Waves towards harmony

WAVES

towards

HARMONY

learning to collaborate in healthcare across borders

Juliët Beuken

WAVES TOWARDS HARMONY

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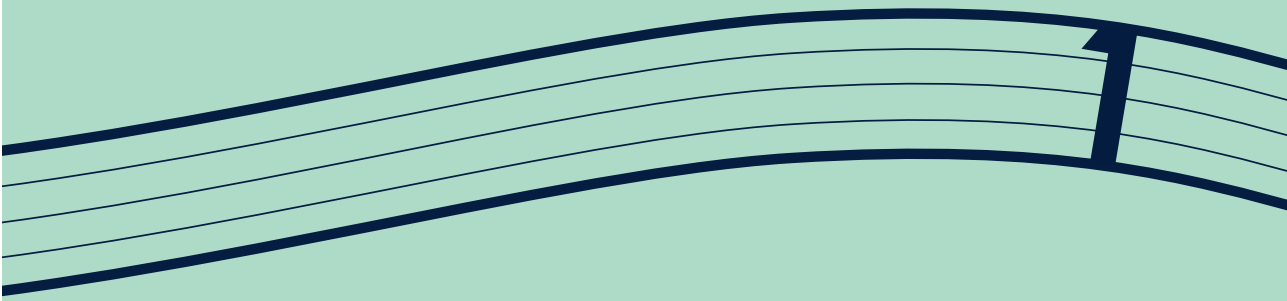

GENERAL INTRODUCTION

A GOOD NEIGHBOUR IS WORTH MORE

In cross-border healthcare, where patients or healthcare personnel cross country borders, cross-border collaborations in healthcare are necessary to organize optimal regional healthcare. Especially in border regions, where national borders of countries meet, collaborations in healthcare can help bring necessary care closer to those who need it. Whether someone is in need of acute care (e.g., after a cycling accident) or planned care (e.g., for complex surgery), the nearest hospital might be just across the border. Healthcare collaborations in border regions can respond to local needs better by sharing expertise (for example about specialized treatment) and/or facilities (for example ICU capacity) (Glinos & Baeten, 2014). In these situations, a good neighbour is worth more than a distant friend.

In the European Union (EU), there are many regions where countries are close together. The EU has several regulations and directives that address cross-border healthcare, for example on the coordination of social security systems (regulation (EC) No 883/2004), and on the application of patients' rights in cross-border healthcare (Directive 2011/24/EU). The latter, a directive and thus open for national interpretation, proposes patients are free to choose a healthcare provider or facility in either the public or the private sector in the EU and should be reimbursed for the costs of identical care in their own country (Wismar et al., 2011). Since its establishment in 2011, absolute numbers of patients crossing borders remain relatively low (Footman, Knai, Baeten, Glonti, & McKee, 2014; General Secretariat of the Benelux Union, 2016). Additionally, for some countries (including Belgium, Germany and the Netherlands) data on reimbursement of cross-border healthcare is unavailable (Wilson, Andouls, & Wilson, 2019). However, EU citizens do find their way to other countries to make use of cross-border healthcare opportunities. Patients cross borders for (a combination of) four reasons: 1) availability (in quantity or type) of care, 2) affordability of care, 3) familiarity with health system(s) or provider(s), and 4) perceived quality of care (Glinos, Baeten, Helble, & Maarse, 2010). Some patients cross borders on their own initiative, while other patients do so with the support of healthcare professionals, for example because of an existing cross-border collaboration.

PROBLEM DEFINITION

Part 1– Analysing needs

Cross-border healthcare comes with challenges. Previous research on cross-border healthcare identified a number of additional barriers that arise in cross-border healthcare, such as language barriers, cultural barriers, differences in healthcare systems, unfamiliarity with other teams, medication safety risks at discharge and difficulties in arranging medical back transfer (Groene et al., 2009; Jabakhanji et al., 2015). Such barriers can lead to communication errors and loss of information in patient handover, which has again and again been associated with patient safety risks (Kripalani et al., 2007; Merten, Van Galen, & Wagner, 2017). While previous studies give us an indication of the challenges of cross-border healthcare in general, little research is available on cross-border healthcare handover from a stakeholder perspective, and on practical needs of these stakeholders involved in cross-border healthcare in border regions. When cross-border healthcare becomes a common practice, as is the case in border regions, challenges could be more substantial, or of a different nature. Therefore, more research is needed on cross-border healthcare in border regions, in particular on the perspectives and needs of healthcare professionals and patients in cross-border healthcare.

Part 2– Designing and evaluating educational interventions

Cross-border healthcare is known to be challenging and healthcare professionals are not prepared for it. Previous research has concluded that healthcare professionals are often unaware of how differences in language, task division, systems and culture can complicate cross-border healthcare. Research by Glonti et al. (2015) reported that only 12% of professionals who previously treated foreign EU patients received information on the management of cross-border care patients. Cross-border healthcare is hardly addressed in education. In the Meuse-Rhine Euroregion, only 14.6% of healthcare professionals involved in cross-border healthcare received any education for this (Bouwmans et al., 2021). Available education and training often focusses on standardized checklists and information systems (Bouwmans et al., 2021), and little is known about appropriate ways to learn about cross-border healthcare challenges and opportunities. As no previous research is available on education to support cross-border healthcare, we need to investigate how to design, implement, and evaluate such educational interventions for cross-border healthcare.

RESEARCH APPROACH

The problems described above require comprehension of what happens in practice, and what we know from theory. Practice and theory should inform and form one another. Design-based research, also known as educational design research, is an approach that combines theory and practice for the design of education (Dolmans & Tigelaar, 2012; McKenney & Reeves, 2012, 2021). In three phases – analysis and exploration, design and construction, and evaluation and reflection – theory (educational research) and practice (educational problems) shape educational design.

First, we needed to analyse the perspectives and needs of healthcare professionals and patients, to understand what practical needs (or educational problems) are in cross-border healthcare. Second, we needed to analyse what insights from learning theory or educational research could help to support these practical needs, design and implement educational interventions accordingly, and evaluate to what extent this design supports cross-border healthcare. We formulated two research questions:

1) What are perspectives and needs of healthcare professionals and patients in cross-border healthcare in a European border region?
2) How can educational interventions designed with practical needs and theoretical insights in mind, support cross-border healthcare?

