## Project Deliverable Report

Deliverable nr D6 – Report on challenges in patient care and the factors that influence change in practice

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The impact of organizational culture on patient handovers in the primary care – hospital interface in Europe has been relatively unknown. The aim of this Deliverable is two-fold: (a) to identify cultural barriers and facilitators to effective and safe patient handovers; and, (b) to provide a closer look into the factors that need to be addressed when developing and implementing best-practice interventions given these cultural findings. A prospective, qualitative study was performed in The Netherlands, Spain, Poland, Italy and Sweden. Patients with chronic diseases, discharged home from hospital, and their respective care providers were recruited. Individual and focus group interviews were used. We found that although the prevailing handover practices differ across Europe, many of the identified cultural barriers and facilitators appear to be similar in the different studied countries and settings. A fragmented delivery care model and culture at the interface between the hospital and primary care, conflicting professional values and, in some countries, the organization’s identity played a key role in hindering effective and safe handover practices. In some of countries studied, the presence of a learning culture and patient-centered culture appeared to facilitate effective handovers. However, as these conditions seemed to lack in most countries, they turned out to be a barrier as well. Finally, the extent to which patients (as well as their family care givers) are aware of their own important role and are empowered enough affects the quality and safety of handovers, both positively and negatively. The results indicate that improving the quality and safety of handover practice in the EU requires more awareness and care for the aspects that make continuity of care possible. Each European country in the study has its own distinct healthcare delivery system, and thus these empirical findings need to be customized to the local constraints. Still, these findings are sufficiently evident to allow the tailoring of future interventions to address and overcome cultural barriers in handovers and to improve the continuity of patient care.

Keywords List
Handover, patient safety, barriers, facilitators, primary care/hospital interface, organizational culture, culture, European Union settings, focus groups, interviews
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Chapter 1. Introduction

1.1 Background
The decrease in the hospitalisation period, the change in work-hours of providers and the increasing number of transitions of patients between institutions and care services puts high demands on the quality of patient handovers, especially those of elderly, very young and high-risk patients with multiple co-morbidities (Halayesmanani et al, 2006). Continuity of care, either at a patient’s referral to a hospital by a primary care specialist or at a patient’s discharge from the hospital (further jointly referred to as ‘handovers’), is a critical aspect of safe and high quality patient care. This requires close cooperation between healthcare professionals across organizational boundaries, thereby forming an interdisciplinary network (Cohen and Bailey, 1997) or the ‘clinical micro system’ (Barach and Johnson, 2006; Mohr et al, 2004). Unfortunately, poor reporting, incomplete information and communication errors often increase the chance of adverse events for patients that ultimately may lead to life threatening situations, avoidable treatment, unplanned re-hospitalizations (Cheah et al, 2005; Simpson, 2005) and a considerable amount of extra costs (Bates et al, 1997; Classen et al, 1997).

It is believed that cultural factors have a major impact on the quality and safety of handover practice and on the success of improvement efforts. As culture is often hidden in the underlying social constructions and attitudes, it is difficult to identify and assess. Hence, little is known about the effect that culture actually has on the quality and safety of handover practice. In HANDOVER Deliverable 6 this will be investigated.

1.2 Objectives of this Deliverable
This Deliverable 6 is the first to be produced by Work Package 5. The aim of this Deliverable is two-fold. First, the main objective is to provide insight into how culture hinders or facilitates effective and safe handovers in the interface between hospital and primary care, in five European settings: The Netherlands, Spain, Poland, Italy and Sweden. We defined culture in paragraph 1.4.2. Covering all cultural barriers and facilitators is not likely to be possible. Handover situations vary across European countries due to social-organizational and regulatory differences that underpin their respective cultures. Therefore this deliverable primarily aims to provide insight into the most important cultural barriers and facilitators to effective handover that are encountered across various handover situations and settings. Furthermore, major cultural differences between the different European settings, that seem to affect handover will be highlighted when appropriate.

The second aim, is to provide a closer look into the factors, given these cultural findings, that should be taken into account when developing and implementing best-practice interventions. Suggestions will be made for developing and implementing effective handover interventions.

1.3 Setting

1.3.1 Handovers at the primary care – hospital interface
The primary focus of the HANDOVER project are patient handovers occurring between the primary care – hospital interface as depicted in Figure 1.
1.3.2 The healthcare systems in the participating countries

Each European country has its own distinct healthcare system with its unique specific dimensions, drivers and constraints, although with many similar and overlapping drivers and barriers (Dean et al., 2005; van Kemenade, 2007). The five countries in the present study all have a universal healthcare system, in theory providing equal possibilities for healthcare access to all of their country’s inhabitants. A common pressure on all countries being studied is a growing need to integrate non-native citizens. In the Netherlands and Spain, there is a longer tradition of integrating foreign populations into the healthcare system. Italy is, with increasing immigration, being challenged recently with this integration process into the healthcare network.

There are significant financial differences between the systems. The patient’s co-payment varies in the different countries from basically zero (Italy and Spain) to as much as €35 for an Emergency Department visit in Sweden. In Sweden, however, there is a fairly low yearly cap on the overall co-payment both for drug prescriptions and healthcare utilization.

The latest OECD report (2009) indicates that the percentages of Gross Domestic Product (GDP) expenditures on healthcare in our 5 studied countries vary between 6.4% (Poland) to 9.8% (the Netherlands). Women have a higher life expectancy than men in all five countries (see Table I). Sweden has the lowest number of acute care beds (2.1 beds/per 1000 population), whereas Poland has the highest number (4.6 beds/per 1000). The number of practising nurses and physicians vary considerably across these countries. As for physician consultations, there is a threefold difference between Sweden at the lower end and Spain at the higher end.
Table I. European Union Healthcare System Comparisons per 1000 Population

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<tbody>
<tr>
<td></td>
<td>2007</td>
<td></td>
<td>2007</td>
<td></td>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>9.8</td>
<td>3.0</td>
<td>3.9</td>
<td>8.69</td>
<td>5.5</td>
<td>81.9</td>
</tr>
<tr>
<td>Spain</td>
<td>8.5</td>
<td>2.5*</td>
<td>3.7</td>
<td>7.5</td>
<td>8.1</td>
<td>84.4</td>
</tr>
<tr>
<td>Poland</td>
<td>6.4</td>
<td>4.6</td>
<td>2.8</td>
<td>5.2</td>
<td>6.6</td>
<td>79.6</td>
</tr>
<tr>
<td>Italy</td>
<td>8.7</td>
<td>3.1</td>
<td>3.7</td>
<td>7.0</td>
<td>7.0**</td>
<td>84.0</td>
</tr>
<tr>
<td>Sweden</td>
<td>9.1</td>
<td>2.1</td>
<td>3.6*</td>
<td>10.6*</td>
<td>2.8</td>
<td>82.9</td>
</tr>
</tbody>
</table>

*In 2006; **In 2005

For more details on the respective healthcare systems, see the country descriptions in Appendix A.

1.4 Conceptual constructs of this deliverable

1.4.1 Clinical Microsystems

Handovers can also be defined as transitions between different clinical Microsystems. A microsystem, centred around patient care, is an organizing design construct in which social systems cut across traditional discipline boundaries (Barach and Johnson, 2006; Mohr et al, 2004). The clinical purpose and its setting define the essential components of the microsystem, which include clinicians, patients, and support staff; information and technology; and specific care processes and behaviours that are required to provide care. Microsystems usually coexist with multiple other Microsystems within the organisation (Nelson et al, 2008). Microsystems are the smallest unit of analysis and change measurement and thus should be the focus of handover improvement and interventions (Barach and Johnson, 2006, 2009).

1.4.2 Culture

Culture and performance were related in organizational and business sciences for the first time many decades ago. However, the correlation became popular in the 1980s by a number of best selling management books generally addressing the notion that ‘organizational culture’ is a crucial variable in the management of organizational performance (Peter and Waterman, 1982; Deal and Kennedy, 1982). Scientific attention to culture has increased rapidly in healthcare over the last decades as new managerial solutions were sought to improve quality and safety issues (Harrison et al, 1992; Mackenzie, 1995; Gerowitz et al, 1996; Gerowitz, 1998). Hence, concepts of ‘culture’, ‘climate’ or ‘organizational culture’ are increasingly suggested and described as an important research variable for healthcare performance and quality improvement (Bosch et al, 2008). Yet, articulating the nature of that relationship remains often difficult (Scott et al, 2003). Some studies were successful in finding associations between culture(s) and performance (Meterko et el, 2004; Shortell et al, 1995; Strasser et al, 2002; Brewer, 2006), whereas other studies failed to show a meaningful connection (Hann et al, 2007; Shortell et al, 2001).
Despite the growing scientific attention, culture remains a diffuse and contested concept in the field of organizational science. One review for example cited 15 different descriptions (Brown, 1995) while already in the 1950’s Kroeber and Kluckhohn (1952) identified 164 definitions of culture. However, many views on (organizational) culture have in common the typical mindset of behaviour or attitude, that emerges from (shared) beliefs, values and norms of individuals in an organization. It is ‘the way we do things around here’ (Bolman & Deal, 1997), as well ‘the way things are understood, judged, and valued’ (Davies et al, 2000). In that way, culture is also closely related to Karl Weick’s (1995) concept of ‘sense-making’: beliefs and experiences of organization members form a frame of reference (i.e. they give a meaning) that steers their social actions. In the attempt to untangle the various elements of (organizational) culture, several levels or dimensions can be identified (e.g. Schein, 1990; Hofstede, 1994; Davies et al, 2000). An example of three of these different cultural levels is illustrated in figure 2.

**Figure 2. Levels of culture**

At the most basic level are the **underlying values, assumptions, beliefs and expectations**, for instance about professional autonomy, the communication with colleague care providers, transferability of information or patient responsibility. Because they exist at a largely unconscious level, they are difficult to discern. Yet they provide the key to understanding why things happen the way they do. The next level of culture are the **intangible activities and relationships**, such as unwritten rules, routines or networks of relationships. At the highest and more visible level culture is represented in **artefacts**, that represent the most concrete physical and behavioural manifestations, for example medical documents, infrastructure, symbols, guidelines (e.g. for communication or structuring letters) or the level of technology utilized.

Consensus is lacking on a precise definition of organizational culture, but also on how it should be observed or measured, and how cultural research should contribute to managerial issues of quality and safety improvement. According to scholars like Martin (2002), Martin and Frost (1996) and Alvesson (2002), the phenomenon of culture can be approached in different ways. Each view depends on the researcher’s training/ discipline/ interests, and whether these are technical, instrumental, interpretive or reflexive. The variety of healthcare reforms that rest on the idea of ‘culture change’ or ‘cultural transformation’, like the policy changes at the NHS (1998) or the recommendations by the US Institute of Medicine (2000), indicate that culture is often perceived as an instrument, that can be manipulated for creating change in the pursuit of better performance. However, more and more scientists believe that this approach doesn’t really fit the aim of quality improvement due to the complex nature of organizational culture itself. In their view, the more visible elements of culture (organizational structure, mission, protocols et cetera) may...
be readily manipulated. However, deep-seated beliefs and values may prove more resistant to external influence. Furthermore, (organizational) culture, especially in healthcare delivery, is believed to be far from uniform or coherent (Martin, 1992), but rather dynamic and emergent (Ashkanasy, 2003) and therefore less controllable. Healthcare organizations are complex organizations with a variety of professionals and microsystems, that work and cooperate according to principles of the organization, but at the other hand, are guided in their behaviour by their shared background, identity and experiences as well (Gastelaars, 2006).

Organizational culture has an integrated, differentiated and fragmented form (Martin, 1992): it comprehends values, beliefs and norms of behaviour, or attitudes, that are consistently shared and recognized in social patterns and actions across the whole organization (‘integrated culture’), but in fact are far more often distinguishable and only prominent in some groups (‘differentiated culture’). They are manifested in so-called ‘subcultures’ that may emerge and change over time. In extreme cases they even may diverge and fragment to such an extent that cross-organizational consensus and norms are absent (‘fragmented culture’). Handovers, for that reason, might be influenced by culture that is integrated across the whole organization at the hospital primary care interface, but also by the culture that defines variations in practices and attitudes between doctors and nurses, between primary and secondary healthcare, between hospital A or B, and between countries.

The diffuse and contested notion of (organizational) culture urges this Deliverable to provide a clearer understanding of this concept from the beginning. Thus, culture is used here as a research tool to interpret how (shared) values, beliefs, assumptions and norms shape the behaviour, or attitude, of stakeholders and thereby may hinder or facilitate handover practice. In addition, culture is seen as a dynamic and emergent property of those who organize and are involved in handovers. Therefore, it is not necessarily controllable but, nevertheless provides more understanding in how to improve handover practice and implement innovations more effectively.

In conclusion, in this Deliverable culture reflects: the social-organizational phenomena, in terms of behaviour or attitude, that emerge from a common way of sense-making (based on shared values, beliefs, assumptions and norms) which allows people in the organization to see situations and events in similar and distinctive ways.

1.5 Research questions
Two research questions have been formulated in order to achieve the set objectives and to answer the defined aims:

- How does culture hinder or facilitate effective and safe handover?
- How can handover be improved and care innovations be implemented more successfully given the cultural findings?

1.6 Structure of this Deliverable
Chapter two of the report introduces the methodology of this study. The materials used in this study are discussed in chapter three, followed by a presentation of the results in chapter four. The report concludes with an overview of the main findings, the limitations of the study and a discussion on work that needs to be conducted in the future.
Chapter 2. Methods

2.1 Study design

We conducted a prospective, qualitative study of patient handovers in five countries (i.e. The Netherlands, Spain, Poland, Sweden, Italy). This Deliverable is the second report on the analysis of the qualitative data also described and reported in Deliverable 3 (Hansagi & Ollson et al, 2010) of the HANDOVER project. The Swedish team within WP2 were responsible for the detailed planning and co-ordination, as well as for the monitoring of the data collection. Each country was responsible for the data analysis within their own setting. The Dutch team within WP5 was responsible for the overall planning, co-ordination and support in the data analysis of each country, as well as for gathering all country-specific reports and in preparing the final D6-report. Quality assurance was conducted by Dr. Julie Johnson (see below).

The participating countries studied handover at the hospital - primary care interface focusing specifically on patients in specific settings in each country as follows: general medical care in The Netherlands, minority groups in Spain, geriatric patients in Poland, and in emergency care in Italy and Sweden. These clinical foci represented a convenience sample of specific interest areas of the participating countries.

2.2 Study population

The study subjects included patients, and the recruited patients’ respective professional care providers (physicians, nurses) at the hospital and in primary care, designated as key stakeholders. The uniform criteria for the selection of the study population and data collection were as follows.

2.2.1 Generic inclusion and exclusion criteria

Inclusion criteria: Patients 18 years old+, with any of the following diagnoses: diabetes mellitus, asthma, COPD, chronic heart failure, and/or patients prescribed 6+ drugs, were recruited consecutively at the point of their hospital discharge. A further criterion was that patients should be discharged to the community (i.e. home or nursing home), hence under the responsibility of primary/ community care (i.e. the GP and, if needed by the patient, the community nurse) Hospital care team members were selected from the general medical and surgical wards where the recruited patients were hospitalized. Primary care team members represented the communities to which the patients were discharged. Exclusion criteria: patients referred to other care units within the hospital (or to another country) prior to their discharge home or discharge to another country.

2.2.2 Country specific inclusion criteria

In addition to the general inclusion criteria, each country, depending on its clinical focus, applied additional criteria (see Table II).
Table II. Country-specific inclusion criteria

<table>
<thead>
<tr>
<th>Country</th>
<th>Patient-related inclusion criteria</th>
<th>Health Professionals-related inclusion criteria</th>
</tr>
</thead>
</table>
| The Netherlands | • Patient admitted to internal medicine, pulmonary diseases, cardiology or (vascular) surgical wards | • Primary care physicians (no community nurses)  
• Sampling in order to get representation regarding age, gender, diagnosis, hospital setting and wards |
| Spain        | • Patients belonging to cultural minority groups  
• Limited health literacy (capacity to read, write, and understand healthcare information) | • Nurse coordinator  
• Cultural mediators | |
| Poland       | • ≥ 60 of age  
• Sampling of patients in order to get representation regarding age, gender and diagnosis | -- |
| Italy        | • Patients admitted to emergency ward  
• Sampling of patients in order to get representation regarding age, gender and diagnosis | • Nurses and physicians from emergency ward and primary care  
• Sampling in order to get representation of seniors and juniors, equal numbers of nurses versus physicians |
| Sweden       | • Patients admitted to emergency ward from emergency room  
• If living at a nursing home, only within a geographically specified area  
• Sampling of patients in order to get representation regarding age, gender and diagnosis | • Nurses and physicians from emergency room and emergency ward  
• Sampling in order to get representation of seniors and juniors, equal numbers of nurses versus physicians |

2.3 Setting
The study was performed in 9 hospitals and their respective primary/community care areas. University hospitals, middle-sized hospitals and hospitals in rural areas were included in our study sample (Table III).

Table III. Clinical foci, setting and hospital name in each country

<table>
<thead>
<tr>
<th>Country</th>
<th>Clinical focus</th>
<th>Setting</th>
</tr>
</thead>
</table>
| The Netherlands | General medical care | The University Medical Center Utrecht (UMCU)  
The Diakonessenhuis |
| Spain        | Minority groups | Germans Trias i Pujol Hospital  
Hospital de la Esperança |
| Poland       | Geriatrics      | The Good Brothers' Hospital, The Specialist Hospital of Stefan Zeromski |
| Italy        | Emergency department | Nuovo San Giovanni di Dio  
Nuovo Ospedale del Mugello |
| Sweden       | Emergency department | The Karolinska University Hospital, Huddinge |
Below follows a short description of the hospital(s), the organization of community care and technical information tools in the settings where the data collection occurred.

2.3.1 The Netherlands

a) The University Medical Center Utrecht (UMCU) is the main hospital of Utrecht, the fourth largest city in the Netherlands. The UMCU resulted from a merger of the University Hospital, the Wilhelmina Children’s Hospital and the Medical Faculty of Utrecht University. The UMCU Center provides top clinical services besides basic hospital services, and is a last resort for referrals from other hospitals in the country. UMCU Utrecht employs a total of 9,238 people, has 1,042 patient beds, 350,000 outpatient visits and 26,244 admissions a year.

b) The Diakonessenhuis is a community hospital located in Utrecht, with two other departments in Zeist and Doorn (cities close to Utrecht). The hospital has a total of 559 beds and more than 2,700 employees and primarily focuses on basic hospital services for the people in Utrecht-city and suburban areas. It has approximately 240,000 outpatient visits and 25,000 admissions a year.

Both hospitals are in the first phase of establishing a shared electronic medical record system. Primary care is provided by 640 GPs in the Utrecht region. Primary care practitioners act as gatekeepers for the hospital care (only 5% of patients enter the hospital without a referral).

