

Learning from integrated eCare practice and  
promoting deployment in European regions



## D6.2 INTERIM PROCESS EVALUATION REPORT – PART 2

Version 1.0 / 22<sup>nd</sup> February 2016

The BeyondSilos project is co-funded by the European Commission within the ICT Policy Support Programme of the Competitiveness and Innovation Framework Programme (CIP). Grant Agreement No.: 621069

The information in this document is provided as is and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability



## Document information

### Abstract

This document contains the preliminary qualitative data collection on care recipients and professionals perspectives on ICT supported integrated care for the BeyondSilos project.

### Organisation responsible

Region of Southern Denmark (RSD)

### Authors

Daugbjerg, Signe (RSD)

### Contributing partners

Alvarez, Angel (BSA)	Melle, Christian (Gesundes Kinzigtal)
Ciccarelli, Michele (Campania)	Meyer, Ingo (Emperica)
Donat, Lucas (HULAFE)	Müller, Sonja (Emperica)
Georgieva, Lidia (CPRH)	Piera, Jordi (BSA)
Goncalves, Rute (Amadora)	Oates, John (HIM)
Hobson, Penny (HSCNI)	Richter, Susanne (Seniorenzentrum am Schloßberg)
Hurtado, Mayte (HIM)	Roth, Monica (Gesundes Kinzigtal)
Kouzmanov, Yanko (CPRH)	Tortajada, Salvador (HULAFE)
Iaccarino, Guido (Campania)	Wolber, Brigitte (Seniorenzentrum am Schloßberg)
Magaldi, Eugenio (Campania)	
Meier, Luitgard (German Red Cross)	

### Delivery date

30<sup>th</sup> November 2015

### Dissemination level

P Public

### Version history

Version	Date	Changes made	By
0.1	19 <sup>th</sup> January 2016	Initial draft	Signe Daugbjerg
0.2	3 <sup>rd</sup> February 2016	Minor revisions	Signe Daugbjerg
1.0	22 <sup>nd</sup> February 2016	Version for issue	John Oates

### Outstanding issues

Parts of the qualitative data collection will need further updating once data collection is finalised.

### Filename

D6.2B v0.2jeo BeyondSilos First interim evaluation report part2 - Qualitative data collection

### Statement of originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

## Executive summary

### **Purpose of document**

This deliverable D6.2 Interim Evaluation Report – Part 2 includes the preliminary results for MAST domain 4 from the BeyondSilos qualitative data collection on care recipients' and professionals' perspectives of ICT supported integrated care. The aim of the process evaluation is to collect data to enable an understanding of the barriers and facilitators for implementing ICT-supported integrated care.

### **Methods**

The process evaluation primarily focuses on the users, i.e. the care recipients and professionals using ICT and delivering any services in integrated care. It is also intended to give insights into the background, context and implementation process in each deployment site. Consequently, the process evaluation is divided into three main areas:

- Context and implementation: identification of barriers and facilitators: the team at each deployment site provides notes on their experiences.
- Evaluation of care recipients' perspectives: The care and rehabilitation process of care recipients is studied by means of semi-structured interviews and records of care.
- Evaluation of professional users' perspectives: The experiences of and cooperation between professionals implementing the ICT-supported integrated care is studied by means of short structured interviews.

### **Results**

#### Barriers and facilitators

**Technical:** Most pilot sites indicate that the ICT system is easy to use and also highlight the benefits of good ICT support. However, the pilot sites also indicate that the systems are not always easy, for the elderly people to use (buttons and icons appear too small) and that they have experienced problems with data transfer, log in accounts, system failures and learning curves for ICT tools.

**Organisational:** Most pilot sites report that they have experienced great support and engagement from the partners involved in the projects, though one pilot site finds it difficult to get commitment from GP practices to participate. Several pilot sites report that it seems difficult for the professionals to set aside working time to engage in the project, and therefore they have to fulfil tasks related to the project in their leisure time, which effects the quality of the work.

**Administrative:** It seems that the new horizontal integration of care has helped establish clear roles and given closer contact between professionals and project partners, and a shorter and quicker communication. However, for some the lack of support from the administrative departments has been a limiting factor. Further, the administrative workload to prepare deliverables is considerable.

**Economic:** Most pilot sites indicate that it has been very positive that a fixed budget was given to prepare the work and implementation process. However, there seems to be a reduction in the budget which has influenced the quality of the equipment that could be bought, and made it difficult to overcome unexpected work tasks related to technical errors. One pilot site also indicated that bad planning prior to investment of the project budget has been a limiting factor.

Overall summary of the new integrated care processes and the supporting technical solution

The BeyondSilos services comprise a number of different services across the sites. The services includes: Integrated health and social records, web portal where each user has different access rights to the platform, mobile devices for the care recipients, devices for home monitoring of biometric parameters relevant for the management of the care recipients conditions, panic buttons, and PC tablet device at home. Both care recipients and professionals use the technologies. These are described in more detail in D6.2A

Overall summary of the perspectives of the care recipients

Overall, the attitude towards the BeyondSilos care is positive. Some care recipients say that they have a better care experience because they feel relieved that a whole team of professionals from different disciplines follow up their care plan. Some say that they think they have more control of their own care, feel more responsible for their own health, and have a better understanding of their condition. However, some care recipients also find it complicated to work with computers, tablets or smartphones, since it is the first time for them.

Overall summary of the perspectives of the professionals on using the ICT for integrated care

Overall, the health and social care professionals express satisfaction with the BeyondSilos services. Some pilot sites report that the new service allows for better management because it improves the coordination between social and health care. In addition, it can improve the time spent with the care recipient while at the same time the professional can oversee more care recipients and give them constant care. However, it is also emphasised that the ICT service should be complementary treatment and cannot stand alone without any physical contact from professionals. The social workers interviewed more often indicated feeling inexperienced in using the ICT tools, which leads to more work load. One pilot site reports that nurses working close with the care recipients feel that although the ICT tool is a good concept, it is not well planned since the care recipients needs more technically training in order to trust the tools.