THREE COUNTRIES, TWO RIVERS, ONE REGION

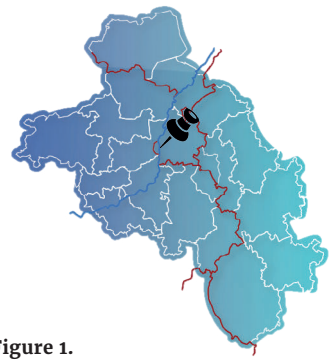

Figure 1.
Euroregion Meuse-Rhine. Red lines represent borders. Maastricht is indicated with a black pin.

In the Meuse-Rhine Euroregion, borders of Belgium, Germany and the Netherlands meet. Within the region, many differences and similarities exist, in history, culture, politics, education and health. For example, health demographics such as life expectancy of Maastricht (NL) show closer resemblance to those of Aachen (DE) and Liège (BE), than to those of the rest of the Netherlands (Curvers & Willems, 2018). On the other hand, the organization of healthcare in the three academic hospitals in this region is quite different, which complicates collaboration in healthcare. This makes the region an interesting setting for cross-border healthcare research.

THESIS OUTLINE

Research question 1 is addressed in the research presented in Chapter 2 and Chapter 3. In **Chapter 2**, we describe cross-border healthcare from the perspective of healthcare professionals working in the Meuse-Rhine Euroregion. In this chapter, we report findings from interviews with healthcare professionals about their experience with cross-border healthcare in three settings. The interviewed healthcare professionals worked in acute and planned healthcare settings, in Belgium, Germany and the Netherlands. In **Chapter 3,** we describe cross-border healthcare from the perspective of patients. We interviewed patients in border regions about their experience with cross-border healthcare. Both chapters give us insights in what those directly involved in cross-border healthcare see as challenges and opportunities, and what they need.

Research question 2 is addressed in the research presented in Chapters 5 and Chapter 6. The needs analysis provides an understanding of cross-border healthcare in the border region from the healthcare professionals' perspective, and highlights that challenges and opportunities occur in different ways according to context. There are general differences in healthcare between countries and there are differences specific to one cross-border healthcare situation. With this in mind, we proceeded to design and evaluate interventions that could contribute to general and specific differences. In **Chapter 4**, we designed, implemented and evaluated an educational intervention for residents (physicians in training to become specialists) in the Dutch part of the Meuse-Rhine Euroregion. The aim of this intervention was to make residents with a variety of backgrounds aware of different kinds of challenges and opportunities of cross-border healthcare. In **Chapter 5**, we designed and evaluated another educational intervention outline, this time for healthcare professionals involved in specific cross-border healthcare collaborations. The aim of this intervention was to support healthcare professionals in improving existing collaborations. We evaluated the outline of this workshop with experts from healthcare and education. These two chapters provide insights into how we can design education for cross-border healthcare.

An overview of the studies in this thesis is provided in Table 1.

AUTHOR REFLEXIVITY

Sometimes I'll start a sentence and I don't even know where it's going.
I just hope I find it along the way.
– Michael Scott

Research is shaped by those who conduct it. My research has certainly been shaped by several aspects of my own background. As the child of two nurses, I was raised with an interest for healthcare. This led me to study health sciences in Amsterdam. In my masters, I was introduced to the field of health professions education. My interest in education of healthcare professionals resulted in two research internships. In both internships, I tried to understand the current situation and needs for improvement by talking to both teachers and students. When I started my doctoral research in Maastricht, these experiences came in handy when analysing needs of stakeholders in cross-border healthcare. However, I still had to learn to comprehend practice and theory to design education. My supervisors, experts in education research, offered the necessary insights to make these connections. Furthermore, they guided me in collaborative research practices with partners from other countries in the region. I was able to work together with people from different professional and national backgrounds, and experience differences not unlike those in cross-border healthcare. I, too, experienced how collaboration can be a challenge *and* an opportunity. In the end, I believe these collaborations strengthened this thesis.

Table 1. Overview of thesis outline

	Chapter 2	Chapter 3	Chapter 4	Chapter 5
Title	Going the extra mile. Cross-border patient handover in a European border region: Qualitative study of healthcare professionals' perspectives	Out of sight, out of mind? A qualitative study of patients' perspectives on cross-border healthcare in a European border region	Creating cross-border collaborators. Design and evaluation of a workshop on cross-border healthcare for residents in a European border region.	Made in context. Expert evaluation of an educational intervention outline aimed at developing a shared understanding of cross-border healthcare.
Research questions	What are the perspectives of healthcare professionals on cross-border handover? What do they see as challenges inherent in cross-border handover and opportunities for its improvement?	What are the perspectives of patients who have experienced cross-border healthcare and, more specifically, handover in a European border region?	How does the workshop *Creating Cross-border Collaborators* with characteristics of contextual, collaborative and reflective learning enhance residents' awareness about challenges and opportunities of cross-border healthcare?	How do experts in healthcare and education evaluate an educational intervention outline with elements of authentic, team, and reflective learning designed to stimulate a shared understanding of cross-border healthcare challenges and opportunities among healthcare professionals?
Methods	Qualitative, semi-structured interviews	Qualitative, narrative interviews	Mixed-methods, surveys and focus group interviews	Qualitative, semi-structured interviews
Participants	Healthcare professionals involved in three cross-border healthcare settings in the Meuse-Rhine Euroregion (N=43)	Patients in cross-border healthcare in European border regions (N=8)	Residents at Maastricht University Medical Centre (N=16)	Experts in healthcare and education in the Meuse-Rhine Euroregion (N=11)
DBR-phase(s)	Analysis	Analysis	Design, implementation and evaluation	Design and evaluation

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2

GOING THE EXTRA MILE.

Cross-border patient handover in a European border region: Qualitative study of healthcare professionals' perspectives.

J.A. Beuken, D.M.L Verstegen, D.H.J.M. Dolmans, L. van Kersbergen, X. Losfeld, S. Sopka, L. Vogt & M.E.J. Bouwmans

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ABSTRACT

Background

Cross-border healthcare is complex, increasingly frequent and causes potential risks for patient safety. In this context, cross-border handovers or the transfer of patients from one country to another deserves particular attention. Although general handover has been the topic of extensive research, little is known about the challenges of handover across national borders, especially as perceived by stakeholders. In this study, we aimed to gain insight into healthcare professionals' perspectives on cross-border handover and ways to support this.

Methods

We conducted semistructured interviews with healthcare professionals (physicians, nurses, paramedics and administrative staff) in a European border region to investigate their perspectives on cross-border handover. The interviews were aimed to investigate settings of acute and planned handover. Informed by the theory of planned behaviour (TPB), interviews focused on participant perspectives. We summarised all interviews and inductively identified healthcare professionals' perspectives. We used elements of the TPB as sensitising concepts.