2.3.2 Spain

a) Germans Trias i Pujol Hospital (within the Nord Metropolitan Regional Management) is a reference and high technology center in Badalona (Barcelona), and comprises 15 primary care teams. The hospital had in 2008 a total of 27,591 discharges, 108,356 emergency attendances, 387,764 outpatient attendances, 12,660 surgical interventions and 38,784 hospital day visits.

b) Hospital de la Esperança (within the Municipal Institute of Health Assistance), located in Barcelona, offers an integrated health service. In 2007 there were a total of 30,711 discharges, 159,068 emergency attendances and 116,097 outpatient attendances. It constitutes a tertiary care reference hospital, a Municipal Institute for Medical Research, Centre Forum, Centre Peracamps and 11 primary care centers within 2 districts of Barcelona. Both primary and specialized care centers are using electronic records and currently working to share patient information in the near future.

2.3.3 Poland

Patients were recruited from two hospitals in Krakow county (population of approximately one million, 16 hospitals and 6 hospital emergency departments).

a) The Good Brothers’ Hospital, with 127 beds, around 6,000 inpatients, non-profit, run and owned by the Order of Good Brothers. This is the oldest hospital in Krakow dating back to the 17th century.
b) **The Specialist Hospital of Stefan Zeromski.** The hospital has 17 clinical departments, 656 beds, 30,000 in-patients annually, and over 60,000 outpatient ambulatory consultations. The hospital serves over 200 primary care practices, both group and individuals. Patients are encouraged to consult a GP or the GP contracted services out of the regular working hours but most often choose to go to the ED directly. Long term care is not well developed and not popular, thus the majority of patients are transferred to home settings. The hospitals use electronic medical record systems, but data and information are not shared with primary care providers.

### 2.3.4 Italy

a) **The Hospital “Nuovo San Giovanni di Dio”** is located in the western part of the city of Florence. The hospital has 418 beds and 43,000 annual visits.

b) **The Hospital “Nuovo Ospedale del Mugello”** is located in the rural area of Mugello, in the north-east of Florence. The hospital has 110 beds. The Emergency Department was renovated 5 years ago and it registers an average access rate of 45 patients a day.

Both hospitals are part of the Health Care Unit of Florence. 710 GPs, 104 paediatricians, 213 primary care centres provide care in this district. The hospitals are connected through a networked electronic medical record system accessible to the other 4 hospitals and managed by the local healthcare agency. Both hospitals are directly managed by the local healthcare agency of Florence.

### 2.3.5 Sweden

**The Karolinska University Hospital, Huddinge,** is one of seven public hospitals in Greater Stockholm. The hospital provides highly specialized, as well as basic care. There are 700 beds and 700,000 annual visits. The emergency department (ED) counts 80,000 visits a year. 60% of patients are discharged home from the ED’s acute general medicine/surgical ward, after an average stay of 48 hours. Although patients are encouraged to consult their local healthcare centre first, they are free to visit an ED. Primary care in the area is provided by 20-25 healthcare centres with general practitioners, nurses, etc. All medical services at hospitals and in the primary care are contracted by the Stockholm county council. An exception is nurses in nursing homes; the nurses are employed by the municipality. Electronic medical record systems are in use in the hospital and in primary care but to date only some of them are shared.

### 2.4 Data collection and analysis

The project members in the participating countries collected data from key stakeholders locally. The data collection tools and the analyses of the generated data are described below.

#### 2.4.1 Individual interviews

We conducted audio-taped interviews using a semi-structured guide with purposively sampled patients and their respective care providers (Kvale, 1996). The interview guide was prepared based on generic scripts and translated into the respective language and, if necessary, customized for local use and constraints (for example see Appendix B:1-2). The
interview guide allowed for questions and prompts by the interviewers. Questions covered stakeholder’s perceptions regarding handover practice in general, as well as perceptions on identified patients’ transitions that the stakeholders had recently experienced. Major items were the communication, information exchange and coordination of care at handovers. The interviews were transcribed in the native languages according to a standardized agreed upon format (see Appendix C).

2.4.2 Focus group interviews
Focus group interviews (Kitzinger, 1995) were conducted with each type of stakeholder (i.e., patients, patients’ representatives, hospital physicians, hospital nurses, general practitioners and community nurses), using a semi-structured guide (see Appendix B:3-4). The focus groups included three to nine patients or patient representatives, or persons of the same profession. Except for Italy, where 2 focus groups were multidisciplinary (see Appendix D). The interviews were audio-taped and transcribed in the native languages according to a standardized format.

2.4.3 Analysis
At first, data from the individual and focus group interviews were structured locally in each country by condensing data and suggesting codes closely related to the text fragments (Corbin & Strauss, 1990) using the software Atlas.ti (www.atlasti.com). A consolidated code book was created inductively by all participating countries under the direction of Dr. Julie Johnson (see Deliverable 3). This code book was used for the further analysis of the individual interviews and focus group interviews. All local data were then analyzed through iterative feedback and analysis by two researchers in each country.

For the present Deliverable, a comparative analysis was performed of a sample of locally analyzed interviews (see 3.1.3 and 3.2). The comparative analysis consisted of two rounds. In the first round, each country analyzed one individual interview per stakeholder to see if shared themes and sub-themes could be identified and consensus could be reached. The pilot results were integrated in a preliminary report. Subsequently, a secondary analysis of an additional number of individual interviews and all focus groups was conducted to cover the most important cultural themes across the different European settings. The Dutch team within WP5 had a supportive role by providing instructions, suggestions for (sub)themes and relevant codes to extract cultural findings and interesting quotes from the transcripts and to structure them into themes and subthemes.

2.4.4 Country specific procedures
The specific details of the data collecting procedures at each study site, such as interviewers’ competence, methods of approaching subjects, place for interview etc, are described in detail by each study site in Appendix D.

2.5 Ethical considerations
The interviews and focus groups concerned potentially sensitive health and socioeconomic issues for patients. After informing them, patients were asked written consent to participate in this research project. The consent of a proxy, indicated on the chart as next of kin, or other designated proxy, was sought where a patient was unable to participate personally due to his/her illness. Patient’s participation was voluntary, participation would not affect
patient care, and the patient could withdraw at any time from the study. The number of people that conducted the interviews and coding was limited, and raw data were only available to one project manager and one co-investigator due to the sensitive nature of the interviews. Ethical (Ethics committee) and legal approval was achieved in all countries.

2.6 Internal quality assurance

Quality assurance can be defined as the systematic and independent examination of all project methods and documentation. Maintaining accuracy and quality throughout the HANDOVER study is a continual, dynamic process. Although we were clear about the methods and protocols at the outset of the project some minor changes in the research process occurred as the study methods and goals evolved. This was expected given the qualitative nature of the study and the wide variation in study settings and backgrounds of researchers and patient types.

A quality audit determines whether the methods were appropriately implemented and the data correct were generated, recorded, analyzed, and accurately reported according to the study protocol. A quality assurance plan ensures the careful documentation of the methods and protocols and provide consistent methods across the five participating sites. Our internal quality assurance plan ensures compliance with agreed data collection methods and protocols. Dr Julie Johnson, senior qualitative expert was responsible for the internal quality assurance process, and created a reporting tool for this purpose. The tool was adapted from the BMJ criteria (Mays & Pope, 2000), and from Tong et al. (2007), and vetted with the HANDOVER team during the 2009 meeting in Barcelona. The reporting tool was completed following the data collection and analysis phases.

For the complete quality assurance tool and results see the attached “HANDOVER Quality Assurance Report” in Appendix E.
Chapter 3. Materials

3.1 Participants in individual interviews
A total of 321 interviews were conducted with the key stakeholders in the participating countries. However, the numbers of complete sets of interviews, where all three stakeholder categories (the patient, their hospital care provider(s), and their primary care provider(s)) include: in The Netherlands: 15; Spain: 5; Poland: 13; Italy: 3; Sweden: 16.

3.1.1 Patients interviewed
A total of 93 patients (45 females, 48 males) were individually interviewed in the five countries. Occasionally a relative was present and participated in the interviews as well. 39 patients that were recruited for the study could not be interviewed for various reasons (i.e. refused, were too sick or deceased. They originate from the following countries: 16 from the Netherlands; 8 from Poland; 4 from Italy; and, 11 from Sweden. The median age of the interviewed patients was rather high in all countries, 65 to 75 years. Diabetes was the most common diagnosis: 35 of 92 patients (32%). It should be noted that patients could have multiple diagnoses. Only 10 patients (11%) were discharged from hospital to a nursing home (Table IV).

Table IV. Number of individually interviewed patients, by gender, age, diagnosis

<table>
<thead>
<tr>
<th>Country</th>
<th>Patients</th>
<th>Age, median</th>
<th>Inclusion diagnosis</th>
<th>Median # drugs at discharge</th>
<th>Discharged to home/ nursing home</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Diabetes</td>
<td>COPD</td>
<td>Heart failure</td>
</tr>
<tr>
<td>The Netherlands, female</td>
<td>12</td>
<td>75</td>
<td>7</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>The Netherlands, male</td>
<td>10</td>
<td>66</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Spain, female</td>
<td>7</td>
<td>69</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Spain, male</td>
<td>5</td>
<td>63</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Poland, female</td>
<td>12</td>
<td>73</td>
<td>5</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Poland, male</td>
<td>16</td>
<td>66</td>
<td>6</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Italy, female</td>
<td>3</td>
<td>70</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Italy, male</td>
<td>3</td>
<td>74</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sweden, female</td>
<td>11</td>
<td>74</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Sweden, male</td>
<td>14</td>
<td>65</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>35</td>
<td>20</td>
<td>28</td>
<td>81</td>
</tr>
</tbody>
</table>

* more than 6 drugs prescribed at discharge

3.1.2 Interviewed care providers
A total number of 228 care providers were individually interviewed, comprising 150 hospital professionals and 78 primary care providers. The professional experience of the
interviewees varied from half a year (beyond training/ certification) to up to 40 years of patient care experience (Table V).

Table V. Number of interviewed care providers by category, gender, and median years (and range) in profession after professional certification

<table>
<thead>
<tr>
<th>Country</th>
<th>All care providers</th>
<th>Hospital physicians</th>
<th>Hospital nurses</th>
<th>General Practitioners</th>
<th>Primary care nurses/ other</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Netherlands, female</td>
<td>31</td>
<td>5</td>
<td>20</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>The Netherlands, male</td>
<td>28</td>
<td>14</td>
<td>2</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>The Netherlands, years in profession</td>
<td>0-31</td>
<td>5 (0-16)</td>
<td>5 (1-25)</td>
<td>18 (4-31)</td>
<td>-</td>
</tr>
<tr>
<td>Spain, female</td>
<td>14</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Spain, male</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Spain, years in profession</td>
<td>2-30</td>
<td>5 (3-11)</td>
<td>10 (2-20)</td>
<td>13 (4-30)</td>
<td>14 (4-29)</td>
</tr>
<tr>
<td>Poland, female</td>
<td>35</td>
<td>12</td>
<td>11</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Poland, male</td>
<td>12</td>
<td>8</td>
<td>-</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Poland, years in profession</td>
<td>2-37</td>
<td>12 (2-37)</td>
<td>17 (10-30)</td>
<td>15 (7-29)</td>
<td>20 (16-29)</td>
</tr>
<tr>
<td>Italy, female</td>
<td>14</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Italy, male</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Italy, years in profession</td>
<td>7-40</td>
<td>18 (10-30)</td>
<td>15 (8-15)</td>
<td>25 (16-40)</td>
<td>22 (30-20)</td>
</tr>
<tr>
<td>Sweden, female</td>
<td>42</td>
<td>11</td>
<td>17</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Sweden, male</td>
<td>34</td>
<td>17</td>
<td>9</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Sweden, years in profession</td>
<td>0-34</td>
<td>8 (0-27)</td>
<td>3 (0-31)</td>
<td>23 (0-34)</td>
<td>20 (3-30)</td>
</tr>
<tr>
<td>No. of interviewed professionals</td>
<td>228</td>
<td>80</td>
<td>70</td>
<td>59</td>
<td>19</td>
</tr>
</tbody>
</table>

The interviews with the care providers were performed during varying time periods after the patient’s discharge from the hospital (see Table VI).

Table VI. Individual interviews: when performed in days since discharge (median range), and duration (median range)

<table>
<thead>
<tr>
<th>Interview performed within number of days after discharge</th>
<th>Hospital physicians</th>
<th>Hospital nurses</th>
<th>General Practitioners</th>
<th>Primary care nurses/ other</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Netherlands</td>
<td>30 (7-95)</td>
<td>24 (7-82)</td>
<td>40 (13-98)</td>
<td>-</td>
</tr>
<tr>
<td>Spain</td>
<td>21 (14-28)</td>
<td>27 (20-31)</td>
<td>27 (17-34)</td>
<td>23 (17-30)</td>
</tr>
<tr>
<td>Poland</td>
<td>36 (2-46)</td>
<td>34 (15-38)</td>
<td>77 (52-109)</td>
<td>108 (93-109)</td>
</tr>
<tr>
<td>Italy</td>
<td>7 (5-28)</td>
<td>24 (5-25)</td>
<td>20 (12-62)</td>
<td>-</td>
</tr>
<tr>
<td>Sweden</td>
<td>7 (1-32)</td>
<td>8 (1-22)</td>
<td>59 (30-122)</td>
<td>55 (9-100)</td>
</tr>
<tr>
<td>Interview duration (minutes)</td>
<td>Hospital physicians</td>
<td>Hospital nurses</td>
<td>General Practitioners</td>
<td>Primary care nurses/ other</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>---------------------</td>
<td>----------------</td>
<td>-----------------------</td>
<td>---------------------------</td>
</tr>
</tbody>
</table>
The Netherlands 50 (23-60) 45 (30-60) 40 (22-97) -
Spain 19 (17-30) 35 (13-59) 25 (19-36) 30 (25-41)
Poland 35 (32-44) 36 (25-61) 33 (25-42) 30 (25-35)
Italy 12 (10-23) 16 (10-19) 18 (15-54) 41 (21-42)
Sweden 30 (16-45) 30 (20-60) 30 (17-58) 37 (25-53)

*None of the interviewed patients in Italy were assisted by community nurses.

3.1.3 Sample of individually analyzed interviews

A comparative analysis was performed of a sample of 192 interviews of the totally 321 individual interviews conducted with patients (and relatives) and care providers in the five countries (see Table VII). This sample contained interviews with 53 patients, 46 hospital physicians, 38 hospital nurses, 39 general practitioners (GPs), and 16 community nurses (the latter from Poland, Spain, Italy and Sweden). The number of interviews were, except for Poland, fairly evenly distributed across the countries and across similar ages and gender. The results of the analysis of this sample are reported in Chapter 4.

Table VII. Sample of individually analyzed interviews (care providers and patients)

<table>
<thead>
<tr>
<th>Country</th>
<th>Total per country</th>
<th>Patients</th>
<th>Hospital physicians</th>
<th>Hospital nurses</th>
<th>General Practitioners</th>
<th>Primary care nurses/ other</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Netherlands</td>
<td>32</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Spain</td>
<td>30</td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Poland</td>
<td>65</td>
<td>23</td>
<td>16</td>
<td>10</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Italy</td>
<td>27</td>
<td>5</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Sweden</td>
<td>38</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Total number</td>
<td>192</td>
<td>53</td>
<td>46</td>
<td>38</td>
<td>39</td>
<td>16</td>
</tr>
</tbody>
</table>

3.2 Focus group participants

A total of 26 focus group sessions were completed, with altogether 156 participants (37 patients and 119 healthcare professionals, see Table VIII). All focus group interviews were analyzed for this Deliverable.

Table VIII. Focus group interviews with number of patients and care providers per category, gender and years in profession (median (range))

<table>
<thead>
<tr>
<th>Country</th>
<th>Patients</th>
<th>Hospital physicians</th>
<th>Hospital nurses</th>
<th>General Practitioners</th>
<th>Primary care nurses/ other</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Netherlands, female</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>The Netherlands, male</td>
<td>4</td>
<td>4</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>The Netherlands, years in profession</td>
<td>5 (1-25)</td>
<td>7 (0-30)</td>
<td>15 (9-32)</td>
<td>23 (5-40)</td>
<td></td>
</tr>
<tr>
<td>Spain, female</td>
<td>1</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Country</td>
<td>Gender</td>
<td>Count</td>
<td>Minimum</td>
<td>Maximum</td>
<td>Mean</td>
</tr>
<tr>
<td>-------------</td>
<td>--------</td>
<td>-------</td>
<td>---------</td>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>Spain</td>
<td>Male</td>
<td>2</td>
<td>8 (2-24)</td>
<td>24 (20-32)</td>
<td>20 (9-29)</td>
</tr>
<tr>
<td>Poland</td>
<td>Female</td>
<td>8</td>
<td>24 (10-38)</td>
<td>16 (10-33)</td>
<td>17 (15-29)</td>
</tr>
<tr>
<td>Italy</td>
<td>Male</td>
<td>4</td>
<td>18 (8-22)</td>
<td>11 (3-18)</td>
<td>21 (18-36)</td>
</tr>
<tr>
<td>Sweden</td>
<td>Female</td>
<td>3</td>
<td>4 (1-8)</td>
<td>6 (1-20)</td>
<td>22 (0-37)</td>
</tr>
<tr>
<td>Total numbers of participants</td>
<td></td>
<td>37</td>
<td>30</td>
<td>32</td>
<td>31</td>
</tr>
</tbody>
</table>
Chapter 4. Results

Researchers in each country performed an analysis of the interview sample using the themes agreed upon in a preliminary analysis. The themes included: fragmented handover culture in the interface between hospital and primary care, professional culture, hospital/ward culture, learning culture, and patient-centered and -participation culture. Local results were analysed comprehensively, shared, compared and are summarized, directed at the cultural barriers and facilitators to effective and safe handover. A selection of examples of handover practice and quotations are used to provide a better understanding and evidence of the cultural findings. The perspectives of each country and their respective stakeholders are described separately when appropriate.

4.1 Fragmented culture in the interface: hospital-primary care

4.1.1 Inward versus outward

The quality and safety of patient handovers is often affected by the extent to which the hospital and primary care providers are focused and anticipate on ensuring continuity of care. In general, many physicians and nurses are very concentrated on fulfilling their own work and put less time and effort into ensuring that care can be followed up effectively. Remarkably, hospital physicians and nurses seem to have a stronger inward focus, and are less aware of and dedicated to the handover process, than their counterparts in the primary care setting.