## Table of Contents

Document information	2
Executive summary	3
Table of Contents	5
<b>1 Introduction</b>	<b>7</b>
1.1 Purpose of this document	7
1.2 Structure of document	7
1.3 Glossary	7
<b>2 Process evaluation</b>	<b>8</b>
2.1 Approach	8
2.2 Methods	8
2.2.1 Context and implementation	9
2.2.2 Care recipients' perspective	9
2.2.3 Professional users' perspectives	10
2.3 Analysis	10
2.3.1 Description of cases	10
2.4 Expected results	11
2.5 References	11
<b>3 Intermediate Process evaluation results</b>	<b>12</b>
3.1 Badalona	12
3.1.1 Barriers and facilitators	12
3.1.2 Case description and summary	13
3.2 Process evaluation: Valencia	14
3.2.1 Barriers and facilitators	14
3.2.2 Case description and summary	15
3.3 Process evaluation: Campania	16
3.3.1 Barriers and facilitators	16
3.3.2 Case description and summary	17
3.4 Process evaluation: Kinzigtal	18
3.4.1 Barriers and facilitators	18
3.4.2 Case description and summary	20
3.5 Process evaluation: Amadora	20
3.5.1 Barriers and facilitators	20
3.5.2 Case description and summary	21
3.6 Process evaluation: Sofia	22

3.6.1	Barriers and facilitators	22
3.6.2	Case description and summary	22
3.7	Process evaluation: Northern Ireland	24
3.7.1	Barriers and facilitators	24
3.7.2	Case description and summary	25
<b>4</b>	<b>Conclusion</b>	<b>26</b>
4.1	Overall status on input	26
4.2	Overall preliminary results	26
4.2.1	Overall barriers and facilitators in the implementation process	26
4.2.2	Overall summary of the new integrated care processes and the supporting technical solution	27
4.2.3	Overall summary of the perspectives of the care recipients	27
4.2.4	Overall summary of the perspectives of the professionals on using the ICT for integrated care	27
	<b>Appendix A: Templates for data collection</b>	<b>28</b>
A.1	Description of context and care-as-usual	28
A.2	Identification of barriers and facilitators	28
A.3	Interview guide for care recipients	29
A.4	Interview guide for professionals	31
A.5	Case description and summary	32

## 1 Introduction

### 1.1 Purpose of this document

Deliverable D6.2 Interim Evaluation Report describes the preliminary results of BeyondSilos at a local pilot site level. Due to the large amount of information included, the document is divided into two separate documents:

- D6.2A Interim Evaluation Report – Part 1: Background description of pilot sites and reporting of quantitative data collection of baseline data based on the MAST methodology.
- D6.2B Interim Evaluation Report – Part 2: Qualitative data collection on perspectives of care recipients and professionals regarding ICT supported integrated care

This deliverable D6.2B Interim Evaluation Report – Part 2, provides details on MAST Domain 4 (Patient Perspective) and Domain 6 (Organisational Aspects). A second round of interviews will be conducted at the end of the BeyondSilos follow-up period in 2016; full results will be included in the final overall evaluation report D6.3.

Preliminary results for MAST Domain 1 (Health and Social problem and characteristics of the application) and Domain 2&3 (Safety, Clinical and Social effectiveness) are presented in D6.2A Interim Evaluation Report – Part 1. Preliminary results for Domain 5 (Economic aspects) will be presented in deliverable D7.4 Interim report on exploitation activities and results on Domain 7 (Socio-cultural, ethical and legal aspects) will be included in the final evaluation deliverable D6.3.

### 1.2 Structure of document

This process evaluation report is structured into three parts:

- Chapter 2 summarises the guidelines that the pilot sites will be using for the qualitative data collection.
- Chapter 3 summarises the results of the qualitative data collection of each pilot site
- Chapter 4 provides templates for all parts of the data collection.

Appendix A contains the templates used to collect information.

### 1.3 Glossary

<b>EHR</b>	Electronic Health Record
<b>ICT</b>	Information & Communication Technology

## 2 Process evaluation

### 2.1 Approach

As a part of the overall evaluation of the BeyondSilos project, an evaluation of the processes related to the implementation of BeyondSilos interventions is being undertaken. The aim of the process evaluation is to collect data to enable understanding of possible barriers and facilitators for implementing ICT-supported integrated care.

The data collection for the process evaluation is carried out at local site level. Locally performed analyses provide insights into the unique experiences of each site. The WP6 evaluation team is conducting the overall analyses across pilot sites. These analyses identify common barriers and facilitators for implementing ICT-supported integrated care between pilot sites. The process evaluation gives insights into the background, context and implementation process of each deployment site. The target population are the care recipient and the healthcare and social care professionals using the ICT and delivering any services in integrated care.

The process evaluation is divided into three main areas:

- 1) Context and implementation.
- 2) Process evaluation of care recipients' perception.
- 3) Process evaluation of professional users' perception, and the organisational perspective.

This evaluation will deliver valuable input to the MAST Domain 4 Patient Perspective and Domain 6 Organisational Aspects; the results will be included in the final overall evaluation report D6.3.

### 2.2 Methods

For the process evaluation, network theory is applied as a theoretical framework. Network theory implies a common view of coordination of work rather than traditional organisational theory based upon a hierarchical perspective<sup>1</sup>. The network perspective opens up the exploration of the dynamics of collaboration across sectors.

The particular points of integration between health and social care services when delivering integrated care often happens in an organisational no-man's-land without supervision and with unclear responsibilities. Therefore, success is perceived to be highly dependent on personal and professional networks, which are based on relationships based on trust. The network theory framework facilitates a wider understanding of these relationships and the interactions within the network<sup>2</sup>.

Each deployment site follows the methodology described in this section. Data collection is divided into three different parts, plus a summary of findings. First, the context and implementation process is described; secondly, care recipients' perspective is assessed; thirdly, professionals' perspectives are included; finally, a summary of the findings is prepared for input into WP6 deliverables. Templates are provided for each set of data to be collected and for the summary in Appendix A.

---

<sup>1</sup> Powell 1990; Thompson et al. 1990

<sup>2</sup> Alter & Hage, 1993; Abbot 1988; Axelsson & Axelsson 2006

## **2.2.1 Context and implementation**

To identify the organisational changes caused by the ICT-supported integrated care, it is necessary to describe the context and starting point of the implementation process in each site, as well as report the progress of the implementation at specified points in time.

### **2.2.1.1 Description of context and care-as-usual**

All BeyondSilos sites have provided a description of the setting and care-as-usual prior to the implementation of ICT-supported integrated care. This description includes the typical treatment and rehabilitation process of the selected patient group, and the organisation and integration of care, including relevant actors and any prior uses of ICT-solutions. This description is part of the description of Domain 1 in the MAST model provided in deliverable D6.2A.

### **2.2.1.2 Evaluation of the implementation process**

Twice during the implementation process, 3-4 months after the first participant has been enrolled and 8 months after the first participant has been enrolled, the person(s) responsible for project management and implementation at each site provide information on the implementation progress as well as any facilitators and barriers experienced. The template questionnaire for this is included in Appendix A.2.

## **2.2.2 Care recipients' perspective**

The care and rehabilitation process of the care recipient is studied by means of semi-structured interviews and records of care. For the case study of the care recipients' perspectives, a minimum of three care recipients who have followed the long pathway should be identified as subjects for the data collection. The WP6 team recommend sites to continue inclusion until the point of data saturation<sup>3</sup>; that is, to continue until additional interviews no longer contribute any new information. This is expected to result in the inclusion of no more than 6-8 care recipients. For pilot sites with a separate short pathway it is recommended that another three end-user from this pathway are selected in addition. Participants have given their consent to be interviewed; the information collected is used only in anonymised format.