Results

Forty-three healthcare professionals participated. Although respondents had neutral to positive attitudes, they often did not know very well what was expected of them or what influence they could have on improving cross-border handover. Challenges covered five themes: information transfer, language barriers, task division and education, policy and financial structures and cultural differences. To overcome these challenges, we proposed strategies such as providing tools and protocols, discussing and formalising collaboration, and organising opportunities to meet and get to know each other.

Conclusion

Healthcare professionals involved in cross-border handovers face specific challenges. It is necessary to take measures to come to a shared understanding while paying special attention to the above-mentioned challenges. Meeting in person around meaningful activities (e.g., training and case discussions) can facilitate sharing ideas and community building.

INTRODUCTION

Patient mobility is increasing and centralisation of specialised healthcare calls for an optimal use of international resources. In Europe, a relatively large number of people are already receiving cross-border healthcare, with over 160000 patients crossing borders to Belgium, Germany, France, Luxembourg and the Netherlands each year to receive elective or acute healthcare (General Secretariat of the Benelux Union, 2016). Consequently, patient handover - 'the transfer of information and professional responsibility and accountability between individuals and teams, within the overall system of care' (Jeffcott, Evans, Cameron, Chin, & Ibrahim, 2009) - in a cross-border setting is common.

Patient handover is a complex event that causes risks to patient safety when performed suboptimally. Information may be lost due to inefficient or non-existent communication between healthcare professionals (Pezzolesi et al., 2010). Moreover, handover has been associated with inaccurate or delayed clinical assessment and diagnosis, medication errors, duplication of tests, increased length of stay, increased in-hospital complications and decreased patient satisfaction (Kripalani et al., 2007; Petersen, Brennan, O'Neil, Cook, & Lee, 1994). When patient handover is performed in a cross-border setting (with the patient going from one country to another), additional barriers arise, such as language barriers, cultural barriers, differences in healthcare systems, unfamiliarity with other teams, medication safety risks at discharge and difficulties in arranging medical back transfer (Groene et al., 2009; Jabakhanji et al., 2015).

Despite these additional risks to patient safety, little research is available on cross-border handover from a stakeholder perspective. Existing literature on cross-border healthcare essentially focuses on European law and policy (Baeten, 2014; Legido-Quigley et al., 2011; Peeters, 2012; Wismar et al., 2011) and does not sufficiently elaborate on the practical needs of stakeholders involved. Studies that did involve healthcare professionals seem to focus on general aspects of cross-border healthcare and provide little insight into the practical challenges (and solutions) of cross-border handover (Footman, Knai, Baeten, Glonti, & McKee, 2014; Glinos & Baeten, 2014). One study that included multiple stakeholders in cross-border handover all across Europe (Groene et al., 2009) suggested that issues of organisation and communication had a potential impact on quality and safety. This study concludes that cross-border healthcare requires particular attention in medical practice and calls for further research. Hence, these studies had a general focus and did not explore perceptions of handover in medical practice.

Since healthcare professionals are directly involved in cross-border handovers, it is important that we embed their perspectives in research on this topic. Understanding their perspectives can give essential leads for practical improvement.

A prominent theory that helps to provide insight into stakeholders' perspectives on complex events is the theory of planned behaviour (TPB) (Ajzen, 1991) (figure 1). This theory suggests that someone's attitudes (What do I think of this?), subjective norms (What do others think of this?) and perceived control (Can I control this?) determine their intended behaviour in certain situations. The theory has previously been used to understand and change people's behaviour, such as discriminatory (e.g., stereotyping) and organisational (e.g., job performance) behaviour, in a large variety of situations (Fishbein & Ajzen, 2011). Thus, knowing healthcare professionals' attitudes, subjective norms and perceived control may help us to understand their perspective on cross-border handovers and ultimately to develop ways to support this complex communication task.

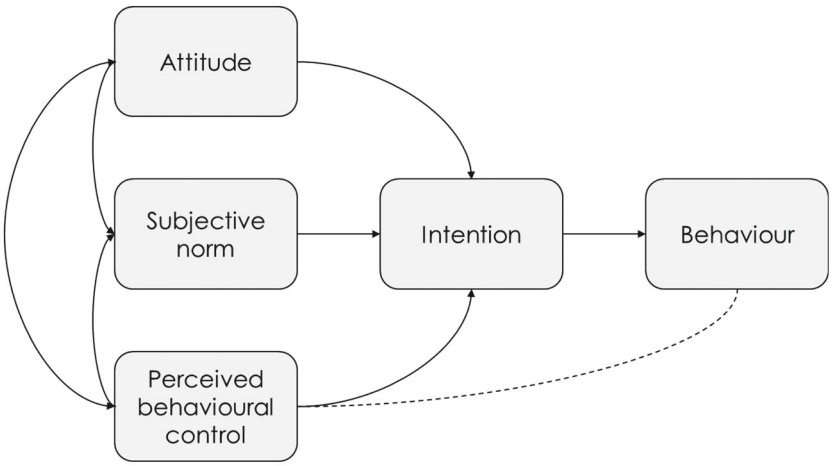

Figure 1. Theory of planned behavior (Ajzen, 1991).

In order to mobilise support for this complex and increasingly frequent event, it is imperative that we gain more insight into healthcare professionals' perspectives on cross-border handover. The present study therefore explored healthcare professionals' perspectives with the aim to identify challenges of and ways to support cross-border handover. Our research questions were 'What are the perspectives of healthcare professionals on cross-border handover?' and 'What do they see as challenges inherent in cross-border handover and opportunities for its improvement?'

METHODS

Design

We adopted a constructivist perspective, choosing a qualitative approach with semistructured interviews. Healthcare professionals (doctors, nurses, paramedics, residents and administrative staff) working in three different settings in the Meuse-Rhine Euroregion were included.

Setting

The Meuse-Rhine Euroregion is a border region where the borders of Germany, Belgium and the Netherlands meet. The broad variety in language, culture and healthcare systems (including three academic hospitals) made this region a very interesting setting to investigate cross-border handover. We selected three handover settings in this region: 1) an emergency department in the French-speaking part of Belgium (Wallonia) that admits patients from French-speaking and Dutch-speaking Belgium, 2) an emergency department in Germany close to the Belgian and Dutch borders receiving patients from emergency services in Belgium and the Netherlands and 3) a fixed collaboration between a Dutch and German clinical department whereby patients are referred to Germany for specialised treatment. Settings 1 and 2 are considered acute handover, and setting 3 is considered planned handover.