Most hospital physicians and nurses value the importance of continuity of care at the patient handover. However, there is often a limited amount of time to think or perfect patient handovers. For example, the main concern in hospitals is often primarily on ending hospitalizations, working towards discharge and focusing on new patients again once the discharge is nearby. For many hospital physicians and nurses the handover stops when a patient leaves the hospital. Below are quotes that reflect these sentiments:

Hospital physician, the Netherlands: What we as hospital physicians often deal with is that if we see that a discharge is coming, then it has to be finished (…) there is the pressure that it needs to happen. (…) And yes, I tend to draw my attention away...you back down a little bit because the patient needs to go away.

Hospital physician, Poland: Yes, no responsibility for handover. I work in the hospital and my responsibility for the patient finishes when the patient closes the hospital door behind him.

The attitude, recognized in various wordings across the different countries, was that patients need to be discharged as quickly as possible ("getting the patient out"), so that other patients can be admitted ("the next patient is always waiting").

Hospital nurse, the Netherlands: You notice that clients need to get out of the hospital more rapidly...so there comes a moment when the patient really has to go away. And often there is not enough time to handover 'the package' to community care correctly. This is why things go wrong.
Hospital nurse, Sweden: Sometimes you feel that the hospital physicians have made a decision about discharge, and then you feel that it is actually a little bit too early. But you don't have that much of a choice since there is such a high pressure with patients at the ward.

This attitude often seems to hinder hospital physicians and nurses to communicate sufficiently with their primary care counterparts and to anticipate well on their needs to continue care after discharge. For example: the handover of clear and complete discharge letters on time.

GP, the Netherlands: Sometimes I get letters telling me that the patient has been discharged and variations are reported. Well, then I know that the patient is at home again, but further nothing! That's annoying because I don't know anything. The patient expects that I am informed: 'Doctor, you know...'. Well, this doctor doesn't know!

It also seems to lead to situations where patients are discharged, regardless if at the moment of discharge it may be suboptimal for the GPs, community nurses or the relatives to continue care properly. For example, many GPs and community nurses complained about patients being discharged at (or just before weekends), when access to primary care and the pharmacy is restricted.

GP, Italy: Well, we are upset because the hospital physician does not provide us with information. Often patients are discharged at weekends and they call me on Friday evening while I am seeing patients. I have to provide the medication because the patient has not been informed that some medication request form are only valid for the hospital pharmacy and they must be collected before the pharmacy closes. Very often the patients wait for the ambulance to take them back home and nobody tells them about where and when to get the medications...

Country specific problems related to an inward focus were found as well. For example, retrieving information regarding medications is often experienced to be difficult as many hospitals remove patient files quickly after discharge. This makes it hard for community nurses to continue care as questions, that arise after discharge, often cannot be answered.

Primary care providers are not always that process-minded themselves either. For example, several hospital physicians expressed that referrals sometimes contain insufficient and irrelevant information, which makes follow-up problematic. In the view of some hospital physicians and nurses, handover sometimes is even used as an opportunity to temporarily get rid of the problem.

Hospital physician, Poland: ...GPs don’t examine patients at all: you get referral to hospital with abdominal pain. Don’t do any diagnostic tests, no interview, – this is not cooperation but getting rid of the patient, passing him on to specialist care.

Hospital nurse, Italy: Well the GPs’ referrals sometimes they help, they are very on the spot...most of the times you start from scratch again, you realize that it is just a way to get rid of the responsibility. That is ‘I send the patient to the ED, and somebody will take care of him’.

Several GPs in different countries acknowledged this by saying that their referral letters are not always as optimal as they should be. They cite time constraints or simply because of a lack of effort on their behalf. Consequently, hospital physicians express difficulties in
continuing care as inadequate referrals often increase the workload and delay proper patient treatment, and sometimes leads to unnecessary duplication of work.

_Hospital physician, Poland:_ …sometimes it turns out that we discover America: diagnose diabetes and this has already been diagnosed some time ago, thus we lose time on deepening the diagnosis instead of continuing the treatment or modifying it a bit.

In Italy, a hospital physician also expressed that the community care and local care units do not provide information on the availability of care for discharged patients. This makes it more difficult to inform patients and relatives properly at discharge.

_Hospital physician, Italy:_ …We do a notification, we signal a particular situation (…) to the social service and to the community nurses, the patient has got this particular need and we do not get any feedback (…) the relatives come back to me and I can only say that I transmitted the notification…I really would like to get some feedback from them especially in order to provide the right message to the patient and the relatives…”you will go here and then they will do this and that”.

The inward attitude of physicians and nurses, both at the hospital and primary care level, also leads to situations where the success of the handover depends too much on the patient. While, in fact, many patients are not capable to inform the hospital physician at admission or the GP after discharge. As a result, patients do not inform their care provider properly or, in extreme situations, ‘disappear from the radar’ for both sides and thereby hinder continuity of care.

_GP, Poland:_ …I think the majority share my opinion that handover does exist but formally and in paper form. In reality, there is no such thing as handing over specific content information regarding specialist consultation or admission. If there would be a patient that requires an emergency referral, I write it for him and the patient, let’s say, disappears in the jungle of the system and is left to himself. So there is no continuity (…) I refer him/her and add some diagnostics if necessary and that is where my role finishes. The patient is then alone: has to look for the hospital himself. Of course I can advise him but my role is over. I think that is the main difficulty of the system: there is no link between the levels of care, no personal communication between the different levels’ providers, as it is in UK which I have noticed.

Besides an inward attitude that appears to be a common barrier to effective and safe handover, both at the hospital and primary care level, primary care providers often seem to have a more outward focus than their hospital colleagues. Many GPs and community nurses expressed the importance and their effort to handover complete, clear and relevant information, allowing the hospital staff to continue care as best as possible. Many of them also argued the need for more direct handover communication with their hospital colleagues in addition to the referral and discharge notes, in particular when dealing with complex cases. Several GPs and community nurses indicated to be aware of the need for having such an outward, process-oriented, attitude at handover, because they are largely dependent on the quality of handovers themselves. They are the ones who work closely with patients after discharge, who need sufficient and adequate information from their hospital colleagues in order to continue care properly without extra unnecessary work, and who often have to deal with the results of poor handover communication. A couple of
community nurses expressed that they have become more aware of the need to invest in handover communication, since their earlier experiences as a hospital nurse themselves.

4.1.2 Individual/ separate versus collaborative attitude

Interviews demonstrate that handovers are more the result of individual work than a collaborative, team effort. Moreover, most physicians and nurses at the hospital and primary care levels do not consider themselves part of a team/network, but see themselves more as separate actors with different professional backgrounds in the delivery of care (”us in the hospitals” and “them in primary care”).

Hospital physician, Italy: We are on two different tracks that hardly meet. They read our medical discharge reports. We read their referral notes and we all keep on going on our own direction. (...) We are on two tracks that hardly converge...like a railway...

When handover collaboration was mentioned in interviews this was indicated more as an important value and wish, rather than an actual fact. In the eyes of many physicians, nurses and patients the lack of a collaborative attitude often hinders effective handovers.

There are a couple of factors that contribute to this lack of collaborative attitude. First of all, most care providers believe and act upon a sharp demarcation of tasks and responsibilities. Especially physicians (hospital physicians and GPs) feel that the professional, who actually cares for the patient, is responsible for the patient and for decision-making regarding handover. It is not considered as a shared responsibility.

Hospital physician, The Netherlands: I must say that I find communication by telephone very problematic. It contains elements of interfering responsibilities. If I have somebody in the hospital, I carry the responsibility for everything that happens. I can phone whatever I want, but in the end I am responsible (...) There is room for discussion, but my decision stays my decision.

Some GPs in various countries believed that their referral information is not considered enough by the hospital staff.

GP, Italy: ...I ask the ER staff “did you read the referral?” he answers: “Well no, but I inserted it in the medical record”. Sometimes ER nursing staff have the idea of assessing by themselves the situation rather than reading the referral.

A couple of hospital physicians acknowledged this by indicating to follow their own track at handovers anyway. The role of the GP or community nurse, in terms of their opinion or the information that they provide is often not taken into account.

Hospital physician, The Netherlands: We often fall back to our own information system, because cardiac patients tend to come back to us. (...) so we construct our own patient medical history, own working lists and recognize our own patients...they all keep coming back. So were are not very dependent of the referral. The referral, when we talk about new patients, are often ambiguous, question marks...

Hospital nurse, Spain: You invent your own world of information and make your own assessment.
Second, the main focus in handover communication is on giving and receiving information and instructions rather than a shared-decision making or an assessment of what needs to be done. Being a recipient at referral and an informant at discharge, or vice versa, is leading.

 Hospital nurse, Italy: We communicate through fax to the community care, only through fax. (…)
 Interviewer: Do you add anything to the medical discharge letter?
 Hospital nurse: We do not touch it, for us the transmission of the information consists in sending the fax, when it is needed. We make a call to communicate that the patient will be discharged, tomorrow will be discharged and…that’s it.

Third, physicians and nurses also express that many colleagues, including themselves, are often very reactive and lack the pro-active initiative to collaborate, for instance by calling one another.

 GP, the Netherlands: You know, quick communication about a bad reaction on a chemo so that the hospital physician knows that further treatment needs to be postponed for a week for instance. The major problem is that someone has to take the initiative to call…This is often difficult for both GPs and hospital physicians I think. Yeah, you have to call, you need to do it, you need to be aware of it.

 Hospital physician, Spain: I have never talk to a General Practitioner…neither on his own initiative, nor on mine. It happens to all of us, I think.

 Many interviewed care providers are displeased with the current level of handover collaboration. The wide feeling is that important communication moments often remain unused and therefore many issues remain unspoken or taken for granted.

 GP, the Netherlands: Well, in 50% of the cases it is communicated. In the other 50% of the cases there is no communication at all, or the expectation is that you’ll understand it.

 Other major complaints were that the lack of collaboration often leads to unwanted changes in care and duplication of work. Several patients perceived the lack of a collaborative attitude reflected by the changes in their (medication) treatment, imposed by either level of care (hospital and primary care) without consulting each other. Moreover, several hospital physicians ordered new diagnostics ‘‘at their own hospital’’ after patients were being referred, regardless of whether patients already underwent these tests.

 According to many interviewed physicians and nurses (in particular at the primary care level) handovers would be much better if one would call another more often to discuss the follow-up care, so that discontinuity of care and duplicate efforts can be reduced. Especially with complicated patients where continuity of care is believed to be essential. This feeling of being a team/ network is often still missed.

 GP, The Netherlands: I experienced it recently, that a hospital physician calls me and says: ‘‘Listen, I am shocked by the fact we diagnosed cancer and it does not look good’’. Well, then I have the feeling that we work together on what is beneficial for the patient. And often this is not what usually happens and that’s a shame! (…) to investigate the possibilities with regard to the patient’s social situation.
4.1.3 Relationship between hospital and primary care providers

The relationship between hospital and primary care providers at handover is considered good, but could be improved. Handover communication and collaboration is still hindered too often by a problematic relationship where care providers have a distant or negative attitude towards each other.

First of all, the relationship seems to be shaped for a large part by the level of trust between care providers. Bad handover experiences have made physicians and nurses in the hospital and in the community often skeptical to collaborate, share or trust their clinical counterparts. For instance, negative experiences with inaccurate referrals or receiving dishonest referral information often seems to diminish the level of trust that hospital physicians have in GPs and reduces their effort to collaborate and take GP decisions into account.

*Hospital physician, the Netherlands:* ...and that is why a part of the diagnostic is kept by myself.
Perhaps I am a little bit reserved because I think like ‘oh well, here we have another patient with no useful information again’.

Some hospital nurses also doubt the competences of community nurses with regard to providing certain care activities after discharge (e.g. patient with chemo, complex wounds or simply starting with community care directly after discharge) as earlier experiences turned out disappointing.

Secondly, the relationship seems to be influenced by the level of understanding and respect as well. To a varying extent in each country, the hospital physicians and nurses did not value their primary care colleagues or there was an unequal perception on authority, status or prestige noticed. Such perceptions often seemed to hinder handover communication and proper coordination of care and lead to reduced patient quality.

*Hospital physician, Spain:* First of all, we should look at each other as partners, and not as rivals, which is the way we look at each other now. And this is something that makes communication difficult between us.

*GP, Spain:* Hospital specialists have always considered that they are a little more important than we are.

A lack of understanding and respect also seems to be manifested in the communication tone between hospital and primary care providers. For example, a couple of community nurses felt that they are not always taken seriously (or approached very respectfully) by hospital nurses, which de-motivates them to invest in future handover collaborations.

*Community nurse, the Netherlands:* Sometimes you get sent away with such a cliché. …) When you call to the ward the reaction is often ‘Well, I will pass it through’. And then you have to wait and see what really happens.

The communication tone is sometimes even felt to be deconstructive for a good relationship by physicians and nurses, because it is used to express criticism or frustrations instead of using positive, tactful or constructive remarks.
Hospital nurse, the Netherlands: I don’t have the idea that we really have such a good relationship with homecare. Also because you speak them rarely, and if you speak them it is mostly because they have a complaint. And...ehm...yes, I think that most of them don’t communicate this very tactfully. Probably because they are already frustrated when something has gone wrong. And I can imagine this to a certain level, but then I think: ‘I can only promise improvement’. (...) They don’t call like ‘Gee, you did it really well and precise...now I can provide nice wound treatment’. No, they only call when something is not right, so the tendency is to get a negative atmosphere very quickly. It happened once that I said to them: ‘I am fine with talking to you, but I can’t help as long as you keep shouting and raging’.

A third important factor behind the quality of the relationship seems to be the level of personal acquaintance between care providers in the primary and secondary care. For example, according to several GPs, personal acquaintance with their hospital colleague makes the effort to contact, to exchange sufficient information and to get things done much more easier. It also makes communication swift and less formal. This is also expressed by hospital physicians. In turn some of them find it easier to pick up the phone, to call on time, to reach one another and to handover information thoroughly when they are acquainted with the GP.

Hospital physician, Spain: Knowing each other helps in case you have to make a call one day.

Handover communication and collaboration becomes more problematic when physicians and nurses at both levels of hospital and primary care are unfamiliar with each other. And, although many address the importance of knowing each other better, by face or voice, this appears to be absent very often. Because of the large organization of hospitals, the frequent turnover of hospital staff (“there is constantly new staff”) and considerable geographical distances, as there is a more variable adherence region (especially for specialized clinics), it often remains impossible to foster personal relationships. In addition, in the Netherlands, Italy and Spain nursing handovers are organized by liaison (or so-called transfer/ case manager) nurses at many of the hospital wards, which means that the normal hospital ward nurse has a less active role in organizing handovers and hardly communicates with their community counterparts.

Hospital nurse, Spain: We are not very involved in the patient’s transfer…It would be different if we have a more active role.

Besides personal acquaintance that smoothens handover communication and collaboration, knowing each other is believed to make the expectations at handover less ambiguous. Unfamiliarity, for example with each other’s communication preferences, sometimes leads to a reserved attitude. For example, in the Netherlands it appeared that some residents in training worried about calling the GP, because they do not know if the GP would appreciate this.

Hospital physician, the Netherlands: Recently I received a list of mobile numbers of all GPs from my supervisor…and I consider that a little bit ehm...[laughs] I am not quite sure if this also counts for residents. (...) I do not really have the guts to use them. Those are private numbers. I still have to think it over if will use them...I think so [laughs] well let’s say perhaps...
A close relation with the GP or the hospital physician is found important by many patients and relatives as well. They indicate to have a more comfortable and confident feeling at handovers when they know their GP or hospital physician well. Furthermore, most patients appreciate being acquainted with the doctor so that the medical history, which is thought to be very important by them, is already known at the time of the handover. According to patients and relatives, this avoids annoying situations for them of telling the same story over and over again.

4.1.4 Coping with different professional views and working patterns

The quality of handovers also seems to be influenced by the extent to which care providers are aware of and able to cope with the different professional views and working patterns that exist between hospital and primary care (a more specific versus general approach). Many physicians and nurses believe that there is insufficient knowledge and awareness for these different views and working patterns. Or like one GP said:

*GP 1, the Netherlands: They (the specialists) think in another domain, just like we have ours.*
*GP 2: So, it's the way of thinking. There needs to be more awareness of each other's pattern of thinking.*

The way care is organized and followed up seems to be pretty vague for both sides. Physicians and nurses also expressed that they are often unknown with the expectations of their counterpart, their needs to continue care, and also, if those needs are met at handover.

*Hospital nurse, Sweden: And it is easily so that you misunderstand each other, you work in different ways in the emergency care and the primary care. It is just that you have different opinions, we don’t know how work is done at the primary care really, and they don’t know how work is done at the hospital.*

The combination of different professional views and working patterns and insufficient knowledge and awareness of this, often leads to misunderstandings, conflicts and under- or overestimation of capabilities that hinder effective handovers.

First of all, it leads to misunderstandings in the information exchange. As a consequence of a lack of insight in the expectations and needs of the hospital physician, several GPs expressed the doubt of being too extensive in their information to the hospital physician. This is confirmed by several hospital physicians who told that they often receive a lot of (social-psychological related) information at referral, that perhaps might seem relevant in the eyes of the GP, but irrelevant to the hospital physician. For them it only takes extra time and energy to filter the essential parts.

*Hospital physician, the Netherlands: Let’s say that we rarely receive a real question from the GP (...) but a sort of screen dump from their digital system. We don’t really know how to deal with that...we have a different way of looking. The purpose behind this whole package of information is good, but not workable for use.*

Besides a proper selection of information, some hospital physicians also indicated that GPs do not always anticipate enough on handing over information in a well-structured way (e.g. in terms of the chronology or priority of information). In contrast to the quality of information at referral, GPs sense that this also lacks at discharge. According to them,
hospital physicians often send discharge letters with unclear information. A frequent heard example is the use of medical abbreviations/ acronyms that are unknown to the GP. This costs the GP extra time to figure out what some parts of information mean. It might even lead to misinterpretations as well.

*GP, the Netherlands:* Nowadays we often received a medication for instance, that is typed. (...) that is something the pharmacist does. (...) what medication started, what is stopped and what is continued. But I don’t understand those abbreviations exactly. For instance, it says ‘R: 0’. I don’t know if that means to continue, stop or start with medication. (...) it requires extra time.

Several hospital nurses also experience problems with assessing information needs of their colleagues in the community. They feel that their efforts at discharge might not meet the expectations and needs of community nurses. Therefore, it often costs them a lot of (extra) effort and time to write clear nursing discharge letters and to figure out if they hand over care properly. Interviews showed that these feelings are correct. Community nurses in the various countries expressed that nursing discharge letters do not sufficiently cover their needs to continue care properly. For example, in Sweden community nurses perceive the reports from their hospital colleagues to be more medical than nursing in their character. Subsequently, they cope with this by examining patients themselves, for example on bedsores, after the patient’s discharge.

*Community nurse, Sweden:* But they are really bad written, and I think it just gets worse and worse. The wards have almost stopped written nursing discharge note. I almost call it a medical discharge note.