### **2.2.2.1 Criteria for selecting care recipients**

From the care recipients included into the evaluation of BeyondSilos, a sub-sample for the process-evaluation should be selected. Strategically, it is recommended to select care recipients representing differences in terms of gender, age, co-morbidity and the like.

### **2.2.2.2 Records of care**

If possible, deployment sites collected data from their local ICT systems on the activities and communications within each end-user's rehabilitation. These data are useful as background knowledge when conducting and analysing interviews. The feasibility of retrieving this information is decided locally.

### **2.2.2.3 Interviews**

The care recipients are interviewed 3-4 months after entering the project. Interviews follow a semi-structured interview-guide; a generic template for the interview guide is included in Appendix A.3.

The term "semi-structured" implies a certain structure in terms of which themes are addressed during the interview. There are no further restrictions than the mentioned themes; interviewers are encouraged to

---

<sup>3</sup> Grounded theory by Strauss and Corbin 1990

ask interviewees for elaborations when they find the information to be valuable for the evaluation. The aim with the interviews is to explore how ICT can support care, treatment and rehabilitation of care recipients in collaboration with healthcare professionals or social worker. In addition, interviews might identify challenges with using the new technology, seen from the care recipient' point of view.

Reporting of the patient interviews for WP6 is done in an English summary of the interviews.

### **2.2.3 Professional users' perspectives**

The purpose of the process evaluation on the professional users' perspectives is to study the experiences of those persons who are implementing the ICT-supported integrated care into their daily work routines.

#### **2.2.3.1 Criteria for selecting professional users**

The participants for the data collection on the professional users' perspectives should be actively involved in the ICT supported integrated care. If possible, the professionals should represent different occupations and sectors (e.g. nurses, hospital doctors, home nurses, social workers and GPs), hence ensuring the possibility of studying rehabilitation from the perspective of the different actors.

#### **2.2.3.2 Interview survey**

Short structured interviews have to be conducted with the healthcare professionals and social workers. Each site should optimally conduct a minimum of six interviews. The interviews can be conducted online (e.g. using Skype) or face-to-face; each interview should last about 30 minutes. During and after the interview the interviewer takes notes and makes a short summary in English in a predefined template. Each interview is thus intended to require no more than 1 hour. A list of topics to be included in the interview guide and summary template is provided in Appendix A.4.

#### **2.2.3.3 Additional notes**

If deployment sites wish to do so, it is possible to add participants or set up focus group interviews. If any additional data collection is planned, the WP6 team can provide assistance in the planning phase.

## **2.3 Analysis**

Local deployment sites write summaries of the "cases" as described below. A template for reporting is provided in Appendix A.5. The descriptions are based on short summaries of the information gathered through the qualitative data collection process.

### **2.3.1 Description of cases**

Based upon the findings (notes) from the interviews with the care recipient and health and social care professionals, sites summarise the results in three separate descriptions on how ICT can support integrated care at the site. The descriptions have the following headings:

- Describe how the technical solution supports the integrated care.
- Describe the individual perspective of the care recipient. How does the care recipient experience the care, treatment or rehabilitation when ICT is being used?
- Describe the perspective of the healthcare and social care professionals on using the ICT for integrated care.

## 2.4 Expected results

The results of the process evaluation provide a profile of cases. This provides knowledge at a European level of the similarities and discrepancies that characterise success or failure to implement ICT supported integrated care. In addition, the results provide insight into the perspectives of all the actors using and implementing the systems. As such, new knowledge on what is important for the people at the centre of integrated care, is provided.

## 2.5 References

Abbott A.; *The system of professions*; London: University of Chicago Press; 1988.

Alter C, Hage J.; *Organisations working together*; Newbury Park (CA); Sage Publications; 1993.

Axelsson R, Axelsson SB.; *Integration and collaboration in public health—a conceptual framework*; *International Journal of Health Planning and Management* 2006 Jan–Mar; 21(1):75-88.

Creswell, John W, Clark, Vicki L. Plano. *Mixed Methods Research*; Sage Publications; 2007.

Kvale, S.; *Interviews*; Sage Publications; 1996

Salmons, J.; *Qualitative Online Interviews*; Sage Publications. Second edition.; 2014.

Yin Robert K.; *Case Study Research – Design and Methods*; Sage Publications; 2013.

### 3 Intermediate Process evaluation results

The results of the process evaluation provide a profile of best practices. They enable knowledge on a European level of the similarities and discrepancies that characterise success or failure to implement ICT supported integrated care. In addition, the results provide insights into the perspectives of all the agents using and implementing the systems. As such, new knowledge is provided on what is important for the people at the centre of integrated care.

#### 3.1 Badalona

##### 3.1.1 Barriers and facilitators

Date: 15<sup>th</sup> January 2016

Table 1: Badalona: Barriers and facilitators in the implementation process

	Beginning of implementation		8 months after implementation	
	Facilitators	Barriers	Facilitators	Barriers
<b>Technical</b>	System is easy to use (co-design process performed with all the involved stakeholders including patients).	Problem with tablet/PC battery; they had them plugged all the time and after some months working they started to break.		
	Pre-configuration done by the R&D&I Department.	Devices losing Bluetooth link with tablet/PC (mainly pulse-oximeter).		
	Support from the IT provider to solve issues.	Training time burden.		
	Support structure by the R&D&I Department to solve issues from the care recipients through a provided telephone number.			
	Continuous monitoring of technical issues through a tracking tool, allowing identification of the areas for improvement and any gaps.			
<b>Organisational</b>	Support from the Medical Director and from all the intermediate managers to deploy the new system. A lot of involvement from Primary Care	Difficulties when changing the way to provide care from clinical staff.		
	Previous experience from the R&D&I team in similar projects.	Difficulties obtaining enough clinician time to perform all the activities.		

	Beginning of implementation		8 months after implementation	
	Facilitators	Barriers	Facilitators	Barriers
	Good planning allowed a successful deployment.			
	Good mentoring process: materials, workflows and installation process.			
	Cohesion of teams sharing responsibilities (clinicians, innovation staff and IT staff).			
<b>Administrative</b>	Full integrated organisation used to work vertically through the healthcare levels and horizontally through social care.	Differences in the enrolment process between the care recipients to be enrolled in the long and the short term pathway.		
	IT tools fully interoperable.			
	Electronic health record, social care record and integrated care record fully in place for years. Enterprise Resource planner managing all the administrative aspects also in place.			
<b>Economic</b>	A budget for implementation was given.	Perversion of the funding system in Catalonia, not recognising some of the of the service provision of the BeyondSilos project to be funded.		
	Care recipients receiving everything for free.			