Data collection

Data collection took place between February and November 2018. Recruitment procedures were adjusted to local preferences (e.g., via emails, internal communication platforms and newsletters). We recruited people from different disciplines (i.e., nurses, doctors and administrative staff) and with varying years of experience, with a minimum of 1year of clinical experience. Additionally, respondents had to be involved in handovers. We conducted convenience sampling. We provided respondents with information about the research aims (information letter) and informed consent forms prior to the interview, and gave them the possibility to opt out at any time.

The interview guide was based on the TPB, addressing attitudes (e.g., How do you experience cross-border handover?), subjective norms (e.g., How do others handle cross-border handover?) and perceived behavioural control (e.g., Are you content with the way in which cross-border handovers are handled?) as experienced in cross-border handover (see online supplementary appendix 1). The interview contained a short introduction, followed by seven main interview questions and complementing subquestions. Since we conducted the interviews in the native language of respondents, we had a professional translation company translate the interview guides. At each interview, two researchers

(JB, DV, LvK or MB) were present, one acting as the interviewer and the other one as an observer. The interviewer consulted the observer to make sure all questions were answered. When needed, a translator assisted them. Most interviews lasted between 30 and 45min. The researchers conducting the interviews had no previous connection to the respondents. Three researchers (JB, LvK or MB) or the translator recorded and summarised all interviews. Parts of the interviews were transcribed to support statements made in the summary. All summaries were checked against recording by a second researcher and, if necessary, were translated. Summaries were sent back to respondents, who were asked to agree, adapt or reject the summary within 2weeks. If their reply was not forthcoming, we assumed agreement.

Data analysis

We analysed the summaries in two phases. The first phase was an inductive analysis based on the following the steps proposed by Braun and Clarke (2006): 1) familiarise yourself with your data, 2) generate initial codes, 3) search for themes, 4) review themes, 5) define and name themes, and 6) produce the report. Authors who coded the data (JB, DV, DD, LvK, XL, LV and MB) in this phase had a variety of backgrounds, specifically in healthcare (XL and LV), psychology (LvK and MB), educational sciences (DV and DD) and health sciences (JB). Some authors had previous experience with qualitative research (JB, DV, DD, LvK and MB). Other authors were instructed about the coding procedures. Authors each coded a number of the interviews according to their own perspectives. Thereafter, the authors discussed their findings and constructed overlapping themes through several rounds of coding and identification of themes. Special attention was payed to interconnectedness between appearing themes (i.e., double coding of data). After these two rounds of coding, no new themes were identified. In the second phase, the TPB informed further scrutinising of the data. Authors (JB, DV and MB) used the elements of the TPB as sensitising concepts (Blumer, 1954) and analysed coded data again, focussing on indicators for respondents' attitudes, subjective norms and perceived control concerning cross-border handover.

RESULTS

We conducted interviews with 43 respondents (see table 1). In the following paragraphs, we will first elucidate respondents' perspective using concepts from the TPB (research question 1) before presenting respondents' perceived challenges and opportunities of cross-border handover (research question 2).

Attitudes, subjective norms and perceived control

To describe healthcare professionals' perspectives on cross-border handover, the following paragraphs will elaborate on their attitudes, subjective norms and perceived control regarding this topic. To this end, we present the findings pertinent to each of the TPB-inspired sensitising concepts.

Attitudes: what do I think of cross-border handover?

When asked about their perceptions of cross-border handover, healthcare professionals expressed relatively neutral to positive attitudes. Most respondents described cross-border handovers as 'no different from regular handovers' and used positive words (e.g., 'polite', 'specialised' and 'fast') to describe their neighbouring colleagues. Some respondents, however, shared negative experiences, such as healthcare professionals refusing to communicate with them or impolite behaviour (e.g., being yelled at). Yet others felt that cross-border collaboration held great promise for improving healthcare. These respondents were often involved in improving cross-border handover and expressed enthusiasm to increase cross-border collaboration: *"In the Euregion, collaboration between these ... academic hospitals is crucial for further international development. Those chances are not optimally used at the moment."* (Physician working in the Netherlands and Germany)

Table 1. Demographics

		N=43	%
Occupation			
	Physician	15	34.9
	Nurse / nurse practitioner	11	25.6
	Paramedic	12	27.9
	Physician in training	2	4.7
	Administrative	3	7.0
Country			
	Belgium	9	20.9
	Germany	26	60.5
	The Netherlands	8	18.6
Language			
	Dutch	9	20.9
	French	8	18.6
	German	26	60.5

Subjective norms: what do others think of cross-border handover?

Many respondents first declared cross-border handover similar to regular patient handover. However, they subsequently discussed differences in expectations between healthcare professionals involved in handover, for example, in what language the handover should take place. This reflects a strong local subjective norm and the absence of shared subjective norms of cross-border handover. Healthcare professionals were unaware or unsure of what other healthcare professionals involved in cross-border handover thought and expected, and therefore acted in accordance with local assumptions when dealing with cross-border handover. In discussing differences, healthcare professionals often differentiated between 'how we do it' and 'how they do it', articulating division rather than collaboration:

> We have a routine in [the Netherlands]; we have a routine in [Germany]. … Those are completely different organisations with completely different organisation structures, and because of those organisations, it is often difficult to come together and really do things … together. (Physician working in the Netherlands and Germany)

Some respondents worked or had worked in two countries. They shared subjective norms more explicitly and understood the perspectives of the healthcare professionals involved in both countries. Because of their international experience, they seemed to be more aware of their own role in cross-border handover and considered it their responsibility to establish collaboration and improve cross-border handovers.

Perceived control: can I control cross-border handover?

Almost all respondents felt they had little control. This was strongly related to the many challenges that respondents described and to the control they actually had when dealing with certain challenges (e.g., being unable to speak the other language or to transfer information via digital systems): *"There is often a little bit of a language barrier, since I do not always understand everything, and also not everybody speaks English. My English is also not so good."* (Nurse working in Germany)

In the face of practical challenges, respondents sought ways to 'work around it', for instance, by communicating through hand gestures (when language skills were insufficient) or by transferring information onto compact discs (when a digital system was not available). However, when the problem was less clear, respondents felt less able to influence the situation. This was the case when differences between countries were not well understood, leaving healthcare professionals feeling unable to change this.

Challenges and proposed strategies

Our exploration of the perceived challenges and opportunities for improvement led to the identification of eight themes. Challenges covered the following five themes: information transfer, language barriers, task division and education, policy and financial structures, and cultural differences. The opportunities for improvement, hereinafter referred to as 'proposed strategies', covered three themes: provide tools and protocols, discuss and formalise collaboration, and get to know each other (see table 2).