The lack of knowledge and awareness for each other’s professional view and needs sometimes leads to conflicts at handover. For instance, it creates disputes on the timing of handovers.

*GP, the Netherlands:* (...) a GP is from its nature, from its professional attitude, somebody that takes risks. The intrinsic risk of a GP is that he or she misses a diagnoses or does this too late. You get so many blurred signals. Well there is little understanding for this by hospital physicians. (...) with respect to this, there is still a serious misunderstanding. We say ‘couldn’t you avoid this’ and they say ‘couldn’t you send that patient earlier’.

Sometimes, in particular in the Netherlands, it also leads to disputes of the accuracy of the handovers as well. For example, GPs expressed that they often have to deal with patient-health problems at referral that are difficult to assess, but still are urgent enough to decide for a quick referral. Most of the time such referrals are based on assumptions or vague indications. GPs sense little understanding and sympathy by the hospital physician for such referrals. According to them, most hospital physicians, and in particular surgeons, want a concrete diagnosis and a referral question that corresponds with his/her field of expertise. Such conflicts in understanding seem to hinder proper coordination of handovers. For example, several Dutch GPs indicated that this sometimes hinders them in getting patients admitted. According to them, hospital physicians are sometimes resistant to see a patient or do not seem to examine referred patients seriously.
GP, the Netherlands: Sometimes there is little understanding for when you say: ‘I really have to show you this patient in a short notice’. (…) You really have to push it through a little bit. Let’s say that I need to refer patients based on ‘postal address’ arguments. (…) Especially for patients with chest pain or heart rhythm complaints, where you think: ‘this cannot wait for two months’…there is often little respect for this. And that is annoying, because you think ‘you [hospital physician] really have no clue that patients are sitting here with anxiety.

Disputes on the accuracy of the handover sometimes leads to undesired behavior. The hospital physician’s demand for a concrete diagnosis and a question at referral sometimes even tempted some GPs to alter their handover information in order to get a patient admitted or to avoid long discussions. Such handovers are less reliable and often causes unnecessary irritation by the hospital physician when it turns out that the information does not correspond with clinical findings at admission.

Third, the lack of knowledge and awareness of each other’s professional view and needs also leads to situations where the counterpart is overestimated at handover. According to GPs and community nurses, the hospital has a false idea of the possibilities at the primary care setting, in particular with regard to the resources and the time that are available in primary care (e.g. medicines, care facilities).

GP, the Netherlands: Blood abnormalities in the hospital that need to be checked afterwards. They often take for granted that we have the time do so.

This appeared the most at the level of nursing care. Many interviewed community nurses believe that the hospital is not sufficiently aware of their work capacity and skills and take certain capabilities for granted. For example, they are sometimes forced to provide extensive and specialized care after discharge, far beyond what they are really capable of. Furthermore, community nurses believe that their hospital colleagues are not sufficiently aware of the complex social context in which homecare often needs to be provided. Although patients may function well in the hospital, at home it is often much more difficult for the patients to take care for themselves. According to them, the hospital often does not recognize this. Consequently, community nurses are often busy with issues, other than their core tasks and are unable to cover all the necessary care.

Community nurse, Spain: A patient can be discharged with four ulcers and not even God knows about it until you visit the patient at home, and this is really bad.”, or “You’re going to provide home care and the patient that was referred to you is in need of a caregiver to perform tasks of hygiene … this is a waste of resources!

One community nurse indicated that the assessment should not only be based on what the patient can do by him or herself (in terms of activities), but also on the mental state and the home setting. This is often forgotten by the hospital or other institutions involved (e.g. the indication bureaus in the Netherlands), and by patients themselves as well. Furthermore, in the Netherlands, the community nurse is only appointed for a particular number of care events or services, and not for the time and energy that administration and coordination of care requires after discharge.
Community nurse, the Netherlands: Our number of working hours is only based on things like bandaging and not for coordination of care, like transporting the patient to the outpatient clinic, or keeping administration up to date.

Due to an overestimation of their work capacity and services, community nurses often have insufficient time to cover all the necessary care and administration to continue care after discharge. Their heavy workload and limited amount of time to fulfill their tasks is not seen and taken into account by the hospital staff when discharging a patient.

Community nurse, the Netherlands: (...) that the hospital makes a significant wrong assessment and requests insufficient community care. Well, as a community nurse you have serious problems when such a patient returns home, because you are not allowed to provide more care than what is requested at that moment.

Furthermore, a false understanding by the hospital staff about the present primary care setting sometimes also leads to problems with continuing medication treatment or the use of special care treatment. Several GPs and community nurses described situations where their hospital colleagues were not aware of the fact that certain medicines or care facilities were not available in the community.

GP, Spain: We have had some problems because some things cannot be prescribed in primary care service... Then, in the hospital, they change the medication. They should check it out.

Physicians and especially many nurses both at the primary and secondary level, believe that problems like misunderstanding, conflicts and overestimation of possibilities can be reduced when there is more knowledge of the organization, the professional attitude, the working methods and the needs of the counterpart.

Hospital nurse, the Netherlands: I really would like to know how our handovers are received by homecare. Because, currently I make an assessment of the information that they need to know, but is this correct? So, for me as a nurse, it would be beneficial to hear something back about: what type of information they want to receive? What do they expect from us? That would be absolutely of added value!

A striking example of how handovers are facilitated by a better knowledge and understanding between hospital and primary care was found in Sweden and the Netherlands. Here, many of the interviewed GPs have previously worked at hospitals. The GPs’ awareness and understanding for the typical situation at the Emergency Department, that is often characterized by stress and young, inexperienced hospital physicians, gives the possibility to better understand the differences so that the risks of misunderstandings decrease. For example, one GP indicated to react pro-actively on the problems of the Emergency Department (difficulties with receiving electronic referrals) by adding a note on the patient’s medication list.

GP, Sweden: Sometimes patients get home really, really quickly from the hospital, but I know... you must have some understanding, it sound so pretentious “I know” but I mean we all know what it is like at the hospital.

Interviewer: mmm
GP: it is not like you could say that the hospital does it all wrong, they have to according to the existing demands.

A similar example is noticed in Spain at the nursing level.

Community nurse, Spain: All of us have worked in hospitals, thus we perfectly know how they work and the problems you can find there; which things we can do and which we can’t. Therefore, it would be great if all those persons that have always been in a hospital could come to primary care assistance, even for a week, to see what we do; also it would be great if they could make house calls, so as to get acquainted with the limitations and pressure we encounter.

Particularly GPs and community nurses argue for a better contact and understanding between hospital and community nurses. They feel a sense of urgency, because they are the ones that have to deal constantly with the problems that derive from inadequate handovers (e.g. incorrect assessment of community care, errors in the medication information, etcetera). Eventually, they are the ones at the end of the care system; ‘’if we will not do it, nobody does’’.

Community nurse, the Netherlands: The moment you enter [the patient’s home] you cannot walk away anymore. (...) You don’t have a colleague who picks it up further, so you need to finish the work.

4.2 Professional culture

4.2.1 Routines versus ratio

Many physicians and nurses indicated that what they find appropriate patient handover often differs per situation. However, handovers are often also considered to be a routine; a certain, standard way of doing things, that is learned and integrated ‘on the job’ or ‘in the field’. These routines are based on protocols and guidelines, but also based on personal habits (’’just the way we do things here’’) and experiences that have been developed and gathered as a professional along the way.

Hospital Nurse, Sweden: We do as we always have done (...) what you suppose is the right thing to do.

Hospital physician, Sweden: I don’t know whether there are written guidelines. However you have learned during the years how it is supposed to be, and it has worked out well, pretty well, and then you do it like that.

Routines are in many cases considered to be very effective, especially in handover situations of patients with standard health problems. In a setting of heavy workload and time pressure most care providers seem to rely on a certain standard approach at handover, especially when this worked out well in previous situations (e.g. only writing a short, standard discharge letter). However, interviews have shown that especially more difficult types of handovers are often hindered by the (professional) attitude of relying on routines as well.

Many hospital physicians and GPs believe that more frequent oral communication could improve handovers, in particular regarding complex patients. In many cases it would allow the hospital physicians to be better informed at admission and the GPs before and at
discharge. Yet, they indicate that, besides the lack of time, it is often not a habit to call or see each other frequently.

_Hospital physician, the Netherlands: Sometimes, when I discharge a patient, and I hear the original reason for referral I think: ‘he, we missed an point here or there or lost some information along the way’. Yes, and it is true… you just need to call the GP more often and it just isn’t integrated in our system…_

Furthermore, in Sweden it appears that some community nurses do not check the web-based communication system (a tool to improve the information exchange between hospital and primary care providers) every day, even though they are aware of the need for doing this. This makes it problematic for the hospital when they need up-to-date information in case a patient is admitted.

Interviews, particularly in the Netherlands, showed that many care providers often automatically rely on a standard working approach (e.g. because of earlier experiences). This turns out to be hazardous sometimes as well. For instance, a couple of Dutch hospital nurses expressed that medication lists of patients with standard health problems are sometimes copied and sent away at discharge without checking duplications or the latest adjustments.

_Hospital nurse, the Netherlands: Every now and then the medication is not copied well. For instance, patients who received a percutaneous coronary intervention, which we have a lot, are subscribed with Acetylsalicylacid and Clopidrogel for 3, 6 or 12 months. And sometimes people do not control well if they copied the right subscription._

This implies that serious mistakes can be made in the subscription of medicines when duplications are missed or new medicines are added at the last moment before discharge. Moreover, it was addressed that care providers often depend too much and too quick on standardized protocols and guidelines without assessing what is the best in this particular case. For example, many GPs are used to write their referral note in a specific format, that according to many hospital physicians contains to extensive and redundant information. In the Netherlands, many community nurses feel that the organization of aftercare (by hospital nurses or the transfer office) is mostly based on a standardized protocol, rather than a deliberate assessment of personal patient needs.

_Community nurse, the Netherlands: The complexity of care is not determined by the number of treatment handlings. You see, you can provide somebody [a patient] very simple at home with routine ADL care, but she might live in a complex home situation. That requires a different way of thinking. When you are used to think in terms of treatment you will start to think very soon: ‘no, this woman doesn’t need homecare because she can wash herself in front of washbasin by sitting on a chair’. But when she’s, subsequently, unable to open the door or to prepare a meal…_

4.2.2 Prioritizing care and administrational burden

In general, across the different countries, both primary and secondary care providers indicate that ensuring good handovers is often a matter of setting priorities. Interviews have shown that physicians and nurses prioritize care before handover administration (e.g. planning discharge, writing letters, making phone calls, organizing community care). Some of them referred to their professional identity by expressing in various wordings that they
became a doctor or nurse to provide care and not to work as an administrator. Based on their professional identity they feel constantly urged to act in a ‘here and now’ situation where the professional duty of providing care prevails. Especially with constant time pressure and heavy workload, short-run care problems and activities on an ad-hoc basis seem to pre-empt tasks that are relevant to ensure an effective handover process. Many physicians and nurses at the hospital and primary care level argued that often there is not time enough for both. Administrational tasks and responsibilities therefore become a secondary priority, and for many, these even feel more as a burden rather than an important aspect of care as well.

GP, Spain: We would like to have enough time to visit a patient at hospital, or to plan communication with people in another way... But we keep visiting patients all day long...

The consequences in daily practice are that essential handover activities, such as writing referral letters and discharge letters are often delayed or even forgotten and not executed at all. For example, several GPs described that they often have to make the choice to write less extensive and clear referrals for one patient, in order to have enough time for the next patient.

GP, Sweden: A patient comes for a 15 minute visit, and then it shows that he has something that takes 20 minutes to investigate, and all of a sudden you get a bit worried, and do not dare to send the patient back home, but instead you need some help, and the time is over since ages, and then the referral becomes less precise unfortunately.

Furthermore, hospital physicians and nurses described many situations where they missed or forgot to handover essential information (on time) to their counterparts at discharge, because they were too busy with other patient care activities.

Hospital nurse, the Netherlands: Handovers are sometimes forgotten, because it is already quite a bit of work that is done on top of your daily working hours. (...) it often needs to be done at the last moment. Then you stick to a very short description...and you do miss things (...) Handovers are often performed in a hurry, in between other activities. Especially, when one doesn’t know the patient very well and has to rely on earlier reports.

Due to time pressure and heavy workload many hospital physicians and nurses admit postponing administrational duties or the organization of follow-up till the very last moment.

Hospital physician, the Netherlands: Yes, I think that’s the way it is. That surgeons are more like ‘I want to finish this first’ or ‘I want to do something for the patient and don’t feel like setting behind the desk and writing discharge letters’. And besides that, surgeons are just constantly busy and are multi-tasking. (...) So I can imagine that when it’s five o’clock and you still have another twenty consultations to do, you tend to put those discharge letters aside.

Hospital nurse, the Netherlands: Like I said before, because you have so many things to do beside direct nursing care...logistics, administration, you sometimes tend to set priorities and think: ‘Okay, I will do these papers tomorrow’ or ‘This list of the dietician...not right now’!
Consequently the administrational tasks pile up further and become less attractive to carry out as it often also requires extra work to modify all the information at the last moment. With regard to discharge, it often means that papers or follow-up needs to be organized at the very last moment and turn out to be too late or suboptimal.

4.3 Hospital/ward culture

In Sweden, The Netherlands and Italy it appears that cultural barriers and facilitators at handover also originate from the local identity and characteristics of the hospital and/or ward.

First of all, the identity and characteristics of the hospital often seem to have an effect on the handover communication between hospital and primary care providers. Physicians and nurses described difficulties when working at a large (university) hospital in developing and sustaining personal, direct contacts with primary care counterparts. The large (university) hospitals as a tertiary referral center serve many primary care communities and cannot invest effort in all these.

_Hospital physician, Sweden: It is impossible at such a large hospital as Huddinge. The catchment area is too big. Don’t know many GPs that belongs to us._

Some physicians had the idea that it has to do with prioritizing personal contact with primary care as well. They described that the existence of a smaller hospital often more depends on referrals by primary care compared to an academic hospital. The academic hospital also has a lot of secondary referrals, due to their last resort function as well as educational and research activities. One hospital physician said that this awareness, of being strongly dependent on primary care triggers them to invest more in direct and personal contacts with GPs.

_Hospital physician, the Netherlands: The GP is your referral, eventually he provides you the bread so to speak. No GP means no patients. And that’s less important for the academic hospital, because here you have secondary and tertiary referrals, from one hospital to another hospital. In the region, you’re very dependent on the GPs, so when a patient is discharged, they are told several times to call the GP._

Several physicians and nurses that work, or have worked in small/local hospitals, experience(d) in general a better contact between themselves and their primary care colleagues. They also expressed the benefits of this experience in enhancing their awareness of the different mindset of hospital versus community based care.

_Hospital physician, Sweden: What really makes is easy there is that the whole islands has around 100 working physicians. So when I was a junior physician at a primary care centre it was easy to call my colleagues whom I knew._

_GP, Italy: ...usually I contact the colleague in the ward. Most of the times this is difficult by phone, but not here because we know each other, the hospital is the only one in the area. If I call the University clinic in Florence nobody is going to give me any information on the phone. Here we know each other since we started and contact is taken for granted without problems._

The constant shifts in responsible physicians or nurses is also described as a barrier to handover communication. Handovers are, particularly in Dutch academic hospitals,
predominantly a task of residents who only work for a short period at a certain ward. This often hinders direct and personal contact with GPs as well.

*GP, the Netherlands:* That’s the problem with academic hospitals, you don’t know the people, right? Regional hospitals are smaller, have a pretty stable group of people working there. That makes the communication easier. An academic hospital is by definition of course a training hospital, so there are always residents you communicate with. And the ones I speak this time, have left for another ward or hospital after six months. So these short, personal lines cannot be maintained.

Furthermore, several hospital physicians and nurses indicated that, the part-time appointment of many GPs and community nurses often hinders handover communication (e.g. the person who was responsible for referral is often not available to answer additional questions). Another important organizational characteristic of hospitals is prioritizing and using (shared) electronic information systems (ICT). Shared ICT systems often facilitate handover communication. In Sweden GPs prefer to send patients to hospitals with the same medical record system, because it makes handover communication more direct and easier.

*GP, Sweden:* Regardless of other circumstances, in the choice between Huddinge and other hospitals I choose Huddinge because we have direct contact.

Organizational identity and characteristics seem to have an effect on the timeliness of exchanging handover information as well. In many hospitals handovers have to cross various internal lines of communication, due to internal procedures that for instance aim for quality control. For example, most large (academic) hospitals in the Netherlands have a standard procedure of discharge letters being written by residents first and then checked by their supervisor, before they are sent away to the GP. Although the intention is to increase the accuracy of the medical discharge letter, it often leads to a delay in the information exchange to the GP.

*Hospital physician 1, the Netherlands:* With the more complicated patients, the supervisors wants to check the letter before it is send to the GP. So then you have another step to take, which delays the process a lot. The letter needs to be printed and left in your mailbox, then you have to read it, correct it, then it has to go to your supervisor...it easily takes two months so to speak...

*Hospital physician, the Netherlands:* .... six months!

Furthermore, the pressure on hospital beds in hospitals seems to lead to very early discharges, that make continuity of care problematic. Patients are sometimes discharged too quick without adequate aftercare being organized. However, the pressure on beds and lack of personnel in nursing homes is sometimes experienced as a barrier to smooth coordination of handovers as well. Some hospital nurses described situations where handovers are being refused by nursing homes, thereby hindering a proper discharge planning or leading to an unnecessary prolongation of hospitalizations.

*Hospital nurse, Sweden:* If it is a nursing home and so (...)it has been like ‘no, we can’t take her home, we have no staff’ and then I have to arrange the discharge before a specific time and ... Well, this may be problematic.
Organizational identity and characteristics seem to have an effect on the completeness and clarity of handovers as well. Especially GPs and community nurses experience different attitudes between types of hospital wards. For example, in Sweden and Italy, it appeared that the attitude of physicians and nurses at the Emergency Department (ED), due to its core task of delivering urgent care in limited time, is more focused on dealing with the most important issues. Therefore, their handovers are considered less complete and clear than the handovers at Geriatric or Internal Medicine wards.

Community nurse 1, Sweden: What really works out well from the Geriatric Department is that the fax really arrives...
Community nurse 2: mm, yes exactly, it is really good, and medication lists and so, because the patients often need help with medications.
Community nurse 1: And all the other things that they have done, dressing, sore dressing...

In general, differences in the completeness and clarity of handovers were also experienced between Internal Medicine specialists and surgeons. Several GPs expressed that Internal Medicine specialists write better discharge notes and medication lists than their surgical colleagues. However, in Poland it was mentioned that many surgeons contact the GP to ask for certain specific information prior to surgery. In such cases surgeons seem to have a stronger process orientation as well.