### 3.1.2 Case description and summary

#### Summary of the new integrated care processes and the supporting technical solution

The integrated care processes are supported by the following main elements:

- Corporate Enterprise Resource Planner (ERP): Manage all the administrative data, especially on patients.
- Electronic Medical Record (EMR): The central repository for health information about each individual patient.
- Social Care Record (SCR): Stores all the social information and documentation related to every individual receiving or having received social services in the city of Badalona.
- Homecare Department Software (SAID): The administrative and clinical software used to manage users that are receiving services delivered by BSA's Homecare Department.

- Health Insight Solutions Homecare Platform (HIS): The telemonitoring platform used by BSA in the BeyondSilos project.

Please see section 3.5, in particular section 3.5.4, of deliverable D6.2A for a full description.

**Summary of the individual perspectives of the care recipient. How does the care recipient experience the care, treatment or rehabilitation when ICT is being used?**

- When ICT is being used the end-user experience improves because they feel relieved that a whole team of professionals from different disciplines (“my doctor”, “my nurse”, “my social worker”, “my...”) follow up their care plan. They do not need to look for the information because all the data is available thanks to the ICT solutions. They do not need to explain everything to healthcare and to social care; the professionals work together because ICT allows them to communicate directly. And in the end, it means more quality in their attention. In fact, some of them think that they have more control, and they notice that they (or their caregivers) play another “role” (they feel responsibility for their own care).

**Summary of the perspective of the healthcare professionals on using the ICT for integrated care**

- Most of them are already accustomed to ICT tools, but only a few had previous experience with integrated care, care management and eHealth facilitated integrated care. They think that some its advantages (regarding to BeyondSilos) are:
  - It allows a holistic approach to user’s care, so it offers a continuous follow up process. Health professionals have access to data from the “social side”.
  - It allows a better management because it can improve the coordination between social and health care. In addition, it can improve the time spent with their users because they can control more patients in the same time.
  - It can help to decrease physical contact, although more control can means more phone contacts or more time “supervising” all the data.
  - It can improve the co responsibility between professionals and users, because the users' role changes with it.
  - On the other hand, someone speaks about the best scenario that ICT allows with the users and their caregivers, but he wants to add that there is a risk if patients rely on the ICT control without any physical contact. In other words, he believes that it has to be a complementary treatment, but not the only one. In addition, there were some technical problems, and some users do not follow the treatment in the correct way. All of them agree with the need for technical support to avoid problems, and if there are any problems, to be able to act quickly.

**3.2 Process evaluation: Valencia**

**3.2.1 Barriers and facilitators**

**Date: 8<sup>th</sup> January 2016**

**Table 2: Valencia: Barriers and facilitators in the implementation process**

	Beginning of implementation	
	Facilitators	Barriers
<b>Technical</b>	Nomhad Chronic Platform was tested previously in a Clinical Trial for complex chronic patients.	Integration with hospital informatics systems is not complete, and difficult for nurses to work.

	Beginning of implementation	
	Facilitators	Barriers
		PC / tablets with Nomhad Chronic fail too often, and it is difficult for patients to send their own data.
		Some improvements in the ICT platform are too slow, and do not solve demands of case management nurses.
		Integration between clinical provider and social provider needs to be improved.
<b>Organizational</b>	Support from regional government administration to enrol a social care provider.	Clinical team are not only working on BeyondSilos project, but several other tasks; this results in a lack of staff involved in the project.
	Excellent work of ATENZIA (Social care Provider) with a total involvement, even not receiving any budget.	Some stakeholders are not as involved as they should be. They do not well understand the main objective of study.
		Unexpected number of drop-outs.
		Lack of fixed phone telephone line which are necessary to install ATENZIA devices.
<b>Administrative</b>	Establish clear roles.	Lack of support from health in research institute economic and administrative departments.
		Lack of previous planning which gave rise to some administrative problems that should have been detected previously.
<b>Economic</b>	A budget for implementation was given.	Bad planning to establish priorities for investing the project budget.

### 3.2.2 Case description and summary

#### Summary of the new integrated care processes and the supporting technical solution

The integrated care processes are supported by the following main elements: Abucasis, Orion Clinic (EHR system) and Nomhad Chronic. Nomhad Chronic is multiplatform software for the care of chronic conditions.

Please see section 3.6, in particular section 3.6.4, of deliverable D6.2A for a full description.

#### Summary of the individual perspectives of the care recipient. How does the care recipient experience the care, treatment or rehabilitation when ICT is being used?

They are mostly happy using ICT tool; they feel better followed up and controlled by clinical staff, even if they consider themselves people with limited technology skills. They feel that having devices at home to control their clinical variables is very useful for clinical staff and also for themselves. They said that they have responsibility to send every day or every two days measurements through PC tablet; this is a little bit complicated, but they see this as a task or an obligation like take their drugs to manage their disease. They feel this as a part of their treatment. Using the tablet, they feel more responsible for their health,

but it is true that they do not exploit all the potential of the tablet which includes some recommendations of individual disease profile; patients confess that they do not pay as much attention as they should to this educational module.

A slightly different issue regards the teleassistance device installed by social care provider. Even if patients are happy to have someone else in addition to their case management nurse care about them, they do not well understand how it can help them, because they consider themselves people without social problems.

### **Summary of the perspective of the healthcare professionals on using the ICT for integrated care**

Healthcare professionals have different perspectives depending on their roles. Nurses who work closely with patients feels that ICT tools are a very good concept, but not well planned. To get a good result using ICT tools, patients should be much more technically trained, they feel that patients do not trust ICT tools very much because they are not well trained in the use of the devices. They complain that this is not real patient empowerment, because patients do what nurses ask them to do, whether or not they believe in self-management. They consider that in some aspects the patient management platform is not flexible; they ask for some modules that will be helpful, but are not easy to develop, or maybe the platform does not have this level of complexity and loses potential, even if they emphasise that is a good tool for daily work. In their opinion, the platform is not fully integrated with the other stakeholders that are involved in patients care, such as GP or social workers.

Physicians who are at coordination team level have a different perspective. They found this kind of tool very useful because it leaves patients more independent. They feel that using PC tablet and other devices strengthen patients' empowerment. They consider that there is still work to do on integration, but it is just time what will be needed. With the support of organisation decision levels, everything will be in place to spread it to manage patients. The most notable aspect of using ICT tools is the interaction with patients, both because patients are better controlled because of data that they send, and patients are better informed because the tablet has an educational module to empower the patient. They believe that nurses' work could be speed up using ICT platform, and be much more accurate.

From social provider perspective, they feel it is an opportunity to enhance users of the teleassistance service. With more information about patient, they could offer a better service and coordinated care. As some clinical stakeholders said, they also consider that the elderly are not well prepared regarding technology use; this is an important barrier to the spread of this kind of service. They expressed the need to improve patients' education to achieve a real self-management status. It is important to get support from decision-makers to create real integrated care, because otherwise many aspects of social and clinical care work in parallel - only in initiatives such as BeyondSilos can converge the two.