Table 2. Schematic overview of the themes identified

Challenges	information transfer	language barriers	task division and education	policy and financial structure	cultural differences
Proposed strategies	Provide tools and protocols (e.g., procedures, language)		Discuss and formalise collaboration (e.g., collaboration agreement)	Get to know each other (e.g., exchanges, training)	

Information transfer

Respondents described many situations in which procedures for transferring information between institutions or professionals were not aligned. Challenges were often the result of mismatches in the communication protocols (face-to-face information transfer) and information systems used (digital information transfer). More specifically, the communication protocols used (such as Situation, Background, Assessment and Recommendations (SBAR), Airway, Breathing, Circulation, Disability, Exposure (ABCDE) and Identify, Mechanism, Injuries, Signs, Treatment (IMIST)) differed between countries (and institutions). Especially when one party involved in handover never used any protocol, there were mismatches in expectations of each other, and misinterpretations occurred. Respondents feared that this could lead to a loss of information:

> Because we sometimes get the impression that they are not listening, right? So that we mention things that we find very important, and structured, and on the other side someone is standing there, saying: 'yeah, okay, yeah, yeah, and what more?' … So that is of course received very differently if you are not counting on that structure. (Paramedic working in the Netherlands)

Many respondents mentioned the challenge that comes with incompatible digital systems. In the Netherlands, for instance, information transfer was digitalised, and documents were not printed for handover. This complicated the exchange of patient

information in acute handovers to Germany that did not have such digital system in place. Certain rules and regulations could also act as impediments. For instance, since the emailing of patient information was prohibited, MRI results could not be shared in an information system. Consequently, these results had to be stored on compact discs and physically transferred by healthcare professionals or patients themselves.

Language barriers

Another challenge frequently mentioned was language barriers, resulting from the encounter of the three different languages spoken in the border region (Dutch, French and German). Although most respondents had some understanding of English and some of the other languages (due to similar dialects), they were rarely fluent in more than one of these languages. According to respondents, this situation sometimes led to misinterpretations or a loss of information, such as misjudgement of the severity of a patient's health status with potential fatal outcome. This was especially challenging in acute situations, since professional translators were not always available. As one respondent described, emergency services sometimes diverted to a domestic hospital to avoid language barriers in a foreign hospital that was closer:

> … you also hear colleagues who sometimes avoid the hospital … because they don't speak the language 100%. For example, if I have an accident [on the Dutch-German border] with a very bad patient, I go to [Germany] very easily. Other colleagues say oh, gosh, [Germany), well, you know what, let's go to [the Netherlands]. You are just twenty minutes longer on the road. So the language problem does play a role. (Paramedic working in the Netherlands)

Task division and education

Differences in the level of education and task division between healthcare professionals from different countries presented a third challenge complicating cross-border handover. Respondents described differences in the amount and kind of training that nurses and paramedics received. Consequently, healthcare professionals with similar job descriptions had very different levels of skills and knowledge. This variety in training led to differences in task division, in turn creating more obstacles because healthcare professionals did not know when and how to communicate what information to whom. One respondent explained how their occupation, nurse practitioner, did not exist in another country. When handing over the patient to the other country, it was challenging to locate someone with similar training and tasks. *"It all starts with their unfamiliarity with our system. Many of our German colleagues do not know that we have virtually the same powers and responsibilities as their emergency physician."* (Paramedic working in the Netherlands)

Policy and financial structures

In a similar vein, differences in policies on measurements and tests used in diagnosis and treatment could pose a challenge to cross-border handover. For example, regulations to prevent bacterial infections (e.g., Methicillin-resistant Staphylococcus aureus) differed between the three countries, causing cross-border handovers from Belgium to the Netherlands to be usually rejected for fear of infection, as one respondent suspected:

> It's not always accepted normally … because I think it's a matter of quarantine. But we have asked. I think that it is allowed that we make transfers to [the Netherlands], but it is very rare … It is rarely accepted. (Nurse working in Belgium)

Differences in financial structures (e.g., Who is paying for healthcare?) seemed to influence the decision to seek or avoid cross-border handover as well. Especially in acute care, respondents mentioned that - depending on the patient's status - they took insurance-related issues into account when deciding where to transport the patient: *"With international stuff, insurance-related issues always come up with the insurance provider. … In terms of effort, it [national handover] is just easier for the patient."* (Paramedic working in Germany and Belgium)

Cultural differences

Cultural differences constituted the fifth challenge in cross-border handover. This challenge seemed strongly related to respondents' beliefs of what healthcare should look like and how this image did not fit healthcare in another country. When discussing culture and its associated challenges, respondents typically described interactions with colleagues and patients, referring to different nationalities and speaking of differences between 'them' and 'us'. Culture often seemed to be entangled with, and expressed in, other themes. For instance, when addressing different uses of procedures, respondents expressed this as a cultural difference. While one respondent spoke of a 'strict handover culture', another one attributed the difference in protocol use to standardised protocols being coloured by personal differences:

> To have a handover that is … objective and neutral is difficult; since it is not necessarily … clean, but also an interaction between people. The handover in relation to … the person, the collaborations in itself, will not be the same. It will be biased. (Physician working in Belgium)

Provide tools and protocols

To overcome many of the aforementioned challenges, healthcare professionals suggested that sufficient resources be developed and implemented. More specifically, information systems should be made compatible and patient information forms made available in different languages for easy translation: *"We do not have digital, secured exchange of diagnostics. That would be really good, if we could look at images of scans in [Germany] and [the Netherlands]. Basically, for [our department] that would solve many problems."* (Physician working in the Netherlands) Additionally, respondents stressed the importance of preparing healthcare professionals to work with these new resources. In order to execute cross-border handovers successfully, healthcare professionals must possess certain skills, such as the command of a language, but also the ability to deal with the protocols (e.g., SBAR) and systems prominently used in the region. Hence, respondents emphasised a need for training to make accurate use of resources, such as new ways to transfer information.

Discuss and formalise collaboration

Challenges such as differences in education, policy and culture, however, were difficult to control or change. According to respondents, in these circumstances, it is crucial to know how healthcare professionals in other organisations work and to create a shared understanding of cross-border handover. That way, they would know what was expected of them across the border in terms of policy, financial structure, education and culture: *"That you know exactly who is allowed to do what, who knows what, who has which task, that you can recognise people well."* (Paramedic working in Germany) Respondents also suggested that agreements be made about how to execute cross-border handovers in practice. One respondent had already sat together with collaborating partners in their setting to create an agreement that was available in two languages and was updated regularly. Their precondition for such arrangement was to sufficiently and frequently inform the stakeholders involved about the agreement.