4.4 Learning culture

4.4.1 Professional attitude to reflect, learn and improve

The attitudes of care providers themselves towards reflection, learning and improving handover practice appears to be important factor influencing the quality of handovers. In the interviews many physicians and nurses indicated they believe in the value of reflection and were reflective in current handover practice.

GP, the Netherlands: …that’s an issue that stays really important, and has to come back a lot of times. (…) I think you can only solve it by constantly working on it, and to let it come back: ‘how do you communicate’?

They were also able to indicate quite specifically what, in their eyes, often goes right and what goes wrong. However, little seems to be learned from it, because these reflections are often not shared with the counterpart. Physicians and nurses express that little feedback is given between them and their counterparts, at a personal and constant level. The experiences with feedback are most of the time unique occasions. Moreover, feedback mostly takes place on a higher level, between professional groups/associations and not on a one-to-one base on the working floor. Although many physicians and nurses believe that handovers would benefit from a better dialogue between them and their counterparts (to be able to learn from mistakes), the interviews have shown that feedback is often considered not really that urgent or simply is not always feasible due to time constraints.

Hospital physician 1, Sweden: About feedback, you rarely get that
Hospital physician 2: No
Hospital physician 1: If we should send deviation notes or write to, when we…it takes so much time
Hospital physician 2: Yes
Hospital physician 2: So if they primary care should send feedback every time they had a wrong referral or something had went wrong, I don’t think that would be possible.

Many physicians and nurses were skeptical towards providing feedback as well, as experiences turned out to be disappointing or were not considered to be of real added value (as it was difficult to identify the structural benefits that came from it).

GP, the Netherlands: I also think that we should be more on top of it, to improve the information that we get at discharge. And that it will improve the quality in the end. Like the French always say: ‘Frappez toujours’, keeping busy with… In the end you’ll get what you want. But at a certain moment you get tired you know. (…) that I think I don’t feel like doing it anymore. I have other, more important things to do than chasing hospital staff. Still, this is important!

Feedback also seems to be hindered by the belief that it is childish to criticize individual counterparts on handover practice details. Something that will not make a difference at the individual level. According to many physicians and nurses feedback should be given on a meso- or macro level.

GP, the Netherlands: I find it often a little bit childish to call back with minor comments about ‘you didn’t do this’ or something like that. (…) It has more impact when we do this via the GP association. (…) they pick it up much more than when you do this one-on-one, because that’s more in the heat of the moment. (…) otherwise it become more a sort of incident politics.

Another aspect that hinders feedback is caused by the status of hospital care providers. Particularly in Poland, where hospital care is perceived as the highest level of care. Many GPs and community nurses consider hospital diagnoses as ‘sacred’, and do not doubt the result and impact nor the recommendations or therapy advised. Medical and nursing discharge letters are often perceived as a superior, undisputed reference (‘a bible’) and not questioned.

GP, Poland: We GPs are mainly just referrals providers (…) we don’t talk to specialists very much. (…) At discharge they provide their recommendations which we follow. I view them as high class specialists and as superior authority.

Feedback also seems to be hindered by the belief that it is childish to criticize individual counterparts on handover practice details. Something that will not make a difference at the individual level. Furthermore, feedback is also often not used effectively. For instance, several physicians and nurses described that they are used to provide feedback indirectly, by writing ‘deviation reports’. Besides this takes a lot of time and energy, it is also considered most of the time to be less effective than direct oral communication. Furthermore, physicians and nurses often complain about the lack of availability of their colleagues or not being taken seriously when providing feedback. Finally, feedback is often associated with pinpointing and blaming each other and to stress out that mistakes were made instead of a constructive tool to learn from mistakes and improve the quality of future handovers.

The absence of feedback and the negative way feedback is often used, hinders physicians and nurses in being informed about errors and learning points (that are often unknown to each other) and being well aware of improvement opportunities. For example,
several hospital physicians expressed that they have little idea about the perceived quality of their discharge letters, because GPs practically never comment on what they missed in a discharge letter to continue care. Hospital physicians therefore try to place themselves in the perspective of the GP and provide handover information based on what they think is necessary: ‘‘what information does he want and what does he need’’. However, they often don’t know if their assumptions are in line with the view of the GP.

*Hospital physician, the Netherlands: They don’t provide feedback….so, I just put myself in the chair of the GP and try to think ‘‘what does the GP need to know if I were him’’? And that’s what I put into the letter. And it doesn’t happen that the GP calls and says ‘‘I want to get this and that from now on’’. (…) I think it would be beneficial to hear back from them [the GPs] if we are doing it right. Do we provide the information that we need to provide? Perhaps this happens at a higher management level, but not at the level of the person who writes the letter. But I never heard about that so far.*

It also makes physicians and nurses less critical on the quality of handovers, because problems are not disclosed. ‘‘If don’t hear any comments back, I suppose that my handovers are correct’’ was a frequently heard remark.

*Hospital nurse, the Netherlands: I definitely would like to hear sometimes ‘‘your information was clear for us’’ or ‘‘we missed some information’’. And what can I do to ensure that I will do better the next time. Because, what you do at handover is for the most part based on own feelings and inspiration. (…) And you just do it the way you think is best. Well, I have to say that I never heard something back from my handovers, so I suppose that I’m doing quite fine! But that’s the question…*

The attitude towards new innovations and working methods turned out to be a barrier or facilitator for handover improvement as well. Several physicians and nurses indicated that a successful integration of new handover practices or innovations is strongly a matter of having the right mindset; being open for new working methods or not, being confident in the added value or not, and being persistent in using it or not.

*GP, Spain: This purpose of educating… There is no solution for those who have been working here for 30 years…*

For example, difficulties were indicated with integrating new handover practices or with entrusting certain tasks to others (e.g. the transfer nurse/ office). Others remain stuck in old working patterns, because they do not want to change their habits or find it difficult to cope with new practices (such as working with computers or new, constantly changing software). In the Netherlands and Spain hospital and primary care physicians indicated that the willingness to integrate new handover practices into their working system is also a matter of age. The younger hospital physicians seem often less resistant and are also better in adapting to new working- or communication methods, that often involve Information technology (ICT).

*Hospital physician, the Netherlands: Well only if one can cope with the electronic patient records…but there are a lot of people, especially the older generation detest it…because it takes a lot of time to understand it.*
4.4.2 Organizational attitude to reflect, learn and improve

The more general attitude within the organization on reflection, learning and improvement appears to be an important factor on the quality of handovers as well.

First of all, the attitude of hospital management and team leaders seem to have an effect on the quality of handovers. Several hospital physicians and nurses talked about the managerial priority and investment in resources (e.g. ICT, training programs) and support (e.g. a transfer nurse) as being essential for improving handovers. Whereas some are satisfied, many others believe that their management (at the hospital or ward) lacks in this investment. Several physicians and nurses expressed that the management does not listen to the needs of those on the work floor, are not aware of improvement opportunities or do not support any intervention to tackle handover issues.

Hospital nurse, the Netherlands: At the other ward, we marked the occasions when you had to organize something for the home situation, so we could indicate how many times we had to organize it ourselves and show them: ‘we want a transfer-nurse’. They answered however, that there wasn’t enough need for it.

In Poland many care providers complained about the healthcare system (that lacks handover support) and the huge workload, that hindered them in improving handover practice. On the other hand, in Sweden some hospitals invested in case managers at the Emergency Department, which the community nurses are very fond of. They see this as the “missing link” between the hospital and the community.

Community nurse, Sweden: I use to call them [case managers] “the patient’s advocate”. I think it works so well because they… see the patient and his hers situation more holistic.

With regard to the management on the working floor several hospital nurses addressed that they benefit from the presence of their team leaders who offer mentorship, answer to urgent matters and listen to their needs, for example to provide appropriate handover.

Hospital nurse, the Netherlands: Yeah, when something is going wrong, we can address this well to her [the team leader]. She is just a really good head of our team. When you encounter problems during the handover, you can tell her about it and ask for a helping hand or a future solution.

Some physicians and nurses also referred to situations where the culture at the ward hindered or stimulated handover improvement efforts. For instance, the shared thoughts about new working methods or instruments across the ward seems to steer people in the direction of using or withholding themselves from it. Especially, when the introduction of new initiatives appear or turned out to be problematic and of no significant added value, the care providers of a particular hospital or ward seem to be less open and supportive for new innovations.

Hospital nurse, the Netherlands: I hope that we get more computers and that they don’t crash, because these things cost a lot of time you know. And then many of us here start to think, ’’let’s continue on paper again’’. (...) It needs to work well from the beginning.
Hospital nurse, Spain: It would be a good idea to receive training in communication, but it depends on the implementation of this training, because if I have to study something that will not be useful for me I will not be interested in it.

Several hospital nurses also described the benefits of working at a ward where it is appreciated and encouraged to speak out frustrations or to correct each other (e.g. in staff meetings), to put forward suggestions for improvement, to compliment and to support each other. Some expressed that such a ‘learning climate’ motivates one another in doing things in handover practice better the next day.

Hospital nurse, the Netherlands: We used to have a daily evaluation... ’what went wrong today and how can we improve things?’ It was just a moment of reflection... ’Are there things that we would do differently tomorrow?’ And you can indicate and discuss the problems easily. But because of the pressure here at the ward, we don’t do that anymore, which makes the nurses very responsible. Some nurses talk about these things with colleagues like ’hey, I needed some more help this morning. It’s a pity you didn’t help me, because I got stuck’. But other colleagues discuss it and leave it like that. (…) These moments of reflection are of real value. We discussed this at the last team meeting, that we should pick up these moments of reflection again.

In the Swedish setting hospital physicians also referred to a ‘learning climate’ as well, where junior hospital physicians in the Emergency Department learned handover practice from the senior hospital physicians (the so-called ’apprentice system’). In contrast, several physicians and nurses indicated to miss a ‘learning’ climate, at the ward, hospital, but also at the higher level of professional associations. They feel willing to learn, to incorporate new practice and also carry ideas for improvement, but are hindered because forums to talk about handover problems and possibilities or initiatives for how to improve are considered to be absent or scarce.

GP, Poland: Communication between levels of care is far from good as this issue is never taken up during the conferences and seminars we have…

4.5 Patient-centered and -participation culture

4.5.1 Patient-centeredness
The patient-centered attitude of hospital physicians and nurses, to answer to individual patient preferences and needs, seems to be an important factor in ensuring continuity of care. Hospital nurses generally addressed this by trying to inform patients and their relatives about the discharge process and follow-up in the best possible way. Many hospital nurses considered it important to notice and anticipate individual patient preferences and needs.

Hospital nurse, the Netherlands: But I didn’t become a nurse to work in a factory. (…) I am a nurse [sighs] a little bit cliché perhaps...but I love to care for other people, honestly! And I perceive this social aspect almost more important than all those nursing-technical handlings...because every monkey can be taught a trick, but being social is something that you have. (…) spontaneity and cheerfulness, it is how you act: ’’Good morning, hello. I’m glad to hear you can go home, that’s great isn’t it?’’
However, most hospital physicians did not refer very often to this theme or indicated to have a more reactive response: the physician’s task is to diagnose, treat and to inform. When a patient is lost and needs more specific attention, he or she has to be assertive enough to demand this. However, with regard to complex and terminally ill patients both hospital nurses and physicians claimed to put a lot of effort into this. In these cases patients and relatives are often broadly informed and asked for their opinion in the preparation for discharge.

The effort of hospital staff, in particular physicians, to inform patients and relatives in time with sufficient, understandable information at handover was often considered insufficient by patients and relatives. For instance, several patients described that they were informed step by step, without having a specific moment to discuss the nearing discharge. Several physicians and nurses also admit that a standard discharge conversation with the patient often lacks.

_Hospital physician, the Netherlands: I think that most nurses inform their patients about things that are relevant for discharge bit by bit, all day long. Like ‘‘I organized this and that, it that okay by you?’’. But there is not a specific standard discharge conversation, that you sit next to the patient and start with: ‘’let’s talk about your discharge’’. The goal must be a standard conversation, it may be a little bit formal, but it makes its objectives very clear I think._

Moreover, hospital discharge often means an abrupt transition for patients where it was difficult for them to obtain sufficient and understandable information on: how to continue care by themselves or others, when to resume activities, what side effects of medication should be monitored, or how to have their answers questioned after discharge. Some patients also experienced problems with understanding what exactly was discussed, because the language the hospital physician or nurse used was too medical for them. Furthermore, hospital physicians and nurses often forget to check with patients and relatives whether everything they told was understood. It seems that nurses and, in particular physicians, are often unaware of the patient’s often limited ability to understand and remember discharge information. Consequently, several patients told about leaving the hospital without clear oral instructions and knowing exactly what medical decisions have been made, or what potential side-effects could be expected.

_Patient, Italy: I go back home with a bag of drugs and trust me that was a mess…I couldn’t sort it out…They haven’t told us that there could be a risk of depression. I had a medical discharge report, which was really good, for God’s sake, but they did not explain it to us enough…_

A lack of clear instructions can hinder the GP, the community nurse, relatives and patients to continue care after hospital discharge. Several patients, however, also addressed good experiences with being informed clearly, on time and sufficiently. Besides being well informed this also gave them the feeling of being taken more seriously.

The effort of hospital physicians and nurses to reduce patient anxiety at handover is often felt to be insufficient. According to many patients and relatives, hospital physicians and nurses are courteous; they treat them with respect and proper attention with regard to their medical treatment and basic physical needs. However, several patients and relatives noticed that hospital physicians and nurses had little attention for their worries and uncertainty when being discharged. They believed that a little bit more compassion and a
more personal approach, by providing a listening ear or a small encouraging chat, could take a lot of anxiety away.

Relative, the Netherlands: …regarding my mother it was clear that she was frightened to go home. A little bit compassion and understanding would have made it much easier (…) Well, there was a conversation just before discharge, but it was a real technical-medical conversation. Not in the sense of ‘are you looking forward to go home’?

This was recognized by hospital staff themselves as well.

Hospital nurse, Spain: A deficiency in handover is that professionals don’t have enough time to give the information to patients in a suitable way (…) and sometimes the lack of empathy of professionals with the difficult circumstances of a patient.

Several hospital physicians and nurses expressed that they often do not have the time to inform patients and their relatives very explicitly, in the most suitable way. On the other hand, a few also believed that what they do is generally sufficient enough.

Hospital physician, the Netherlands: An intern asks our approval for discharging a patient. If this is the case he will walk to the patient between the surgeries if we are on time. The patient is instructed ‘well, you cannot take a shower’ or ‘this is your medication list’. But yes, sometimes this doesn’t go well enough. (…) because the intern is also busy again or is called for an emergency. Meanwhile the patient cannot wait to go home. Well, at a certain moment you have to let the patient go, but without a personal visit.

4.5.2 Patient awareness and empowerment

Handover also seems to be facilitated or hindered by the extent to which patients are aware of their own role in ensuring a smooth handover process. This seems to be an important issue, in particular in countries like Poland where the handover process is primarily the responsibility of the patient (the so-called ‘indirect handovers’). Several patients expressed that they have an own responsibility in this and described how they contributed in ensuring continuity of care; for instance, by collecting and archiving own medical documents, by transferring their medical documents (letters, medication lists) from hospital to primary care or vice versa (in a well-structured way), or by providing physicians and nurses information orally about their health status at admission or follow-up after discharge.

Patient, Sweden: I write a list that I always have with me.

Patient, the Netherlands: You have to be alert...really alert that medications are correct and well organized.

Physicians and nurses, both at the hospital and primary care level highlighted the importance of patient discipline and participation, when they are mentally capable of doing this, as an important facilitator to effective handover. They indicated that this often makes it easier for them to provide adequate follow-up.

GP, Poland: They bring their medical files (…) no problem here. Sometimes the young ones forget then I ask and collect these. (…) patients are generally cooperative. They are more aware than before to be responsible of their own health management.
**GP, Sweden:** And then it depends on the patient’s condition, how much, they also partly have a responsibility.

**I:** mmm, in what way?

**GP:** Yes, if it is a person who is cognitively clear then you must be able to give them the referral in an envelope without them losing it.

Most patients in Poland accept that contacts with different levels of care largely depend upon themselves; they humbly comply to act as delivery service, transferring their healthcare documents from hospital to community care providers or vice versa, and providing them with information about their health. However, many patients in the other countries do not sense any responsibility at handover. According to several hospital physicians, patients often assume too easily that the hospital physicians is always fully informed and has all the information. However, often this is not the case. Consequently, they experience situations where patients do not bring their medication list to the ER or ward when being admitted. Sometimes relatives bring it from home, or the patient figures out which medications are used together with the hospital physician. However, this procedure is less reliable than having a recent medication list.

**Interviewer, Sweden:** If the patient hasn’t brought the medication list, then what?

**Hospital physician:** Number one is to check if they recently have been at the hospital.

**Interviewer:** mmm

**Hospital physician:** and then I usually look at the discharge note and go through it together with the patient, making notes, because often when they hear the name they can say “yes, I take that one every morning and every evening” but it is more difficult for them to just name their medications.

**Hospital physician, the Netherlands:** I taught myself to point out to patients that it is their responsibility when they arrive at the hospital without any medication or medication list. (...) Patients often react very surprised, like “oh, I thought that you already knew this”.

A more, pro-active attitude of patients and relatives themselves to ensure continuity of care would, in their view, facilitate many patient handovers.

Handover is also facilitated or hindered by the extent to which patients and their relatives are empowered enough to express their own needs and preferences. Many patients believe that handover can be facilitated when a patient has the ability to tell the physician or nurse about their own preferences and needs. Many patients also indicated that being empowered is a matter of daring to speak out to physicians and nurses. The interviews described patients and relatives who were empowered to speak up for themselves when they felt this was necessary. Some patients just found it easy to talk to their healthcare providers or were helped by the fact of being care providers themselves. In many occasions it was about asking something that they needed such as a favor (e.g. a drawing of the location of the organ that caused health problems) or some extra information (e.g. what side effects should be monitored after discharge in order to avoid worries and unnecessary consults from the GP). Several patients and relatives also said that empowerment was about becoming up-set, protest against certain handover deficiencies.
Relative, Sweden: ...and then our son calls me back home, it was between 4 pm and 6 pm and says “dad is coming home, but he must be back at the hospital tomorrow morning at 9 am for a gastroscopy” “It is out of the question” I said...
Interviewer: Yes
Relative: “It is no way that they are doing that to an 85 year old man” I said “he can’t handle that, you have to deal with it in another way”.

On the contrary, many other interviewed patients seemed less empowered and able to speak up for themselves, for instance because they are socially less skilled. Several patients felt that they had to participate more actively in decision regarding treatment. Consequently they often indicated to feel more overwhelmed, confused and anxious after discharge, especially when hospital staff did not anticipate sufficiently on their personal needs and preferences at forehand.