## **3.3 Process evaluation: Campania**

### **3.3.1 Barriers and facilitators**

**Date: 15/1/2015**

Table 3: Campania: Barriers and facilitators in the implementation process

	Beginning of implementation		8 months after implementation	
	Facilitators	Barriers	Facilitators	Barriers
<b>Technical</b>	Relative simplicity of the devices.			
	Automation of the procedure.	System failures.		
<b>Organisational</b>	Support from device provider.	Some stakeholders not used to technology.		
	Close relationship with the management.			
<b>Administrative</b>	Close control of costs.	Reduction in the budget.		
<b>Economic</b>	A budget for implementation was given.			

### 3.3.2 Case description and summary

#### Summary of the new integrated care processes and the supporting technical solution

Beyond Silos in Campania builds on an existing path of integrated home care called ADI (assistenza domiciliare integrata); it is provided to patients by the local health authority together with the social services of the municipalities. The technical implementation in Campania Pilot Site relies on a web-based platform that registers the interventions of GPs, territorial geriatricians and nurses and social care givers. This platform is further implemented with data that derive from devices installed at the home of care recipients that monitor biometric parameters relevant for the management of the patient's condition(s).

Please see section 3.7, in particular section 3.7.4, of deliverable D6.2A for a full description.

#### Summary of the individual perspectives of the care recipient. How does the care recipient experience the care, treatment or rehabilitation when ICT is being used?

Three patients were interviewed, one man and two women, living in a family environment with at least a partner. All suffer from CHF, with diabetes as a comorbidity. Their daily life is restricted to their apartment, and see on a daily base at least one relative. Only 1/3 uses the computer to connect to internet. Their health problem relates to their immobilisation and to the presence of pathologies that need frequent medications. The information on their health status derives from the measurements at their home. This knowledge allows a better understanding of their condition, and an improvement of the perceived interaction of the staff in charge of their care. Clinical parameters are improved after enrolment in the BeyondSilos programme.

#### Summary of the perspective of the healthcare professionals on using the ICT for integrated care

Four nurses of Magaldi were interviewed; with an average working experience of 1,5 years, and 27 years old; these are very young nurses. They can explain well the implemented ICT for telemonitoring and the ICT platform that allows the assessment of blood pressure, blood glucose, oxygen saturation and body weight. They agree that the monitoring of patients is substantially improved by the implemented technology, as well as the interaction with patients and their relatives. This implementation has increased

the awareness of nurses regarding patient conditions; it has also improved their relationship with patients and relatives. The impact on the management of cases is overall considered positive, as it reduces the level of anxiety that patients experience when left alone to deal with their condition, as happens in usual care. While there is no change in the daily practice work load, the nurses all believe that the level of interaction with other actors and stakeholders in the integrated care is substantially improved. Some difficulties had to be solved, including the low level of knowledge of patients and relatives. The nurses all agree that the system can be implemented by increasing the number of parameters to be monitored by ICT.

Two physicians, a GP and a specialist of Magaldi Life, have been interviewed, with over 35 years of experience and an average age of over 62 years. They both believe that the system has improved the quality of care and the relationship between staff and patients and relatives, though the daily workload did not change much. The solution increases the empowerment and awareness of patients regarding their conditions. The platform has increased the level of interaction of all the stakeholders and staff. The innovation requires a cultural level from the patient's family that is not always found among clients, and this can be a possible limitation; nevertheless, all staff believe that it is a substantial improvement in daily practice that is welcomed. The physicians also believe that a further improvement will derive from the implementation of more parameters to be monitored.

### 3.4 Process evaluation: Kinzigtal

#### 3.4.1 Barriers and facilitators

**Date: 13.01.2016**

**Table 4: Kinzigtal: Barriers and facilitators in the implementation process**

	Beginning of implementation		8 months after implementation	
	Facilitators	Barriers	Facilitators	Barriers
<b>Technical</b>	Error analysis, mainly from IT department, is always successful and leads to solution.	Tablets are not up to date and difficult to handle. Buttons, writings and icons appear too small.		
	Handling of software is easy.	Problems with data transfer from tablets to electronic patient record system.		
	Software components ascleoncare, CGMnet and DocAccess are compatible with each other and work properly together.	Log in account for the new GP practice which started working in January 2016 is not yet ready. Log in account is necessary to register new patients.		

	Beginning of implementation		8 months after implementation	
	Facilitators	Barriers	Facilitators	Barriers
		Tablets were infected by viruses. Reason was no ant virus software and protection installed; tablets were not intended for use such as downloading online games.		
<b>Organizational</b>	Great engagement of all involved stakeholders (social care and GPs). Health and social care professionals are always busy and fulfil additional tasks related to the project in their leisure time or during visits.	Lack of using ICT and consequently gaining experience and routine because of technical problems.		
	Huge patience regarding delays in implementation process: especially if technical problems occur and tablets must be recollected from social care institution.	GP dropped off project because of selling practice and moving back to Hungary; practice was closed during December. New GP started in January 2016.		
		Health and social care professionals are always busy and fulfil additional tasks related to project in their leisure time or during visits. Therefore quality of project work is sometimes un satisfactory.		
<b>Administrative</b>	Close contact with professionals and project partners, and short and quick communication.	Administrative workload to prepare deliverables is large.		
<b>Economic</b>	A budget for preparing work and implementation process was given.	Unexpected work and tasks is a heavy burden on human resources. Especially if technical errors occur.		

### 3.4.2 Case description and summary

#### Summary of the new integrated care processes and the supporting technical solution

The integrated care processes are supported by the following main elements:

- CMG net: electronic patient record system.
- AscleonCare: social care documentation system.
- DocAccess: provides the link between CMG net and AscleonCare

Please see section 3.8, in particular section 3.8.4, of deliverable D6.2A for a full description.

#### Summary of the individual perspectives of the care recipient. How does the care recipient experience the care, treatment or rehabilitation when ICT is being used?

Patients have a positive feeling being part of this research project, and are glad that an ICT solution enhances the communication between GPs and their care team. They have the impression that cooperation between care team and GP is already quite good, but also can be improved. At the moment, patients doubt that there will be a huge change in their process and quality of care by using this new technology. Their acceptance to pay for any tele care service out of their own pocket is very low. Abilities to use blood pressure or glucose meter devices, even PC, are very low. Only mobile phone is used more often.

#### Summary of the perspective of the healthcare professionals on using the ICT for integrated care

Female healthcare professional who was interviewed was 42 years old. She was rather convinced that the ICT solution will support an integrated care model, and that the workflows will change a little. HCPs are already accustomed to using this kind of ICT technology because they have used a common electronic patient record system for three years.