Get to know each other

To pursue the two strategies previously addressed, many of the respondents advocated meeting professionals from other countries. They considered face-to-face meetings as essential to facilitate sufficient resources and to create a shared understanding of cross-border collaborations. Respondents who mentioned training of skills also stressed the importance of doing this together, in interprofessional as well as intercultural settings. They mentioned successful examples: students going to other countries for short-term or long-term exchanges and meetings to discuss handovers. Professionals who already met regularly saw 'personal contact' as the key to good collaboration:

> You see that if you come together in person, you can also discuss things well. You can do a lot by phone and secure mail, but you see that personal contact and going there or them coming here, that I see as the key to success. (Nurse practitioner working in the Netherlands)

DISCUSSION

Healthcare professionals in a European border region have positive attitudes towards cross-border handover and see many similarities with regular handover. However, we also noticed that professionals had different expectations about how those handovers should be handled (i.e., different subjective norms) and found it difficult to influence current cross-border handover procedures themselves (i.e., low perceived control). They mentioned challenges specific to cross-border handover (information transfer, language barriers, variety in task division and education, differences in financial and political structure, and cultural differences) and several ways to overcome these (providing tools and procedures, discussing and formalising collaborations, and getting to know healthcare professionals across the border).

The findings bear resemblance to previous studies on cross-border healthcare by, among others, Groene et al. (2009) and Footman et al. (2014), who also mentioned challenges related to language barriers and differences in procedures and systems. This is on top of challenges that are associated with 'regular' handover. For example, Sabet Sarvestani, Moattari, Nasrabadi, Momennasab, and Yektatalab (2015) reported that unstructured handover of shifts led to difficulties in information transfer. They also identified communication, organisation and culture as important leads for improving patient safety during handover in a variety of in-hospital settings (Sabet Sarvestani et al., 2015).

Handover is always a vulnerable event associated with loss of information and miscommunication. These risks seem to be amplified in handovers across the border, possibly due to professionals' lack of knowledge about their colleagues across the border. Besides, this study has demonstrated that handover across borders presents unique and additional challenges (e.g., level of training and cultural differences). Certain conditions must be met for effective cross-border collaboration, such as finding connections between the different health systems, involvement of committed individuals and alignment of partners' interests (Glinos & Baeten, 2014). Explicit attention for these complex handovers is required. Our study provides better insights into the challenges and proposes strategies to overcome these.

In the current study, we identified challenges amplified by cross-border aspects like language, different healthcare organisation structures and overall unfamiliarity on both sides. A noteworthy challenge we identified was cultural differences. Even though our respondents often did not explicitly use this term, they often implicitly addressed cultural aspects in relation to other challenges. They were, for example, inclined to talk in terms of 'how they do it' versus 'how we do it'. Sometimes, the interviewers noticed differences that the interviewees did not seem to notice, for example, regarding expectations about the role of the patient (e.g., 'We expect patients to actively indicate their need for pain medication' versus 'We actively ask the patients if they require pain medication'). Since culture greatly affects a person's attitudes, subjective norms and perceived control, and, hence, their behaviour (Fishbein & Ajzen, 2011), cultural differences inevitably lead to different ideas about how to deal with certain situations (Schein, 1984), increasing chances of miscommunication. Cultural differences should thus be considered carefully in the process of designing and implementing strategies of support for cross-border handovers.

Another remarkable result is the paradox between low perceived control on cross-border handover articulated by many of the respondents and their simultaneous ideas about how to overcome the challenges they face. The low perceived control might be attributed to factors that are indeed hard to change (such as healthcare systems and policies) or overall complexity of cross-border handovers. We strongly believe that discussions between healthcare professionals about collaborating internationally may unravel the complexity and increase their perceived control of these situations. Once they are aware of, or even understand, differences in expectations and approaches, peer discussions can help build a community of practice (Wenger, 2011) in which healthcare professionals who collaborate across borders share ideas about how cross-border handover can be improved. To strengthen this community-building process, it is vital to include and empower healthcare professionals who are aware of cultural differences (Sammer, Lykens, Singh, Mains, & Lackan, 2010).

Limitations

Our study has several limitations. First, we studied cross-border handover in a unique setting: a border region that has an elaborate history of cross-border collaboration (Legido-Quigley, Glinos, Baeten, & McKee, 2007). Notwithstanding this, the challenges identified in the present study are likely to also arise in other border regions. Second, although gaining insight into healthcare professionals' individual perspectives on cross-border handover was our explicit aim, perceptions may differ from what actually happens in practice. Last, we focused on healthcare professionals' perspectives, without addressing the needs of other essential stakeholders in cross-border handover.

Future research

Observational or ethnographic research into cross-border handovers would be suitable to study how professionals interact in practice. Such an approach could provide better insight into cultural aspects of cross-border collaboration in healthcare and could shed light on the inherent risks to patient safety and associated implications. Future research should also focus on the perspectives of patients and other stakeholders in cross-border handover (e.g., healthcare insurers and general practitioners).

Practical implications

Cross-border healthcare is complex, and some factors cannot easily be changed. This research points to several measures that could be taken to align procedures and come to explicit agreements on cross-border collaborations. However, we foresee improving cross-border collaboration in different settings requires a tailored approach. It is thus important to establish contact and arrange meetings between healthcare professionals around meaningful activities, such as case discussions, joint training and formalised collaboration, to build community for cross-border collaboration.

Conclusion

Although healthcare professionals have positive attitudes towards cross-border patient handover, they also have different expectations of how those handovers should be handled and feel they have limited control. They face specific challenges in cross-border handover, such as differences in formal structures (task division, policies and financing) and in culture. We suggest discussing these specific challenges to come to a shared understanding of cross-border handovers. Meeting in person around meaningful activities (e.g., training and case discussions) could facilitate shared ideas and community building. This way, healthcare professionals establish shared expectations and can take control of healthcare professionals in cross-border handover.

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APPENDIX 1
INTERVIEW GUIDE

Basic questions

1) Could you tell us something about the work you do?

2) Could you describe a cross-border handover as they generally happen in your unit?

3) Could you describe the most recent cross-border handover you were involved in?
   a. Could you describe the situation you're thinking of? (Situation)
   b. Could you describe your role in this situation? (Task)
   c. Could you describe what you did? (Action)
   d. Could you describe what the result was? (Result)
   e. In hindsight, is there anything you would do differently?