Patient, the Netherlands: And if such a doctor had visited me and said I’m sorry, but I can’t help you further, then it would have soften the pain perhaps a little bit. (...) You are dumped just like that and told “you can go”. Sometimes it is so important how you treat people, you’re not a number!

Participating in the handover process and being empowered, however, does not seem to be decided by the attitude of patients and relatives alone. Physicians and nurses also indicated that this depends on other factors, such the health condition of patients, the presence or absence of relatives (who act as a representative, collects the medical documents, observes appointments) and being able to speak the native (or at least English) language. Moreover, the (often) hectic setting in a hospital is considered to be a barrier for the patients to participate and being well informed and empowered as well.

Community nurse, Sweden: Unfortunately I can tell that a lot of patients really do not understand much of what has been said. The information is given too fast and the amount is too much. Many of these elderly, they are alone, sit alone in their apartments, it is peaceful and quiet. And then they come to the hospital, it is just too much, and they have problems hearing and seeing.

Some interviewees indicated that patient participation and empowerment at handover often results from instructions and education by the physician or nurse.

GP, Poland: This is related to patient education and what do you expect from your patients. My patients know they should get me the copies of their medical documents (...). And then some come after 5 years or so and ask: „doctor, do you have a copy of this exam? Because I have lost it...
Chapter 5. Conclusion and future work

The objective of Deliverable 6 was to identify the cultural barriers and facilitators to effective and safe handovers in the interface between hospital and primary care. Moreover, we investigated what conditions should be taken into account when developing and implementing best-practices around patient handovers.

5.1 Conclusions of this study

The major finding of this Deliverable is that handovers are often hindered by a lack of awareness, knowledge and interest of all types of stakeholders to ensure the continuity of care. This is reflected in several cultural themes (see table IX).

First and foremost, the fragmented culture in the interface between hospital and primary care appears to be a critical source for discontinuities in the provision of care across Europe. Many physicians and nurses, in particular in the hospital, seem to prioritize their own work and are less concerned with ensuring proper follow-up in/by the hospital or community – a problem known as sub-optimization. Moreover, they work as separate actors beside each other with insufficient knowledge and understanding of each other’s different professional views and work practices. The relationship between hospital and primary care providers is also often characterized as distant and negative. Although many interviewed physicians and nurses demonstrated the need for a more collaborative attitude and a better relationship with their counterpart colleagues, little proactive action seems to be undertaken so far in each country.

Second, many care professionals structurally prioritize the medical or nursing care above the need for handover administration. Writing handover letters or organizing aftercare is sometimes felt more as a burden rather than an important aspect of care. Care providers tend to postpone their administrational duties, thereby increasing the chance for information delay and suboptimal handovers.

Third, there is a lack of prioritization, on an individual and group level, to reflect and learn from current handover practices. Feedback between hospital and primary care providers regarding patient handover appears to be an exception rather than a rule. At a higher group level (e.g. ward, hospital or professional association) managerial support and a discussion platform were occasionally perceived as facilitators for handover reflection and improvement. However, these conditions were in general often missed by care providers and therefore turned out to be important barriers. Consequently, many handover problems remain unspoken and possible opportunities for improvement missed.

Fourth, many hospital care providers lack a prioritization of compassion and responsiveness to patient needs and preferences at discharge. This often leads to patient-anxiety and increases the risk for wrong medication use or even unnecessary re-hospitalizations. At the other hand, the presence of these conditions appeared to be a facilitator to effective handover.

Finally, many patients and relatives are unaware of their important role in the handover process and the opportunities they have to contribute to a better continuity of care. It seems that many handovers can be improved when patients, for example, are more aware of the importance of handing over their discharge letters to the GP on time or by carrying an up-to-date medication list at referral. The identified cultural barriers are summarized in table IX.
Table IX. Summary of major identified cultural barriers to effective and safe handovers

<table>
<thead>
<tr>
<th>Themes</th>
<th>Barriers</th>
<th>Examples of manifestations</th>
<th>Example of consequences</th>
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| 4.1 Fragmented culture in the hospital-primary care interface | 4.1.1 Inward attitude: priority on own work/ "getting the patient out" | ▪ Lacking communication and information exchange  
▪ Handovers regardless of timing | ▪ Extra workload  
▪ Delay of follow-up  
▪ Duplication of work |
|                                             | 4.1.2 Lack of collaborative attitude: being provider and recipient/ "us" and "them" | ▪ "Going our own way": not really considering handover information  
▪ Lack of taking initiative to call and share thoughts/information | ▪ Issues remain unspoken, missed or taken for granted  
▪ Variations or duplications in treatment (e.g. medication) |
|                                             | 4.1.3 Distant and negative relationship: lack of respect and understanding, distrust and unfamiliarity | ▪ Reserved in calling, unavailable, getting things done less easier  
▪ Swift and formal talks  
▪ Deconstructive communication (criticism & frustration) | ▪ Issues remain unspoken and missed or taken for granted  
▪ Uninformed physician/nurse |
|                                             | 4.1.4 Lack of knowledge and understanding for different views and work patterns: unknown with organization, expectations and needs of the counterpart | ▪ Misunderstanding in informational needs  
▪ Disputes on the accuracy and timing of handovers  
▪ Overestimation of capabilities PC | ▪ Irrelevant, incomplete or unclear information/ extra work to filter most important information  
▪ PC unable to provide sufficient / specialized care (e.g. wound care/ medication) |
| 4.2 Professional culture                   | 4.2.1 Relying too much on routines: standard way of assessing or doing things/ "This is the way how we do it always here" | ▪ Not used to call counterpart colleague (while relevant)  
▪ Depending quickly on standard approach/protocol (e.g. format referral or discharge letter) | ▪ Issues remain unspoken and missed or taken for granted  
▪ Irrelevant or scarce information |
|                                             | 4.2.2 Priority on care and administrative burden: professional duty calls first/ "I am a care provider and not an administrator" | ▪ No time for/ postponement of administrative duties (e.g. writing letters, planning discharge, organizing community care) | ▪ Letters are suboptimal, delayed or forgotten  
▪ Delay in follow-up |
| 4.3 Hospital/ Ward culture                 | 4.3.1 Identity hospital: academic hospitals seem to have less priority/ability to invest in personal, direct contact with PC than regional hospitals | ▪ More bureaucracy  
▪ More communication lines to cover  
▪ More shifts in responsible care providers | ▪ Handovers are more difficult to organize and poor of quality at larger, academic hospitals than local, regional hospitals |
|                                             | 4.3.2 Identity ward: Emergency Departments or Surgery wards are very concentrated on providing necessary specific care | ▪ Only reporting essential information | ▪ Less complete and accurate handovers from ED or Surgery than Geriatrics or Internal Medicine |
| 4.4 Learning culture                      | 4.4.1 Professional attitude to reflect, learn and improve: lack of willingness (scepticism, resistance) and of knowledge and skills on a personal level; handover information from the hospital is superior and undisputed | ▪ No structural, constructive and direct feedback  
▪ Stuck in old work patterns/difficult to cope with new practices | ▪ Less critical/ false view on the quality of own handovers as problems are not disclosed  
▪ Implementation of innovations is difficult |
|                                             | 4.4.2 Organizational attitude to reflect, learn and improve: lack of priority and awareness on a higher, organized, level (association, hospital, ward or team) | ▪ Lack of managerial support and investment in resources  
▪ Management deaf for needs on the work floor  
▪ Lack of forum/platform to reflect and work on improvement | ▪ Lack of resources and needs to improve handovers  
▪ Missed improvement opportunities |
| 4.5 Patient-centered and -participation culture | 4.5.1 Patient-centeredness: re-active pose to answer to patient preferences and needs; relying on assertivity of patient (or relative) | ▪ Patient discharged without sufficient, understandable information  
▪ Patient informed quickly just before leaving the hospital | ▪ Patient anxiety  
▪ Risk for medication errors  
▪ Unnecessary re-hospitalizations |
|                                             | 4.5.2 Patient awareness: unawareness and no sense of having a role to contribute to effective handover | ▪ Patient (or relative) does not carry an up-to-date medication list  
▪ Patient (or relative) does not forget to hand over discharge letter to GP | ▪ Delay in follow-up at referral or discharge |
|                                             | 4.5.3 Patient empowerment: less skilled or no dare to speak up, protest and obtain own preferences and needs | ▪ Patient (or relative) does not ask for more specific information  
▪ Patient (or relative) does not protest against handover decisions/signal specific needs | ▪ Patient is overwhelmed, confused, anxious  
▪ Specific patient needs remain unaddressed |
5.2 Future work
The results of this study highlight that, irrespective of the provision of medical or nursing care, the continuity of care at the patient’s referral or discharge is often insufficient. Critical aspects in the handover process of care from one level to another of the systems (e.g. collaboration, administration, feedback, informing the patient, patient/family education) do not always get the desirable attention as they interfere with other (professional) values, beliefs and interests of the care providers. Therefore, in order to improve the quality and safety of handovers, more care for handover is needed!

Moreover, such a behavioural change primarily needs to result from the intrinsic motivation of the professional. The results of this study show that a shared interest and sense of ownership for the handover process among hospital and primary care providers is currently insufficient, in all countries. Therefore, it is imperative that hospital and primary care providers value continuity of care more as an important goal; something they have in common and that is a core task for each care provider.

Based on the results and the conclusion of this study, the following suggestions can be made:

1) **Improve the knowledge and understanding between hospital care providers and their primary care counterparts**

   Interviewees made it clear that there is a big gap between hospital and primary care, that is not only physical but also cultural. Physicians and nurses, especially in the hospital are often for a large part unaware of the expectations and needs of their counterpart colleagues after patients have been discharged and handed over. The clinicians often take their current handover practices for granted (e.g. ‘’I guess the way we do it is right, because we don’t hear anything back’’). The scope of their vision is often narrowed down to the values and beliefs that have the priority within their own hospital or primary care boundaries, thereby preventing them from gaining a clear appreciation of the whole handover process, and the impact of their actions on the continuity of care. This is also known as cultural blindness (Bate, 1994). Therefore, physicians and nurses in the hospital need to be more aware of what is going on in the primary care, and vice versa. This effort to increase the critical reflection of their own patient handling as well as to gain a better understanding of the actions of their counterparts. Interviews have shown several fine examples of physicians and nurses who became more aware of and were able to anticipate better the needs of their counterparts. A better knowledge and understanding between hospital and primary care may be enhanced through collaborative meetings or bridging practices and educational exchange programs.

2) **Improve care for handover administration**

   Administration is key to a continuous care process and therefore an effective and safe handover. Hence, it is important that physicians and nurses do not perceive administrative tasks (e.g. organizing planning discharge, organizing follow-up and writing referral or discharge letters) to be of less importance than medical/nursing care, something that can wait until the end of the day or even tomorrow. Because physicians and nurses have limited time and are constantly called to
provide care, it is very important that administrative tasks are not postponed but executed as soon as possible. Otherwise, as indicated by several physicians and nurses interviewed, administration starts to become a burden: extra work that has been piling up towards the end of the day and, subsequently, is suspended to another moment. The importance of handover administration as well as the benefits of doing this on time should be brought more to the attention of physicians, nurses and policy-makers. For example, by the display of warning signs or reminders in electronic agenda’s or information systems when certain administration tasks are not executed in time.

3) Improve the learning culture

The willingness and ability to reflect and learn from mistakes in the past, within the hospital/ward and between hospital and primary care, is essential for improving future handovers. Interviews have shown that feedback often lacks or, when present, remains a unique occasion for speaking out frustration and criticism. This turns out to be more demotivating than useful, as nothing is learned from it. In order to improve the quality and safety of handovers it is important to encourage a more structured and constructive way of providing feedback, at a personal and group level, possibly via integrating (online) structured feedback sessions or open discussion forums. Furthermore, exemplary handovers as well as concrete points of improvement should be more appreciated and celebrated as such, to make the added value of feedback visible as a motivation for further improvement.

4) Improve patient-centeredness of discharge and handover practices

Handovers also require a more pro-active attitude of physicians and nurses to anticipate on patient-anxiety and the need for patients and relatives to receive clear and understandable information at handover. This may be enhanced through training programs (in the curriculum of medical students) or a standard conversation before discharge.

5) Improve patient awareness and empowerment

The interviewees highlighted that many patients and relatives are unaware of the important role they can play in handovers and the value of being empowered enough to speak up. This often hinders the continuity of care at handovers, as discharge letters do not reach the GP (on time), medication lists are not up-to-date, or important personal issues (e.g. complex home situation, anxiety) are overlooked. Therefore, increased awareness of patients and relatives concerning their own responsibilities and their involvement in ensuring the continuity of care would contribute to the quality and safety of handovers. Especially as in most countries patients and relatives are the most important link in the information transfer between hospital and primary care. Concrete interventions to increase patient awareness and empowerment may include: an information flyer, brochure or specific person designated to help patients or relatives to pick up their own pro-active role.
5.3 Relevance of this work to future innovation and health policy

Although the prevailing handover practices differ across Europe, many of the identified cultural barriers and facilitators appear to be common in the different studied countries. The activities for Deliverable 6 have created an important empirical base for continued work in the HANDOVER project and for other EU projects that aim to investigate the impact of (organizational) culture on healthcare performance and improvement efforts. This focus is particular relevant and needed in regard to patient-handovers. Patients, and their healthcare providers (physicians and nurses in hospitals and primary care), have contributed with rich descriptions about their experiences and perceptions of handovers in the interface between the hospital and primary care.

5.4 Limitations of this study

The study included five countries and was performed in different settings and used different clinical foci. The diversity of settings and languages make drawing comparisons and recommendations for action complicated. This study was an inductive qualitative research and the empirical findings were aimed at a deeper understanding of patient handovers and not necessarily at statistical generalization. Our goal was to gain a better understanding on the role of (organizational) culture to effective and safe handover and to suggest specific guidance for further research and policy development. Nevertheless, quantitative information from the different countries, for example regarding the delay of discharge letters to the GP, the delay of follow-up in the community after discharge or the frequency of unnecessary re-admissions, could further enrich our research in comparing the quality and safety of handover across Europe and stressing the sense of urgency to improve the handover practice.

The preliminary analysis of this Deliverable is based on half of all interviews performed. However, an innovative internal quality assurance program has been set up to enhance the transferability and credibility of the findings (Kuper, 2008). The rest of the findings from the remainder interviews will be analyzed and reported in our final report.

In conclusion, the study has identified several important cultural barriers and facilitators to effective and safe patient handover practices in the European context of care, both common as well as context-specific. The empirical research performed in Deliverable 6 allows us to further sharpen the focus of how to develop and implement effective handover interventions.
References


47. www.atlasti.com


Appendix A

DESCRIPTION OF THE HEALTHCARE SYSTEMS IN THE FIVE COUNTRIES

The Netherlands

The Netherlands has over 16 million inhabitants, approximately 100 hospitals (45,000 beds), 1400 residential homes (110,000 beds) and 330 nursing homes (58,000 beds). Nearly all patients are listed with a primary care physician (PCP). The PCP acts as a gatekeeper to specialized care. All PCP’s have out-of-office hours for urgency care, arranged in primary care wards. Sometimes these primary care wards and emergency care departments within hospitals are combined. The Dutch health care system consists of a combination of competition, universal health care coverage and is of relatively high quality. The percentage of GDP (The Gross Domestic Product) spent on health care in the Netherlands is 9.8 % (OECD, 2009).

In January 2006 a new insurance system for curative health care came into force. Under the new Health Insurance Act, all residents of the Netherlands are obliged to take out health insurance. The new system is a private health insurance with social conditions. The system is operated by private health insurance companies; the insurers are obliged to accept every resident in their area of activity. A system of ‘risk equalisation’ enables the acceptance obligation and prevents direct or indirect risk selection. Long-term care for the elderly is covered by social insurance from taxation. For those who would otherwise have insufficient income, an extra government allowance is paid to make sure everyone can pay for their health care insurance. People are free to purchase additional packages from insurance companies to cover additional treatments such as dental procedures and physiotherapy. A number of recent changes are meant to further improve the quality of care in the Netherlands. Doctors and hospitals are now required to report performance information every year. This information is available to the public on websites, but it is still too soon to see how much effect this has on patients' choices.

Spain

The Spanish National Health System comprises both the State and Autonomous Community Health Departments and covers all the health functions and services. Health care in Spain is publicly funded, with universal, free health services at the time of use. Spanish Health care is a non-contributory benefit and paid for through taxation, and is included in the general budget for each Autonomous Community. Health care is one of the main instruments of policies to redistribute income amongst Spanish citizens: all citizens pay taxes according to their financial capacity and receive health services as needed. The state has the main responsibility for the general organization and coordination of health matters. The Autonomous Communities govern Health Planning, Public Health and Health care. Each Autonomous Community includes a Regional Health Service, which is the administrative and management body responsible for all the centres, services, and facilities in its own Community, whether these are organized by regional or town councils or other intra-community administrations.
Primary Health Care (PHC) is provided through primary care centres, which are staffed by multi-disciplinary teams comprising general practitioners, paediatricians, nurses and administrative staff and, in some cases, social workers, midwives and physiotherapists. PHC professionals play a gatekeeper role for more specialized services. General practitioners are the first point of contact between the population and the health system; they are responsible for screening patients and providing both diagnosis and treatment if appropriate. They may also refer patients to specialized services if necessary. Specialist Care is given in Specialist Centres and hospitals, for both in- and out-patients. Once care is complete, the patient is referred back to the PHC doctor who uses the full medical history as a basis for subsequent treatment and overall care.

Poland

The Polish health care system, serving a population of over 38 million, is based on general health insurance, provided by the National Health Fund in 16 provinces. Primary health care is organized within the family-medicine concept of health care system gate keeping. No referral however is required from a GP to OBGYN (Obstetrics and Gynaecology), midwife, dentist, dermatologist, venereologist, oncologist, ophthalmologist, or psychiatrist. There are approximately 700 hospitals with the majority public and a small number recently turning private. The numbers of acute care hospital beds are above the Organisation for Economic Co-operation and Development (OECD) average (3.8 compared to 4.6 acute care beds per 1000 population in 2007). Poland follows the reduction in the number of acute care hospital beds, which is related to the reduction in average length of stay: from 10.8 days in 1995 to 5.9 in 2007 (OECD Health at a Glance, 2009). Twelve per cent of Polish hospitals have been accredited within the voluntary, Joint Commission International (JCI) based Polish National Accreditation Program, run by NCQA since 1998. The accreditation program also covers the Primary Care sector, Mental Health and Substance Abuse Centres. The National Committee for Quality Assurance (NCQA) and the Polish Society for Quality Promotion in Health Care are the key actors in the field of quality in health care. Since the 1980s the Polish health care system has been constantly in a stage of change and transformation. With higher salaries for health care professionals, rising awareness of the significance of quality of care, patient safety and patient centeredness (Law on Accreditation, Law on Patient Rights and the Ombudsman of Patient Rights), it is harmonizing with other EU Member States.