The social care professionals who were interviewed were female and between 28 and 40 years old. For social care professionals, this kind of tool is new to them, but they are very well informed about how the ICT system works, but feel inexperienced in using it. At the moment, social care professionals have a personal perception of having more work to do because of administrative and evaluation related tasks. Regarding changes of organisation aspects, they do not expect much difference.

Regarding this ICT solution as support for integrated care, healthcare profession agreed, while social care professionals disagree.

## 3.5 Process evaluation: Amadora

### 3.5.1 Barriers and facilitators

Table 5: Amadora: Barriers and facilitators in the implementation process

	Beginning of implementation		8 months after implementation	
	Facilitators	Barriers	Facilitators	Barriers
<b>Technically</b>	Online platform is attractive and user-friendly.	Time needed to upload and boost the platform with social and health needs.		

	Beginning of implementation		8 months after implementation	
	Facilitators	Barriers	Facilitators	Barriers
	Good and prompt back-office support from the ICT provider.	Gaps and lack of necessary fields to fill in with core information; minor lack of interoperability in between sections.		
	Multiple solutions for each situation: platform available either smartphones; TV; laptop.	Time delay to receive all the necessary telemonitoring devices from the ICT provider.		
	Muti services platform: telemonitoring; e-learning; tele-assistance?	Difficulties of integration of tele assistance in the platform.		
<b>Organiaational</b>	Good involvement of the critical players of the Project (Misericordia of Amadora health and Social Care Board staff).	Lack of using ICT and consequently gaining experience and routine because of technical problems.		
	Good involvement of project stakeholders from Amadora Municipality and Portugal Telecom.	Delays on prompt reply by Portugal Telecom given to the process of acquisition.		
	Good support from Misericordia of Amadora Board.			
<b>Administrative</b>	Close support provided by the project management.	Time needed to insert and upload all the relevant information.		
<b>Economic</b>	A budget was given in the framework of the project to prepare work and implementation process.	Unexpected work and complex tasks to deliver.		

### 3.5.2 Case description and summary

#### Summary of the new integrated care processes and the supporting technical solution

The integrated care processes are supported by the following main elements:

- eLearning integrated solution
- Tele-assistance and telemonitoring solution
  - Teleassistência – Patients with fixed line PT.
  - True Kare – Patients with mobile line PT.

- Smarthealth.
- Portal – PAD (Portal de Assistência Domiciliária)

Please see section 3.9, in particular sections 3.9.3 and 3.9.4, of deliverable D6.2A for a full description.

**Summary of the individual perspectives of the care recipient. How does the care recipient experience the care, treatment or rehabilitation when ICT is being used?**

At the moment (20<sup>th</sup> January 2016) interviews have not taken place because the pilot only started in December 2015, due to the acquisition of Portugal Telecom. Interviews are planned for the third week of February.

**Summary of the perspective of the healthcare professionals on using the ICT for integrated care**

At the moment (20<sup>th</sup> January 2016) interviews have not taken place because the pilot only started in December 2015, due to the acquisition of Portugal Telecom. Interviews are planned for the third week of February.

### 3.6 Process evaluation: Sofia

#### 3.6.1 Barriers and facilitators

Table 6: Sofia: Barriers and facilitators in the implementation process

	Beginning of implementation		8 months after implementation	
	Facilitators	Barriers	Facilitators	Barriers
<b>Technical</b>	Web-portal is user-friendly.	Elderly persons are difficult to train in ICT.		
	Our software engineers are responsive to implement changes.			
<b>Organizational</b>	New roles and responsibilities are clearly defined.	Co-ordination of subcontractors requires extra resources.		
<b>Administrative</b>	Pilot objectives demand organisational change.	Reporting consumes considerable resources.		
<b>Economic</b>	A budget for implementation was set.	The budget required purchase of equipment which is not top of the range.		

#### 3.6.2 Case description and summary

**Summary of the new integrated care processes and the supporting technical solution**

The technical solution consists of the following integrated components: central database, Integrated health and social record, web portal where each user has different access rights to the platform, mobile devices for the care recipients.

Please see section 3.10, in particular sections 3.10.4, of deliverable D6.2A for a full description.

**Summary of the individual perspectives of the care recipient. How does the care recipient experience the care, treatment or rehabilitation when ICT is being used?**

The care recipients in the pilot site Sofia for BeyondSilos share a common opinion that they feel calmer and more secure because there is a team of professionals that takes care of them. The patients are generally concerned about their health (and blood pressure as a daily indicator) and they welcome the opportunity to have their vital signs monitored on a daily basis. They rely on on-demand assistance by our social workers and medical nurses. Another advantage that the patients point out is that they feel more responsible for their own health due to the fact that they have to measure their blood pressure at least once a day.

The social aspect of the project is also essential to patients because the majority of them are lonely elderly persons who have no spouses, and not all of them maintain close relations with their children if they have them. The clients find it important that they have someone to talk to and share how they feel and receive consultation in case of a problem. The patients register as an advantage the personal visits by the social workers and their professional attitude. The clients treasure the fact that the social worker and the medical nurses are familiar with their problems, and can react to their status according to the results in the central database and the integrated record. The clients are also satisfied with the communication and co-operation among the different parties in the project; when they have a health problem or a problem with the ICT components, there is somebody who responds to their needs in a timely manner, either with a piece of advice about the treatment or with a personal visit. They feel confident that in case of emergency, they can activate the panic button and connect directly to the call centre or the emergency services.

The majority of them have not received other similar care, and therefore cannot make a comparison between this and other programmes, but generally all are satisfied that they are afforded the opportunity to participate in this project.

Since most of them so far have not used ICT and have little experience working with a computer, tablet or smartphone, so for them to use this solution is complicated; but thanks to the training from the project team, they learned quickly and do well. Once accustomed, they do not want lose this service, and say they will certainly feel its absence.

So far, patients were able to track the status and progress of treatment through calls to the call centre or in the blood pressure history. Now the project has developed a solution by which each patient or their relatives will be able to follow changes in status through access to the database, and report him/herself the progress achieved through the use of new technology.

**Summary of the perspective of the professionals on using the ICT for integrated care**

According to professionals, the project is useful, because the use of technology by older people to enable them to make more contacts, thus avoiding social exclusion. Also, access to adequate health and social services is also facilitated in a new, modern and intelligent way.

Professionals see as a benefit that they are saving time and money for patients, but on the other hand it also saves their own time, as they can manage their workload better; time required for face-to-face contact with the user is reduced since it is all electronic.

Few professionals have had previous experience with electronic healthcare, but said that thanks to the database, which has full information about patients and their status, they can provide adequate care to everyone, depending on their individual needs.