4) Why do you handle cross-border handover the way you do?
   a. How do you experience cross-border handover? (Attitude)
   b. How do others handle cross-border handover? (Subjective norm)
   c. Are you content with the way in which cross-border handovers are handled? (Intended and actual behaviour)
   d. Do you feel like you are able to influence cross-border handovers? (Perceived behavioural control)

5) What do you need to be able to optimise cross-border handover?
   a. What is the role of training in optimising cross-border handover?

Additional questions

These questions can be asked when the previous questions have been answered, and there are more than five minutes left.

6) Could you describe a more remarkable or exceptional cross-border handover you were involved in? (sub-questions of question 3 apply)

7) Why did you/others handle this situation in a certain way? (sub-questions of question 4 apply)

8) Are there any lessons learnt from this situation?

3

OUT OF SIGHT, OUT OF MIND?

A qualitative study of patients' perspectives on cross-border healthcare in a European border region.

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ABSTRACT

Objective

To improve our understanding of patients' needs in cross-border healthcare, with a specific focus on handover.

Methods

In this qualitative study, we conducted narrative interviews with 8 patients who had experienced cross-border healthcare, including handover. Based on an inductive analysis, we crafted stories representing participants' perspectives. Crafted stories attend to the personal character of patients' experiences.

Results

We crafted 3 stories relating patients' cross-border healthcare pathways. We identified 3 recurring issues in these stories: 1) Patient involvement in the decision-making process regarding their healthcare; 2) Communication with their healthcare providers; and 3) Information throughout the healthcare process.

Conclusion

The said issues, albeit no novelty in healthcare, seem to be amplified by cross-border barriers, such as system, language, and cultural differences. To empower patients to be involved in their own healthcare process, these issues should become a topic of conversation between patients and healthcare professionals.

Practice implications

The patient stories in this article could help raise awareness among professionals and patients about the issues patients face in cross-border healthcare. Awareness is a first step in overcoming these issues.

BACKGROUND

Seeking healthcare across the border seems to be becoming more prevalent in Europe. In the 2016 "Patients Without Borders" report, the General Secretariat of the Benelux Union observed that at least 168 thousand patients cross borders between Belgium, France, Germany, Luxembourg, and the Netherlands each year for planned or unplanned medical treatment. Patients who plan their medical treatment across the border may do so for a variety of reasons: The perceived quality might be better, costs might be lower, and certain treatments might not be available in the country of residence (Glinos, Baeten, Helble, & Maarse, 2010). Cross-border handovers can also be unplanned, for instance when an emergency arises. Patient mobility can benefit both patients (e.g., by reducing waiting time or costs and providing access to specialized healthcare) and healthcare professionals (e.g., through the exchange of resources and expertise) within Europe. The European Union actively supports patients in seeking healthcare across the border by disseminating information through leaflets, fact sheets, and specialized contact points (European Commission, 2021).

As patient mobility and cross-border healthcare are rising, so are concerns about patient handovers: The transfer of information and professional responsibility and accountability from individuals and teams in one country to individuals and teams in another country (Jeffcott, Evans, Cameron, Chin, & Ibrahim, 2009). In terms of patient safety, handovers are always a vulnerable event, especially so in international settings, as differences in language, culture, and healthcare systems may complicate the process (Beuken et al., 2020; Jabakhanji et al., 2015). Particularly in border regions, where healthcare institutions in different countries are relatively close to each other, cross-border healthcare, and handover in particular, requires special consideration.

To identify the requirements for cross-border healthcare, numerous exploratory studies have been conducted (Beuken et al., 2020; Footman, Knai, Baeten, Glonti, & McKee, 2014; Glinos & Baeten, 2014; Jabakhanji et al., 2015). However, most of these studies did not address the needs of one important stakeholder: the patient. Studies that did address patients' perspectives (Groene et al., 2009; Verra, Kroeze, & Ruggeri, 2016) have revealed that patients often lack important information, especially about administrative processes. Another study, moreover, has pointed to medical travel agencies – organizations that actively stimulate patients to seek cross-border healthcare – providing inconsistent information on, among other things, risks and liabilities (Maguire et al., 2016). Since these studies were conducted, the European Commission has developed information about cross-border healthcare specifically for patients (van de Steeg et al., 2018). However, we are unsure if these additional measures were, indeed,

effective. Additionally, studies on cross-border healthcare have often included patients who travelled relatively large distances to receive healthcare, but did not necessarily live in border regions. Their experiences may differ from those of patients in regional cross-border healthcare. Hence, we still know little about patients' perspectives on cross-border healthcare.

We therefore conducted a study to answer the following research question: *"What are the perspectives of patients who have experienced cross-border healthcare and, more specifically, handover in a European border region?"*

METHODS

Design

We took a phenomenological approach, focusing on the unique, lived experience of individuals (Savin-Baden & Howell Major, 2013). To give patients the opportunity to talk about their personal experience, we chose to hold individual interviews. Because of the exploratory nature of this study and our research paradigm, we included patients with a broad variety of experiences.

Sampling

Using purposive sampling, we recruited participants who lived in the Meuse-Rhine Euroregion and had received healthcare in a country in which they did not reside. Inclusion criteria were that participants had experienced cross-border healthcare in the last five years, remembered at least part of this experience, and were willing to talk about it while being audio recorded. Since generalization was beyond the scope of this study, we aimed to include ten patients who had received cross-border healthcare for a variety of reasons. Participants were recruited via researchers' networks, that is, by word of mouth, departmental emails, and social media. One participant refused to be recorded and therefore withdrew from the study just before the interview. One participant experienced cross-border healthcare in another European border region. All remaining participants fit the aforementioned inclusion criteria.

Data collection

Because healthcare (and, therefore, cross-border handover) can be considered a significant event in people's lives, we chose narrative interviewing. With this technique, researchers create a setting in which participants are encouraged to tell stories about such events, by giving them the opportunity to talk freely about their experiences (Anderson & Kirkpatrick, 2016; Jovchelovitch & Bauer, 2000). Our narrative interview

guide, based on the work of Jovchelovitch and Bauer (2000) and Anderson and Kirkpatrick (2016), comprised four phases: 1) Initiation, 2) Narrative, 3) Questions, and 4) Conclusion. In phase 1, we informed participants about the research and interview purpose. In phase 2, participants were invited to talk about their experience with cross-border healthcare. In phase 3, the interviewers asked clarifying questions about the experience, without judging (e.g., by asking "could you describe this in more detail?" rather than "are you sure that this happened?"). In phase 4, we concluded the interview by summarizing the main findings and explaining the next steps (transcription, summarizing, checking). After a test interview, we added some open-ended questions to phase 3 to support non-judgmental probing (e.g., "what happened after that?" and "how did that go?").