Italy

The Italian health care service is publicly funded and based on the principles of universal and equal access to healthcare services. The aim of the health care system is to satisfy the Italian Constitutional law that considers health to be a fundamental individual right of collective interest. The national health care system provides low or no-cost health care to citizens, including in-patient treatment, visits to a GP, and medical assistance provided by paediatricians, obstetricians and other specialists. Following the reform of 2000, the Italian health care system is regulated by the national health care plan issued every three years by the national government and administrated by
the 20 regions through regional health care administrations. The 20 regions attain the objectives set in the plan through 166 local health care agencies. The local agencies provide care either through directly managed hospitals and territorial services or by paying for the services by providers accredited by the regional districts, such as independent hospitals, e.g. agencies and university-managed hospitals and private structures, (e.g. hospitals, nursing homes, and laboratories under contract to the national health care service). The health care system for the population of 60 million is financed by taxes and by contribution-fees paid at the point of service to the local health care agencies. Each resident is required by law to enrol with a local health care agency GPs. The services of the GPs are free. GPs are paid a fixed amount per patient with a maximum of 1,500 patients per GP. On-call physicians are available during holidays, nights and weekends, providing medical care when GPs are not available. Alternatively, patients may go directly to the hospital emergency departments. Hospital services are free or low-cost and basic services (e.g. general medicine, surgery, paediatrics and gynaecology) are available at most general hospitals.

**Sweden**

The Swedish health care system is built on 21 county councils, with numerous regional primary care clinics and public hospitals, and fewer privately owned facilities. Social services, including homecare, and nursing homes, are provided by 290 municipalities for the total population of 9 million. All residents are covered by the national health insurance system, which is financed primarily by taxes. All physicians, including the majority of those in private practice are attached to the insurance system and their fees are regulated by law. Less than 1% of the health care sector is genuinely privately financed. There is a minor co-payment for visits to all types of health care facilities; approximately €11 for primary care visits and €33 for specialist and hospital emergency department visits. However, there is an upper limit to the patient’s out-of-pocket expenses: no one need pay more than approximately €90 (for prescribed drugs €170) over any one period of 12 months.

Patients can list themselves with a primary care physician in a public or private setting. Most health care centres have out-of-office hours for urgencies. Larger hospitals have an emergency care department, staffed with a variety of specialists, including a growing number of emergency physicians. However, the number of hospital-based emergency departments has been reduced by a third over the past 20 years due to hospital closures. Likewise, the number of in-patient beds is now the lowest in the Organisation for Economic Co-operation and Development (OECD) listings, with 2.1 acute care beds per 1000 inhabitants. Referrals and care planning are regulated by Swedish law and interpreted in national, regional and local guidelines. There is a large societal emphasis on prevention and self-care. When in need of medical attention, patients are encouraged to seek information over the web or by the telephone advisory function before seeking care. There they are connected with an appropriate provider in the health care network that best meets their needs and expectations.
Appendix B

INTERVIEW GUIDES

1. Guide for individual interview with patient/family

This semi-structured interview guide is to be used in the audio-taped face-to-face interview with the patient/proxy after the patient’s discharge from the hospital. Please note down where the interview takes place (in the patient’s home or elsewhere; other people around, etc), and other circumstances regarding the encounter (positive/negative aspects, etc) (Length of time of interview: about 1 hour)

Role clarification
Ask the patient to think about his/her recent experience of being hospitalized, and coming home again and ask who is/are his/her current care provider(s) in the community.

Recent experiences of communication
Are you satisfied /dissatisfied with how important information about you, your situation and your treatment was communicated between the different doctors/nurses at the hospital and between the hospital and primary care? Was the communication sufficient and in time?

What is your understanding of how communication took place between the inpatient doctors/nurses and your primary care doctors/nurses? What was your own participation in this communication? What about your next-of- kin’s?

What did you want the inpatient care providers to know? (probes when needed – investigations, tests, planned treatment, drug prescriptions…)

What did you want the primary care physician/nurse to learn about your hospital stay?

Critical incident technique – appreciative and problematic situations
Please tell me about one occasion when the communication process in your view was very satisfying. What was behind this successful occasion? Consequences for you?

Please tell me about one occasion when the communication process in your view was very dissatisfying. What was behind this occasion? How did you notice that it did not work well? What is your opinion about the consequences for you and your well-being?

Communication in general; barriers and facilitators
How does communication generally work for you between primary care and hospital care providers and back again?

What would, in your opinion, be the best way for your primary care physician/nurse to inform the hospital staff about you and your needs? What would be the best way for your primary care physician/nurse to learn about what has happened in the hospital?
In thinking about improvements to communication, what barriers do you think need to be addressed? What would you describe/what strategies would you employ to ensure the communication between primary care and hospital care providers in order to make care safe and effective for the patient?

2. Guide for individual interviews with care providers

This semi-structured interview guide is to be used in the individual interviews with the patient’s care providers shortly after the patient’s discharge from the hospital. The interview guide needs to be adjusted to the care provider being interviewed (hospital/primary care/ doctor/nurse/other carer).

Please note down where and with what category of professional/carer the interview takes place, and individual facts or circumstances regarding the encounter (positive/negative aspects, etc).

(Length of time of interview: about 1 hour)

Role clarification

Tell the respective care provider that the first part of the interview relates to the specific patient NN and his/her admission to/discharge from the hospital. The last part concerns handover communication in general between primary care and hospital.

I. Experiences of communication in a specific case

Are you satisfied /dissatisfied with how the communication about the patient was handed over to you from primary care/ the hospital? Was the communication sufficient and in time?

What information, in your view, about a patient like NN, was necessary for (you as) hospital staff (/primary care provider) to learn when you/they took responsibility for his/her care? (suggested probes – investigations performed, test results, planned treatments, drug prescriptions…)

What information, in your view, was necessary for (you as) the primary care physician/nurse to learn about this patient’s hospital stay? What methods did you personally use for communication in this handover?

Critical incident technique – appreciative and problematic situations

Please tell me about one instance when you felt that communication between primary care and the hospital regarding a patient was exemplary. Try to be as detailed as possible about this communication process. What was behind this successful occasion? What was the impact on the patient?

Please tell me about one instance, where you felt that inadequate communication between primary care and the hospital had a significant impact on the patient’s clinical course in the hospital? Details…. What was behind this occasion? Consequences for the patient?
II. Handover communication in general
What’s your opinion about how communication between primary care (doctors and nurses) and hospital (doctors and nurses) currently is performed? What are the details always delivered? What is often omitted?
What method, what tools do you currently use to inform the doctor/nurse? Do you have (written) guide-lines? Describe... What details do you think are necessary to communicate? (probes) Who do you designate as primarily responsible for this communication to take place?
What would, in your opinion, be the best way for you to learn about the primary care/hospital physician’s/nurse’s assessments of patient status and best practice? What would be the best way for the primary care physician to learn about what has happened in the hospital?
When a patient is discharged, have you ever felt uncomfortable that issues will go unresolved or things will be lost to follow-up by the primary care? Is there anything that occurred during a patient’s hospital stay that you wish that you would have informed the primary care physician/nurse about earlier?

Barriers and facilitators
In thinking about improvements to handover communication, what barriers to effective communication in the patient’s care network do you think need to be addressed?
What strategies or methods would you employ to ensure the communication between primary care and the hospital to be safe and effective for the patient in hand-over situations?

3. Focus groups with patient/patient representatives: interview guide
1. What’s your experience of communication between primary/community care (doctors and nurses) and hospital (doctors and nurses)?
2. What roles do different stake-holders (patients, families, care providers from different settings) take?
3. What do you see as your task(s) and responsibility in clinical handover?
4. Who should be responsible in your opinion for the general coordination of the handover process?
5. Are tasks and responsibilities clearly defined and how does this work in practice?
6. What type of information do you expect to be communicated between primary/community care and the hospital?
7. Barriers/facilitators to transitioning from care by the community to care by the hospital and back again.
8. Describe the most effective, successful handover you would suggest if there would be no restrictions regarding e.g. finance, employees, facilities.
4. Focus groups with care providers: interview guide

Introduction by coordinator (welcome, aims with the focus group and “rules” for the session)

Questions to focus around:

1. Experiences of communication between primary/community care and hospital care? Experiences may concern e.g. ways of communication, timeliness, content and participating stake-holders.
2. Methods/ tools personally used to inform the primary care physician/ nurse or the hospital specialist/nurse? (E.g. written guide-lines, informal routines, use of ICT etc.; description of these)
3. Perspective on task(s) and responsibilities in clinical handover (individual, shared, general/ clearly defined?)
4. Describe the most effective, successful handover you would suggest if there would be no restrictions regarding e.g. finance, employees, facilities.
5. Experiences of uncomfortable feelings (that things will be lost or go unresolved in the follow-up) after referral/ discharge.

Suggestions about ways of dealing with feedback (between hospital and primary care providers) when things actually go wrong in the handover (at referral/ discharge)?
Appendix C

STANDARDIZED TRANSCRIPTION FORMAT

Uniform transcription is required to enable an efficient analysis of the qualitative data throughout the different countries. Therefore, the European transcription has to be performed according to the following guidelines.

- The transcription has to be conducted in Microsoft Word and saved as ‘.rtf version
- It is advised to transcribe the audio file directly in f4. This makes it possible to run the audio-file parallel with the transcript in Atlas.ti and makes it easier to detect unclear passages.
- Standard letter type is Arial, 11
- Line distance is 1.15, with outlining the text left and right (select text and Ctrl+J)
- The interviewer and interviewee are indicated with codes in capital letters based on their role/profession and **not their personal name**:
  - (I) Interviewer
  - (HP) Hospital physicians
  - (HN) Hospital nurse
  - (CN) Community nurse
  - (GP) General Practitioner
  - (P) Patient
  - (R) Relative
- Every change of speaker (including interruptions) starts at a new line (hard return)
- Unclear passages or (only) **important accents/ emphasizes** have to be described as such between brackets (for instance: [???], [laughs] or [raises his voice] etc.)
- Keep as close to the audio-tape as possible in case of expressions of the interviewee like ‘euhm’, ‘oke’, ‘hé’, as well as with fragmented sentences. Don’t reformulate grammatically as long the text stays readable and fit for the interpretation to code.
- Use quotation marks only in case the speaker quotes somebody else or a document.
- Re-read the transcript synchronically with the audio-tape when finished for final correction.
Appendix D

COUNTRY-SPECIFIC PROCEDURES FOR DATA COLLECTION

The interviewers’ methods of approaching subjects, interview location, etc. The interviews followed the Handover Interview Guide developed, and agreed upon by the HANDOVER leadership group.

The Netherlands

a) Individual interviews: All interviews were conducted by one of two trained interviewers, one general practitioner and one organizational-sociologist, both familiar with the organization of primary and hospital care in the Netherlands. Pilot interviews were initially performed and assessed by the local research group (Petra Gademan and Gijs Hesselink). In collaboration with medical and nursing staff, targeted patients from internal and surgical wards were approached with oral and written information about the study by the interviewers, the day of, or the day before, discharge. If the patient or a representative family member agreed to participate, he/she was told that he/she would receive a telephone call to arrange the interview at a later time. The patient (and/or family member) was asked also for consent to interview his/her care-providers at the hospital and in primary care. Interviews with one hospital physician and one nurse, responsible for admission or discharge, were scheduled as soon as possible by one of the two interviewers at a location suitable for the interviewee. About three weeks after discharge, an interview was scheduled with the patient, either at his/her home or, if the patient preferred, at the hospital, sometimes with a family member present. Later, interviews with the patient’s general practitioner were carried out at their workplace or, occasionally, home. The interviewer that interviewed the patient and/or family was also the same person to interview the patient’s hospital and primary care provider. All interviews were audiotaped and then transcribed by well-instructed research assistants with a background in healthcare. The transcribed interviews were subsequently transferred onto document files fit for software use.

b) Focus group interviews: The two researchers responsible for conducting the individual interviews also organized the focus groups. Focus group interviews were prepared by reviewing relevant literature and the development of a protocol to assist in the organization of each focus group session. Each group was led by one trained moderator with, except for the focus group with patients and representatives, the same background as the interviewees. The moderator facilitated the group discussion by asking and clarifying questions, and providing guidance in the discussion in order to address all issues. The moderator was accompanied by one or both members of the research team. They took notes and participated in the discussion when it was felt necessary.

There were 5-8 participants in each group. Each profession had its own group: hospital physicians, hospital nurses, general practitioners, primary care/ community nurses, and patients/ patient representatives. The groups were scheduled at suitable times and location. Field notes were written after each interview jointly by the two responsible researchers.
Also, the focus group interviews were audio-taped and then transcribed by well-instructed research assistants with a background in healthcare. The transcribed interviews were subsequently transferred onto document files fit for software use. As an extra quality control the interviewers listened to the transcripts. Focus group participants were sent a summary comprising the key points that were discussed to check if researcher’s interpretations corresponded with those of the participants.

c) Process Maps: One process map group was conducted. Two primary care/community nurses, two general practitioners, two hospital nurses and two hospital physicians (both from different hospital settings) participated. Due to personal circumstances, one medical secretary was forced to cancel her participation. The start- and endpoints for the process were decided beforehand. Yellow “post-it” notes, marked to distinguish barriers and facilitators, were used during the mapping exercise. The process map was audio-taped, transcribed and transferred onto document files fit for software use.

d) Documents/artefacts: Relevant patient documentation from the patient’s hospital stay was collected in multiple stages. First, several data were collected at the inclusion of each patient. Secondly, a medical student assisted in completing missing data from hospital files. At a later stage, after selecting a relevant artefact, documentation relevant for this analysis and triangulation was retrieved by one of the researchers. This was done in cooperation with one nurse and one GP assistant. The analysis and triangulation was performed by two researches (and discussed in the Dutch project group).

Spain

a) Individual interviews: Interviews were conducted by two trained interviewers, one physician in residency and one linguist and communication specialist with a background in nursing, both familiar with hospital care. Pilot interviews were initially performed and assessed by the local research group.

The target patients were approached with oral and written information about the study by a hospital nurse during their admission to the hospital. If the patient agreed to participate, he/she was asked to sign the consent document to participate in the study and also whether they were willing to participate in interviews, focus groups or both. The patients that accepted to participate in the interviews were informed that they would receive a telephone call to confirm the time of the interview.

An interview with one admitting and one discharging staff member (hospital physician and/or nurse) was scheduled as soon as possible by one of the two interviewers at a location suitable for the interviewee. About three to four weeks after discharge, an interview was scheduled with the patient, either at his/her home or, if the patient so preferred, at the hospital or primary care centre, sometimes with a family member present. Later, interviews with the patient’s primary/community care provider (physician or nurse) were conducted at their respective workplace. The interviewer was the same person who earlier had interviewed this patient’s hospital care provider. All interviews were digitally
recorded and then transcribed by the interviewers and transferred into document files for software use.

b) **Focus group interviews**: All focus groups were conducted by the same moderator who had substantial experience with conducting and analyzing interviews. Two members of the research team alternated in participating in the focus groups as observers and passed prompts, if required, to the moderator. Four groups with 5-6 participants each were interviewed, each profession separately: hospital physicians, hospital nurses, general practitioners, primary care/community nurses. A fifth focus group was held with patients; however, despite various attempts only three patients participated. Participants of each group were asked to fill the data overview form. Groups were scheduled at times and locations suitable to the participants. Field notes were written after each interview by the moderator in collaboration with the researcher participating in the group. Also the focus group interviews were digitally recorded, then transcribed by the moderator and transferred onto document files for software use. As an extra quality control a sample of recordings and transcripts were reviewed by two members of the research team.

c) **Process maps**: Two groups, one for each hospital, were scheduled to prepare the process maps. In the first hospital, the process mapping group comprised: one primary care/community nurse, one general practitioner, one hospital nurse, the hospital quality director, the system information director, one information director, one social worker, one cultural mediator, and two link nurses (one from primary care and one from hospital care). At the second hospital, the process mapping group comprised: two primary care nurses, two general practitioners, one medical secretary from primary care and one from the hospital, two hospital nurses, the hospital-primary care coordinator, two hospital nurses and two specialists (from a medical and surgical speciality).

The end-points for the process were decided in advance and the group used “post-it” notes for facilitators and barriers during the mapping exercise. Once the process maps were finalized and all participants agreed on its elements and order, photos were taken of the arrangement of “post-it” notes and the process maps were drawn in Microsoft VISIO.

d) **Documents/artefacts** from the patient’s hospital stay were collected for two patients, which were identified through the patient interviews described above. Two researchers participated compiling the artefacts for analysis and triangulation.

**Poland**

a) **Individual interviews**: All interviews were conducted by two trained interviewers from a company specializing in qualitative research. One of the interviewers was aged 47, head of the company, psychologist and sociologist, with 20 years of experience in qualitative research and conducting individual interviews and focus group interviews. The second researcher aged 36, a culture animator with 5 years of experience in running workshops, conducting individual interviews in handover research, conducted individual interviews with patients and primary care professionals. The National Committee for Quality
Assurance (NCQA) staff assisted, partly participated in and overviewed this research. Due to the extensive experience of the researchers pilot interviews were not conducted.

Interviews followed the Handover Interview Guide. All individual interviews were audio-recorded and then transcribed by members of the research team and transferred onto files for software use. As an extra quality control, moderators and NCQA researchers verified the transcripts by comparing audio-tapes with transcriptions. The average duration of an individual interview was approx. 35 minutes. Target Patients (apart from the common inclusion criterion of being aged 65+ as Poland has a focus on Geriatrics) were recruited by Handover Hospital Coordinators during the patients’ hospital stay (on the day of discharge) and asked to confirm in writing their participation in the study interview, conducted after discharge (within two to three weeks) from General Surgery or Internal Disease Departments. Patients were informed orally about the study by Handover Hospital Coordinators. Hospital doctors provided information about the patient in the structured “Patient interview” form.

All documents (patients’ consents and patient data) were given to moderators for further recruitment. Patients were contacted by telephone in order to book times and to discuss conditions for the interview. Location was always specified by the respondent. Almost all interviews (27 from 28) were conducted in the respondents’ home environment; only 1 interview in a park. In the “Patient interview form” the moderators described the conditions for the interview. Although the patient was always the main respondent, his/her family also sometimes participated either by listening or active participation. The interview started with taking the patient’s contact details, obtaining consent for audio-taping, explaining the aim of the study. The patient was also asked for consent to interview his/her care-providers at the hospital and in primary/community care and for contact details to his/her primary care doctor. After the interview, a moderator usually continued to discuss patient health and the family situation. Patients received a small box of chocolates as a token of appreciation.