Another benefit in monitoring the condition of patients is the daily information about the vital signs of the patient; daily contact with them is the opportunity for contact with relatives of patients who can provide additional status information for a patient when necessary.

Experts say that the project has supported their interaction with patients mainly due to continuous contact with them. Benefits are sometimes expressed in solving critical health and social problems that require timely and adequate intervention. ICT itself facilitates co-ordination, planning and communication with patients.

On the other hand, communication between professionals is facilitated by ICT that supports constant collaboration between them. Thanks to this, workflow runs smoothly and has an exclusively positive impact on the integration of health and social care.

Recommendations from professionals include the introduction of other devices such as glucose monitors, etc., as well as the introduction of additional social services. A shortcoming is the criteria that must be met by patients to be included; also a daily phone call is denied to the majority of patients.

The opinion of the experts is that ICT facilitates communication with the patient and allows for constant care, but for the patients it is extremely important to have personal contact.

### 3.7 Process evaluation: Northern Ireland

#### 3.7.1 Barriers and facilitators

**Date: 15 January 2016**

**Table 7: Northern Ireland: Barriers and facilitators in the implementation process**

	Beginning of implementation		8 months after implementation	
	Facilitators	Barriers	Facilitators	Barriers
<b>Technical</b>		NI ECR system upgraded led to suspension of all integration work until upgrade completed in December 2016. This has delayed integration of SCS into ECR system which will not happen until late February 2016.		
<b>Organizational</b>	Updated patient Risk Stratification lists provided to GP practice December 2015.	Getting commitment from GP practices to participate in pilot is proving challenging in the current working environment.		
<b>Administrative</b>				
<b>Economic</b>	Funding agreed to reimburse GP practices for evaluation work.			

### **3.7.2 Case description and summary**

#### **Summary of the new integrated care processes and the supporting technical solution**

The technical solution consists of integrated the following components:

- Integrate the regional Remote Telemonitoring service with the NIECR.
- Integrate data captured by the electronic Northern Ireland Single Assessment Tool (eNISAT) with the NIECR.
- Design and set-up a Share Care Summary (SCS) within the NIECR to pull together and display information to enable health and social care providers to see information relevant to each individual patient thereby facilitating better clinical decision making.

Please see section 3.11, in particular sections 3.11.4, of deliverable D6.2A for a full description.

#### **Summary of the individual perspectives of the care recipient. How does the care recipient experience the care, treatment or rehabilitation when ICT is being used?**

Because of the unavoidable delay in building the Shared Care Summary into the NIECR, the BeyondSilos service has yet not started. Therefore we have not yet been able to conduct any interviews with care recipients. Interviews will be performed when the BeyondSilos service has been running for one month.

#### **Summary of the perspective of the healthcare professionals on using the ICT for integrated care.**

Because of the unavoidable delay in building the Shared Care Summary into the NIECR the BeyondSilos service has yet not started. Therefore we have not yet been able to conduct any interviews with professionals from the health or social sector. Interviews will be performed when the BeyondSilos service has been running for one month.

## 4 Conclusion

### 4.1 Overall status on input

As a part of the overall evaluation of the BeyondSilos project, an evaluation of the early processes related to the implementation of BeyondSilos intervention has been conducted. The aim of this process evaluation has been to collect data in order to identify and understand early possible barriers and facilitators for implementing ICT-supported integrated care.

All sites have successfully described barriers and facilitators that have occurred in the beginning of the implementation of the BeyondSilos service. All pilot sites have also conducted interviews with care recipients and professionals except for Amadora and Northern Ireland, which have had to postpone the interviews due to delays in the implementation of the BeyondSilos service.

### 4.2 Overall preliminary results

#### 4.2.1 Overall barriers and facilitators in the implementation process

##### **Technical**

Most pilot sites indicate that the ICT system is easy to use and also highlight the benefits of good ICT support. However, the pilot sites also indicate that the systems are not always easy, for the elderly people to use (buttons and icons appear too small) and that they have experienced problems with data transfer, log in accounts, system failures and learning curves for ICT tools.

##### **Organisational**

Most pilot sites report that they have experienced great support and engagement from the partners involved in the projects, though one pilot site finds it difficult to get commitment from GP practices to participate. Several pilot sites report that it seems difficult for the professionals to set aside working time to engage in the project, and therefore they have to fulfil tasks related to the project in their leisure time, which effects the quality of the work.

##### **Administrative**

It seems that the new horizontal integration of care has helped establish clear roles and given closer contact between professionals and project partners, and a shorter and quicker communication. However, for some the lack of support from the administrative departments has been a limiting factor. Further, the administrative workload to prepare deliverables is considerable.

##### **Economic**

Most pilot sites indicate that it has been very positive that a fixed budget was given to prepare the work and implementation process. However, there seems to be a reduction in the budget which has influenced the quality of the equipment that could be bought, and made it difficult to overcome unexpected work tasks related to technical errors. One pilot site also indicated that bad planning prior to investment of the project budget has been a limiting factor.

#### **4.2.2 Overall summary of the new integrated care processes and the supporting technical solution**

The BeyondSilos services comprise a number of different services across the sites. The services include: Integrated health and social records; web portal where each user has different access rights to the platform; mobile devices for the care recipients; devices for home monitoring of biometric parameters relevant for the management of the care recipients conditions; panic buttons; and PC tablet devices at home. Both care recipients and professionals use the technologies.

#### **4.2.3 Overall summary of the perspectives of the care recipients**

Overall, the attitude towards the BeyondSilos care is positive. Some care recipients say that they have a better care experience because they feel relieved that a whole team of professionals from different disciplines follow up their care plan. Some say that they think they have more control of their own care, feel more responsible for their own health, and have a better understanding of their condition. However, some care recipients also find it complicated to work with computers, tablets or smartphones, since it is the first time for them.

#### **4.2.4 Overall summary of the perspectives of the professionals on using the ICT for integrated care**

Overall, the health and social care professionals express satisfaction with the BeyondSilos services. Some pilot sites report that the new service allows for better management because it improves the coordination between social and health care. In addition, it can improve the time spent with the care recipient while at the same time the professional can oversee more care recipients and give them constant care. However, it is also emphasised that the ICT service should be complementary treatment and cannot stand alone without any physical contact from professionals. The social workers interviewed more often indicated feeling inexperienced in using the ICT tools, which leads to more work load. One pilot site reports that nurses working close with the care recipients feel that although the ICT tool is a good concept, it is not well planned since the care recipients needs more technically training in order to trust the tools.

## Appendix A: Templates for data collection

### A.1 Description of context and care-as-usual

Please make a reference to the section in the deliverable 6.2 where care –as-usual is described for your pilot site.

