipality and patient)			How is this reported?	Hospital receives admission report (if pas. Has service in municipality)			Physical, phone		The municipality receives an e-mail from the hospital	email message	How?	how does this happen? Physical? In hospital or when they have arrived in the municipality, where in the municipality									
WORK PROCESSES at the Hospital	Nurse				Receive medication list		Dialogue with relatives		Nurse in hospital writes "Expected to be ready for discharge in 2 days"	Health information, diagnosis and discharge date	Agree time for return journey		Removes IV								
	Doctor												Prescribes new medications,	Writing discharge notes, How much time do they have							
WORK PROCESSES IN THE MUNICIPALITY	Home service	Reports to GP/Ambulance	?Responsibilities if for short-term department	Writes admission report according to updated IPLOS,crouching away things that are not relevant, Ansvarsvakt?	Writes an updated medicine list	Pause the service in Cos Doc (Health services in the Home, Practical assistance)						maps and assigns together with management further service needs, contact with relatives						Discuss the patient at Tuesday meetings together with care, physio/ergo and case manager		Clarify aids/technology	
	Short-term department B ØHD, IK, IKR	Reports to GP/Ambulance		Writes admission report according to updated IPLOS, crouching away things that are not relevant, Ansvarsvakt?	Writes an updated medicine list							how is it clarified if patient must have home services or on a short-term stay			Receives patients and distributes information brochures about the department	Risk screening, risk of falling, pressure ulcers, nutrition update action plan	Iplos?	Discuss the patient at Tuesday meetings together with care, physio/ergo and case manager	Arrange leave if it is uncertain whether the patient will manage		
	Municipality Administration								Receive email from hospital	receive e-mail and adds into imatis if applicable		together with the home service, maps and allocates further service needs						Discuss the patient at Tuesday meetings together with care, physio/ergo and case manager		Clarify aids/technology	
	GP	Dialogue with healthcare personnel	Considers the level of increased service, for example hospitals or ØHD											Receives discharge notes							
	24-hour service	Reports to GP/Ambulance		Write admission report according to updated IPLOS, cross out things that are not relevant, Ansbarsvakt?	Writes an updated medicine list	Do not pause the service															
	Physio/Ergo																	Discuss the patient at Tuesday meetings together with care, physio/ergo and case manager		Clarify aids/technology	
	Emergency room	Dialogue with healthcare personnel	Considers the level of increased service, for example hospitals or ØHD																		
TECHNOLOGY (if applicable)																					
TRAINING What training and information is required for establishing a new routine in this step?																					