Hospital medical professionals (doctors and nurses, whose patients had been recruited) were recruited by the Handover Hospital Coordinator and asked to participate in the study interview. Most doctors had admitted the patient, only two participated in the discharge. Professionals were scheduled for interviews as soon as possible after patient discharge, at a suitable location. After interviewing the patient, moderators telephoned professionals to agree on the venue and time of interview. All interviews were conducted at the hospital, as this was most convenient for the respondents.

Primary care doctors and nurses were recruited by NCQA researchers: a fax with a description of the study was sent to their office. Preliminary consent had been obtained via the telephone. The professionals’ contact details were given to moderators, who confirmed the consent and arranged details of time and place for the interview. Time and place (respondent’s place of work) were specified by the respondent. Although the respondents chose to be interviewed during their working hours, and defined the interview hour, the time of interview was changed and modified frequently and sometimes many times (due to an excessive workload - influenza season). Interviews with hospital and primary care professionals started by obtaining the professional’s consent for audio-taping and
explaining the aim of the study. After the interview, the moderator collected contact details and information about the professionals in the structured “Health care professionals’ interview form”.

b) Focus group interviews: Six groups of 4-7 participants each were interviewed: two with patients (one with internal medicine department patients, one with surgical department patients); four with health care professionals separately: hospital physicians, PC physicians (GPs), hospital nurses, primary care/community nurses. Doctors and nurses from hospital and PC level were recruited via telephone calls; the respondents approached had not less than 10 years of work experience, including handover (a purposive sampling method was used for recruitment). Patients were recruited by the moderators using snowball methodology. After the initial recruitment, a telephone call was made to verify whether they fulfilled the inclusion criteria. The patient criteria comprised: hospital stay within the last 6 months (1 group- internal medicine patients; 2 groups – surgical patients); communication skills; consent to participate. The focus group interviews were conducted according to the Handover Focus Group Interview Guide, and took approx. 75 minutes. All focus group interviews were conducted in the afternoon (after 4 pm), at a convenient location, regarding public transport, in an NCQA conference room. Snacks, soft drinks, tea and coffee were provided. After the interview, participants were asked to complete the “Focus group interview form” regarding their personal details; professionals also completed a questionnaire about handovers and training in patient handover. All focus group interviews were audio-recorded, transcribed by members of the research team and transferred onto files for software use. Each session, led by an experienced moderator, opened with personal introductions and a presentation of the rules for participation. During the interviews, a member of the NCQA research team took field notes. As an extra quality control, moderators and NCQA researchers verified the transcripts by comparing audiotape with transcriptions.

c) Process maps: Participation in focus groups was as follows: 10 patients (5 in each patient focus group), 4 hospital physicians, 7 hospital nurses, 4 GPs and 7 primary care/community nurses. Each of the six focus groups developed two process maps for handover: idealistic and realistic. The process map included patient journey from PC level to the post-hospital visit in PC practice. A “Post it” method was used, with much emphasis on defining barriers and facilitators for effective handover. The Polish process map results from the discussions held with moderators, researchers and some study participants (both respondents of training interviews and members of focus groups meetings, both from PC and hospital level).

d) Artefact analysis: The patient journey for artefact analysis was identified based upon patient interviews and the “Patient’ interview form”. Documents were collected at hospital and PC level. NCQA researchers cooperated with the Handover Hospital Coordinator in compiling the artefacts for analysis and triangulation. This analysis was performed and discussed by NCQA researchers in consultation with Handover Hospital Coordinator.
Italy

a) Individual interviews: One interviewer and one member of the hospital staff familiar with risk management conducted all interviews. The target patients were selected according to the inclusion criteria of the study plan from the records of the Emergency Department. The patients were further selected with the support of the hospital staff in charge of care on the ward. The patients were approached and given oral information about the study by the interviewer and one member of the hospital staff. If the patient agreed to participate, he/she was told that he/she would receive a letter describing the aim of the study and a telephone call to arrange the interview at a later time. The patient was also asked for consent to interview his/her care-providers at the hospital and in the primary/community care services. The interviewer scheduled an interview with one admitting and one discharging staff member (hospital physician and/or nurse) as soon as possible at a location suitable for the interviewee. About three weeks after discharge, an interview was scheduled with the patient, either at his/her home or, if the patient so preferred, at the hospital, sometimes with a family member present. Later, interviews with the patient’s primary care provider (general practitioner) were conducted at their respective workplace. All interviews were audio-taped and then transcribed and transferred onto document files for software use.

b) Focus group interviews: After experiences from an initial pilot focus group, one researcher conducted focus group interviews supported by a team member of the hospital staff. Five focus groups has been conducted. There were 4-9 participants in the five groups. Three of the groups were composed of health care actors belonging to the same category: general practitioners, hospital nurses, and patients/patients representative. Two groups were multidisciplinary and composed of hospital physicians, hospital nurses, general practitioners, primary care nurses and hospital secretaries. The focus groups were scheduled at a suitable time and location for participants. The focus group interviews were audio taped, transcribed by a professional secretary and transferred onto document files for software use. The participants used post-it notes to write down positive and negative aspects regarding their experiences of the handover process.

c) One process map group met at the hospital. One researcher and one hospital physician structured the care flow chart. The target participants were recruited from Emergency Department (ED) nurses, general practitioners, hospital nurses, hospital physicians and medical secretaries. The end-points for the process were decided beforehand and the group used yellow “post-it” notes for facilitators and orange notes for barriers during the mapping exercise. The session was audio-taped.

c) Documents/artefacts from the patient’s hospital stay were collected at the inclusion of each patient. The manager of the admittance staff has cooperated with the project team in collecting the artefacts for analysis. This analysis was carried out by one researcher and one physician from the hospital and was discussed in the project group.
Sweden

a) Individual interviews: All interviews were conducted by one of two trained interviewers, one nurse and one medical social worker, both familiar with emergency care. Pilot interviews were initially conducted and assessed by the local research group.

Target patients were approached with oral and written information about the study by a project nurse on the day of discharge from the emergency ward. If the patient agreed to participate, he/she was told that he/she would receive a letter and a telephone call about an interview at a later time. The patient was asked also for consent to interview his/her care-providers at the hospital and in primary/community care. An interview with one admitting and one discharging staff member (hospital physician and/or nurse) was scheduled as soon as possible by one of the two interviewers at a location suitable for the interviewee. About three weeks after discharge, an interview was scheduled with the patient, either at his/her home or, if the patient so preferred, at the hospital, sometimes with a family member present. Later, interviews with the patient’s primary/community care provider (physician or nurse) were conducted at their respective workplace. The interviewer was not the same person who earlier had interviewed this patient’s hospital care provider. All interviews were audio-taped and then transcribed by professional secretaries and transferred onto document files for software use.

b) Focus group interviews: After experiences from an initial pilot focus group, three researchers alternated in conducting focus group interviews – each group was led by one trained moderator and one co-worker. There were 6-8 participants in each of the five groups. Each profession had its own group: hospital physicians, hospital nurses, general practitioners, primary care/community nurses, and patients/patient representatives. The groups were scheduled for a suitable time and location for the participants. Field notes were written after each interview jointly by the two group leaders. The focus group interviews were also audio-taped, transcribed by professional secretaries and transferred onto document files for software use. As an extra quality control the interviewers listened to the transcripts.

c) One process map group met at the hospital. One primary care/community nurse, two general practitioners, two hospital nurses, two hospital physicians and one medical secretary participated. The end-points for the process were decided beforehand and the group used green “post-it” notes for facilitators and pink notes for barriers during the mapping exercise.

d) Documents/artefacts from the patient’s hospital stay were collected at the inclusion of each patient and from primary care after the final interview. Two project nurses cooperated with the researchers in compiling the artefacts for analysis and triangulation. This analysis was performed by three researchers and discussed in the project group.
## Appendix E

### HANDOVER QUALITY ASSURANCE REPORT

<table>
<thead>
<tr>
<th></th>
<th>Italy</th>
<th>Netherlands</th>
<th>Poland</th>
<th>Spain</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How were the data collected?</td>
<td>Structured interviews and focus groups – each conducted in the country-specific setting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Could the evidence (fieldwork notes, interview transcripts, recordings, documentary analysis, etc.) be inspected independently by others?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3. How were themes and concepts identified from the data?</td>
<td>For the interviews and focus groups, themes were identified by a multi-stage process. Following initial interviews, each coding team identified several themes that were emerging from the data with respect to the aim of Deliverable 3: identifying barriers and facilitators to effective handovers in the social, linguistic and technological contexts in which they take place in different European settings. At the HANDOVER meeting in Barcelona, the coding team developed a “consensus list of codes”. These codes were then developed into a codebook which was used for subsequent coding of all the data. Conference calls with the coding team were held to further discuss potential changes to the codebook as potential themes arose during the coding process. Based on the coded data, the Dutch team within Work package 5, subsequently provided suggestions for cultural themes and subthemes for this Deliverable. Furthermore, instructions were given for how to extract cultural findings and interesting quotes from the transcripts (e.g. with the help of a list with codes that related to cultural aspects). In the first round, each country analyzed one individual interview per stakeholder to see if these suggested cultural themes and sub-themes could be identified in the various</td>
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</table>
countries. The pilot results were integrated in a preliminary report. Subsequently, a secondary analysis of an additional number of individual interviews and all focus groups was conducted to cover the most important cultural themes across the different European settings.

<table>
<thead>
<tr>
<th>4. Who conducted the interviews and focus groups?</th>
<th>Interviews: Conducted by one researcher and one member of the hospital staff.</th>
<th>Interviews: Conducted by one of two trained interviewers – one a general practitioner and one organizational sociologist.</th>
<th>Interviews: All interviews were performed by two trained interviewers from professional qualitative research company.</th>
<th>Interviews: Interviews were performed by two trained interviewers, one physician in residency and one linguist and communication specialist with a background in nursing, both familiar with hospital care.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus groups: Conducted by one researcher.</td>
<td>Focus groups: Conducted by a moderator with the same background as the focus group participants (except for patient focus group). Accompanied by 2 researchers.</td>
<td>Focus groups: All focus groups were performed by two trained interviewers from professional qualitative research company.</td>
<td>Focus groups: All focus groups were conducted by the same moderator who had substantial experience in this field of research. Two members of the research team alternated in participating in the focus groups as observers and</td>
<td>Focus groups: Three researchers alternated in conducting focus group interviews – each group led by one trained moderator and one co-worker.</td>
</tr>
</tbody>
</table>
5. Was the analysis repeated by more than one researcher to ensure reliability?  

<table>
<thead>
<tr>
<th>Passed Prompts, if required, to the moderator.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

6. How were participants selected? *e.g. purposive, convenience, consecutive, snowball*  

<table>
<thead>
<tr>
<th>Patent-related inclusion criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling of patients in order to get representation regarding age, gender and diagnosis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>&gt;18 years of age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient admitted to emergency room</td>
</tr>
<tr>
<td>&gt;18 years of age</td>
</tr>
<tr>
<td>If patient had slight mental problems, to answer questions, the interview was only conducted when a representative (family member) was available Patient admitted to one academic hospital (x) or to one middle-sized age ≥ 60 with many multiple co-morbidities and poly pharmacy (more than 6 drugs prescribed at discharge). inhabitants of the nearby districts of Krakow admitted to General Surgery or Internal Disease &gt; 18 years of age we used screening variables in order to identify patients belonging to minority groups: Low income level Low education level Low language proficiency</td>
</tr>
</tbody>
</table>
Professional inclusion criteria

- Sampling in order to get representation of seniors and juniors, and equal numbers of nurses vs physicians (when possible)

<table>
<thead>
<tr>
<th>Nurses and physicians from emergency rooms and emergency wards</th>
<th>Nurses and physicians from internal medicine, pulmonary diseases, cardiology or (vascular) surgical wards, at the academic hospital</th>
<th>Doctors and nurses from General Surgery or Internal Disease Depts of two hospitals located in Krakow: the Good Brothers’ Hospital and the Specialist Hospital</th>
<th>Nurses and physicians from medical and surgical wards, at two academic hospitals</th>
<th>Nurses and physicians from primary care</th>
<th>Nurses and physicians from emergency rooms and emergency wards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient discharged from internal medicine, pulmonary diseases, cardiology or (vascular) surgical wards</td>
<td>Sampling aimed at equal numbers of the different hospital settings (x and y) and wards.</td>
<td>Depts of two hospitals located in Krakow: the Good Brothers’ Hospital and the Specialist Hospital of S. Zeromski.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hospital wards</td>
<td>(x) or middle-size hospital (y)</td>
<td>Primary care physicians of S. Zeromski., whose patients have been previously recruited patients - respondents community nurses and general practitioners</td>
<td>primary care Transfer nurses Social workers Cultural mediators</td>
<td></td>
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</tbody>
</table>

7. Method of approach - How were participants approached? *e.g. face-to-face, telephone, mail, email*

<table>
<thead>
<tr>
<th>Patient Interviews:</th>
<th>Patient Interviews:</th>
<th>Patient Interviews:</th>
<th>Patient Interviews:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients approached with oral information about the study. If patient agreed to participate, a letter sent to schedule interview</td>
<td>Patients from internal and surgical wards were approached with oral and written information about the study by the interviewers, the day of or the day before discharge. If the patient or a representative of the family member agreed to participate, he/she was told that he/she would</td>
<td>Target Patients were approached by Handover Hospital Coordinators during their hospital stay (on the day of discharge) and asked to confirm in writing their participation in the study interview, conducted after the discharge (within two - three weeks after the discharge) from General Surgery or Internal Disease Depts.</td>
<td>Target patients were approached with oral and written information about the study by a project nurse on the day of discharge from the emergency ward. If the patient agreed to participate, he/she was told that he/she would receive a letter and a telephone call about an interview at a later time.</td>
</tr>
</tbody>
</table>

Provider Interviews: Interviews with hospital physicians and one nurse, responsible for admission or discharge, were
<table>
<thead>
<tr>
<th>Focus Groups:</th>
<th>Providers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors and nurses from hospital were approached by Hospital Physician and recruited using purposive sampling method. The primary care General Practitioners were approached by a researcher using the snowballing method.</td>
<td>An interview with one admitting and one discharging staff member (hospital physician and/or nurse) was scheduled as soon as possible by one of the two interviewers at a location suitable for the interviewee.</td>
</tr>
<tr>
<td>Focus Groups: The focus group for nurses and hospital physicians were recruited by the two researchers with support of the contact persons (head of the unit) at the hospitals.</td>
<td>Focus Groups: Four groups with up to six participants each were formed.</td>
</tr>
<tr>
<td>They were informed orally about the study by Handover Hospital Coordinators. Their hospital doctor provided information about the patient in the structured „Patient interview” form. All documents (patients’ consents and patient data) were provided to moderators for further recruitment. This was done by the phone call, when date of interview was scheduled and conditions for interview were specified.</td>
<td>The patients that accepted to participate in the interviews were informed that they would receive a telephone call to confirm the date and hour of the interview.</td>
</tr>
<tr>
<td>Provider Interviews: Interviews with one hospital physician and one nurse, responsible for admission or discharge, were scheduled as soon as possible by one of the two interviewers at a location suitable for the interviewee.</td>
<td>Provider Interviews: An interview with one admitting and one discharging staff member (hospital physician and/or nurse) was scheduled as soon as possible by one of the two interviewers at a location suitable for the interviewee.</td>
</tr>
<tr>
<td>Focus Groups:</td>
<td>Focus Groups:</td>
</tr>
<tr>
<td>The eight patients who were willing to participate received an information letter and a time for the group was thereafter scheduled.</td>
<td>The patients were recruited by help of the local chapters of The Swedish Diabetes Association and the Swedish Heart and Lung Association.</td>
</tr>
</tbody>
</table>
already involved wards, by mail, phone or directly approached. Patients/relatives (who met the inclusion criteria) were approached at the wards by one of the researchers. A patient representative was approached by phone.

PC physicians were recruited by phone and mail. Purposive sampling was partly used because of some expertise in handover issues.

nurses, whose patients have been previously recruited) were recruited by the Handover Hospital Coordinator and asked to participate in the study interview. Most of doctors respondents admitted the patient, only two participated in the discharge. Professionals were scheduled for interviews the soonest after patient discharge, at a suitable location. PC doctors and nurses have been recruited by NCQA researchers: a fax with study description was sent to their

5-6 participants each were interviewed, each profession separately: hospital physicians, hospital nurses, general practitioners, primary care/community nurses. A fifth focus groups was held with patients; however, despite various attempts only three patients participated.

Professionals and patients were recruited with the help of the managers of each integrated care system.

The community nurses were invited by help of the regional Center for Family and Community Medicine. An information letter with the scheduled time was send to the eight nurses who were willing to participate.

The GPs were recruited by help of the managers of five primary care centers. Eight general practitioners, all from the same primary care center, participated in the focus group.

The hospital nurses were invited at a work place meeting and also approached face-to-face. Eight
practice office. The preliminary consent has been obtained during a phone call with NCQA. The professionals’ contact details were provided to moderators, who confirmed the consent and arranged details of time and place for the interview. Time and place (respondent’s place of work) were specified by the respondent. Focus Groups: Doctors and nurses from hospital and PC level were recruited by NCQA researcher via phone calls; the respondents approached had not less than 10 years of work.

nurses wanted to participate.

The hospital physicians were by their manager. Seven hospital physicians were willing to participate in the focus group.
experience, this including handover (a purposive sampling method was used for recruitment). Patients were recruited by the moderators with snowball methodology. After the initial recruitment, a phone call was made to verify, whether they comply to the criteria. The patient criteria involved a hospital stay within the last 6 months (1 group - internal disease patients; 2 group – surgical patients); communicative skills; consent to participate in the focus group interview.
<table>
<thead>
<tr>
<th>8. Sample size - How many participants were in the study? How many people refused to participate or dropped out?</th>
<th>See Tables 4 – 8 in Chapter 2, Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Interview guide</td>
<td></td>
</tr>
<tr>
<td>a. Were questions, prompts, guides provided by the authors?</td>
<td>Yes</td>
</tr>
<tr>
<td>b. Was it pilot tested?</td>
<td>Pilot interviews were performed in order to allow the clinical staff members of the research group to get familiar with semi-structured interview technique</td>
</tr>
<tr>
<td>c. Is it being made available?</td>
<td>Yes</td>
</tr>
<tr>
<td>10. Focus group guide</td>
<td></td>
</tr>
<tr>
<td>a. Were questions, prompts, guides provided by the</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>authors?</td>
</tr>
<tr>
<td>---</td>
<td>---------</td>
</tr>
<tr>
<td>b. Was it pilot tested?</td>
<td>Yes</td>
</tr>
<tr>
<td>c. Is it being made available?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

11. Audio/visual recording - Did the research use audio or visual recording to collect the data? Audio recording of interviews, focus groups, and process mapping.

12. How many data coders coded the data? 2 2 2 2 2

13. Were participant quotations presented to illustrate the themes/findings? Yes Yes Yes Yes Yes