### A.2 Identification of barriers and facilitators

Please fill in factors that have facilitated or been a barrier in the implementation process of ICT according to provide integrated care at your site 3-4 months after implementation and 8 months after implementation. This template can be filled out by the local project manager or a person close to the implementation process. The template has to be e- mailed to [dausigne@gmail.com](mailto:dausigne@gmail.com)

**Site:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

There are no requirements to number of facilitators or barriers. Please enter as many or few as you have experienced personally.

Table: Barriers and facilitators in the implementation process

	3-4 months after implementation		8 months after implementation	
	Facilitators	Barriers	Facilitators	Barriers
<b>Technical</b>				
<b>Organizational</b>				
<b>Administrative</b>				
<b>Economic</b>				

### A.3 Interview guide for care recipients

We recruit care recipients who need integrated care and rehabilitation in collaboration between social & health care professionals. Preferably the care recipients should represent different types (e.g. regarding, gender, age etc.).

Please conduct interviews with a minimum of three care recipient. It is suggested that you start by explaining to the end-user the aims of the interview (to explore how technology can support patient care processes in care, treatment and rehabilitation across sectors), and that they will be anonymous in the communication of findings from the BeyondSilos project. The interview is planned to last between 45-60 minutes. Please take notes during the interview. You will need your notes for a description of the cases (please see template in Appendix A.5). You also have to fill in Table 8 in English for each of the care recipient and send it to Signe Daugbjerg.

**Table 8: Interview guide for care recipient**

<b>End-user nr: Sex?</b>	
<b>Question</b>	<b>Notes for answers</b>
<b>Presentation</b>	
1. Could you please shortly present yourself? (prior job, education, family, etc.) ?	
2. How many persons 18 years and above lives in your household besides you?	
3. Could you please explain shortly how and when did your illness occur?	
<b>Everyday life</b>	
3. Please describe your everyday life which activities are you able to do your-self and in which do you need or ask help from other people? How often do you undertake these activities weekly? <ul style="list-style-type: none"> <li>• Today's rhythm</li> <li>• Work</li> <li>• Leisure</li> <li>• Activities</li> <li>• Hobbies</li> </ul>	
5. How often (weekly, monthly, yearly) do you see other family members or friends not living in the same household?	
<b>Use of technology</b>	
6. Do you use a computer? Mobile phone? Tablet? Other technologies?	
7. If yes, what do you use the technology for?	

<b>End-user nr: Sex?</b>	
<b>Question</b>	<b>Notes for answers</b>
<b>Management of your disease / rehabilitation programme by the use of ICT</b>	
8. How is the management of your disease/rehabilitation program planned? Are there clear goals for your progress?	
9. What activities have been planned so far? Activities such as hospital visits, diagnostics, physical or other therapist, health care centre visits, social care centre visits, fitness Centre, etc. ?	
10. Please explain how is the technology being used for supporting your disease/ rehabilitation? <ul style="list-style-type: none"> <li>• Are the healthcare or social care professionals using the ICT in collaboration with you?</li> <li>• Do you have access to your health or social data? Can you see your own record? If so, what do you use the information's for? Does anyone else check your own record, such as your family members, caregivers?</li> <li>• In your point of view, what are the benefits or downsides using ICT to coordinate, plan and communicate care/ rehabilitation for you?</li> </ul>	
<b>Coordination of your care</b>	
11. Which healthcare or social care professionals or voluntaries have you had contact / cooperation with during your illness? (etc. doctors, nurses, GPs, social workers, physiotherapist, church members, patient organizations)	
12. Thinking about all the health and/or social services you have used in the last 3-4 months, how do you experience or think your care has been coordinated (For example, the way different doctors, nurses, social workers and organisations work together)?	

<b>End-user nr: Sex?</b>	
<b>Question</b>	<b>Notes for answers</b>
<p>13. Have you noticed any difference in the overall care you have been receiving, since you entered in the BeyondSilos program? And could you please describe which changes, if any?</p> <p>If yes,</p> <ul style="list-style-type: none"> <li>• Does the new integrated treatment help you understand your illness? How?</li> <li>• Does the new treatment help you cope with your illness? How?</li> <li>• Does the new treatment make you more confident about your health?</li> </ul>	

#### **A.4 Interview guide for professionals**

A minimum of six or more healthcare professionals / social workers should be identified for the interviews. In order to save time, you can consider performing the interviews online or by telephone. We recommend that the interview lasts 30 minutes and that you afterward use 30 minutes to write a summary of the interview. You will have to use your notes for a case description on how you have worked with ICT to integrated care (see Appendix A.5). You also have to fill in Table 9 in English for each of the professionals and send it to Signe Daugbjerg.

**Table 9: Interview guide for professionals**

<b>PROFESSIONAL 1</b>	
1. Please introduce yourself shortly (job & education)?	
2. How long have you worked in your current job?	
3. What is your age?	
4. Can you describe the ICT solution that you are using?	
5. Do you think it has supported the integrated care? Please explain.	
6. Has your workflow changed since the introduction of the ICT? If yes, please describe how: <ul style="list-style-type: none"> <li>• Do you now delegate more responsibility to others?</li> <li>• Do you now have more responsibility delegated to you?</li> </ul>	
7. Has the ICT supported you in your collaboration with the patient? If yes, please describe how:	
8. Has the ICT solution had any impact on the daily work with the patients? If yes – will you please describe how? What have been the benefits and the pitfalls seen from your perspective?	

PROFESSIONAL 1	
9. How have you used the ICT solution in your collaboration with healthcare or social care professionals: <ul style="list-style-type: none"> <li>o Within the hospital</li> <li>o Between hospital and social care</li> <li>o Between hospital and GP's ?</li> <li>o Between Social care and GP's?</li> </ul>	
10. How would you describe the collaboration in implementing the ICT tool in your organisation?	
11. How would you describe the collaboration by using the ICT as a tool to coordinate, plan and communicate about the patient?	
12. How would you characterize the changes in the collaboration after the ICT has been implemented	
13. Have you experienced any changes in the communication between different parts of your organization or with other organisations?	
14. Please let us know any other comments you may have about the integrated care using the ICT solution.	

### **A.5 Case description and summary**

Description of three cases on how ICT can support integrated BeyondSilos care.

Based upon your findings (notes) from the interviews with the care recipient and health and social care professionals, please elaborate a description of how ICT can support integrated care at your site.

Site: \_\_\_\_\_

Date: \_\_\_\_\_

Please summaries the information you have been collecting under the following headings:

- Summary of the new integrated care processes and the supporting technical solution. The objective is to provide a context for the following description.
- Summary of the individual perspectives of the care recipient. How is the end-user experience the care, treatment or rehabilitation when ICT is being used?
- Describe the perspective of the healthcare and social care professionals on using the ICT for integrated care.

Each description has to be limited to two pages in total.

The description has to be called "Description\_case 1\_site\_date" and sent to [dausigne@gmail.com](mailto:dausigne@gmail.com).