Procedure

Between June and October 2018, we conducted eight interviews with nine people. One interview also included the patient's relative. All interviews lasted about one hour. During the first interview, we noticed that it would be meaningful to have an observer who could ask clarifying questions. Therefore, from the second interview onwards, another research team member (MB or DV) was also present who had an observing role. JB was the main interviewer who introduced the topic and asked questions in each phase. Interviews were held in English or Dutch, whichever language the patient preferred. Two participants were interviewed in a language that was not their native tongue. All interviews were recorded with an audio recorder.

Data analysis

All interviews were transcribed verbatim by the researchers (JB or MB). After that, we sent the transcripts to the participants for a member check. Three researchers (JB, MB, and DV) inductively coded the transcripts in accordance with the six-step procedure set out by Braun and Clarke (2006): 1) familiarize yourself with your data, 2) generate initial codes, 3) search for themes, 4) review themes, 5) define and name themes, and 6) produce the report. Transcripts were coded using Microsoft Word and Microsoft Excel.

After several rounds of familiarizing, inductive coding, and discussions, we reported the results in the form of crafted stories (Crowther, Ironside, Spence, & Smythe, 2017). These stories allowed us to address overlap among patient experiences, while still attending to their personal character. Employing the methods suggested by Crowther et al. (2017), we combined participants' experiences and their statements into three cohesive stories. One of the researchers (JB) crafted these stories and discussed them with the remaining researchers (MB, DV, and DD). All story elements were drawn directly and indirectly from the interviews. Several details were altered to connect experiences, enhance the flow, and ensure anonymity.

Ethical considerations

The study protocol was approved by the Maastricht University Health, Medicine and Life Sciences Ethics Review Committee (FHML-REC no. 2018-0331). Data were analysed, stored, and reported pseudonymously. Prior to the interview, participants were asked for informed consent. During and after the interview they were given the opportunity to omit information. Participants could withdraw at any time.

Reflexivity

The authors have varying academic backgrounds and experiences that influence their perspectives. JB is a qualitatively trained researcher with a degree in Health Sciences. MB is a quantitatively trained researcher with a degree in Psychology. Together, they have interviewed over 50 professionals about their experiences working in the Euroregion. DV is an educational and cognitive scientist who has conducted research in the field of instructional design and international education. Finally, DD is an educational scientist who has researched small-group teaching in medical education from a cognitive, social, and, notably, a student and supervisor perspective.

RESULTS

We conducted eight interviews with patients and patient relatives. Their experiences dated from five years to a couple of weeks before the interview. Table 1 presents the participant demographics. Despite the variation in experiences, we were able to discern a thematic overlap between the experiences of patients who had similar healthcare pathways. We identified three such cross-border healthcare pathways:

Table 1. Participant demographics

	Native language	Country of residence	Country of healthcare	Healthcare pathway
Participant 1	German	Netherlands	Germany	Planned by patient
Participant 2	Dutch	Netherlands	Belgium (Wallonia)	Unplanned
Participant 3	Dutch	Netherlands	Germany	Planned by professional
Participant 4	Dutch	Netherlands	Belgium (Flanders)	Planned by professional
Participant 5	Dutch	Belgium	Netherlands	Planned by patient
Participant 6	Dutch	Netherlands	Belgium (Flanders)	Planned by patient
Participant 7	Dutch	Netherlands	Belgium (Flanders)	Planned by patient
Participant 8	English	Netherlands	Germany	Unplanned

1) The handover was unplanned. Patients experienced an acute healthcare situation outside their country of residence. They were therefore transported to a hospital by the emergency services.
2) The handover was planned by a professional (family doctor or specialist) who referred the patient to a foreign hospital outside their country of residence.
3) The handover was planned by a patient. They took the initiative to seek healthcare in a foreign country, sometimes on the recommendation of professionals other than their own doctor.

We combined the experiences of patients with similar healthcare pathways into three crafted stories, consistent with the aforementioned categorization. Quotes drawn directly from the interviews are in italics. Each story is followed by a conceptual summary describing the themes that occurred throughout the story.

Unplanned handover: the story of Hans

We were on our way to a meeting with some colleagues in Germany. It was only a 30-minute drive and a colleague of mine was driving. I remember that, all of a sudden, I started to feel unwell and I panicked. We were afraid something was wrong, so we stopped the car and called the emergency services. My colleague explained in her best German what had happened. Quickly after that, an ambulance arrived. *"An emergency doctor came to ask some questions, but not so many, but directly told me 'you are going to the hospital unless you strongly object to it.' He did speak English. So, they put me in an ambulance and gave me drugs … and then they started to take medical measurements and they told me to which hospital I was going. I also asked if I could go to a hospital closer to home, but* [laughing] *that was not the plan"* (Participant 8).

At the hospital, it took them a while to find someone who was able to explain to me what had happened. My German is not very good, and the majority did not speak Dutch or English. Then, a doctor explained that they wanted to run a couple of blood tests and an MRI. I asked if it was possible to run these tests in the Netherlands and was told I could leave at my own risk. I still do not really understand what they meant by that, but going home did not sound like a good decision.

The tests were planned quite quickly, and an English-speaking doctor gave me a preliminary diagnosis. After a couple of hours, they decided I could leave. "*They said: 'You have to, if we send you home now, you do have to directly contact your own, in this case, your family doctor and ensure that she gets all the information we give you.' Yes, they gave me everything. I just got a file with all the stuff in it, there were the* [test] *results, and then, I don't really know anymore, if there was a data carrier in it"* (Participant 2). They enclosed a

letter for the family doctor, but it was written in German. At home, I gave the files to my doctor and we discussed what had happened. I am not sure what happened to the documents, or if the doctor understood the results. However, I think most terms were in Latin, so I suppose she understood the essentials.

Conceptual summary

Hans received unplanned cross-border healthcare. He felt excluded from the decisions taken by professionals, as some of them were made without any explanation or deliberation. In the beginning of the pathway, his preferences were not taken into account, and professionals initially did not clarify the need for diagnostic tests. Later on, the doctor gave him permission to leave "at his own risk," without explaining what that meant. Once discharged, he was expected to organize aftercare and documentation himself.

Handover planned by professional: the story of Marie

I had already known for some time that something was not quite right and had seen several doctors when I received the diagnosis. They told me I required specialist surgery, which could take place in a Dutch hospital about 200 kilometres away, or in Germany, only 30 kilometres away. Besides, "*what was kind of suggested, and I had some doubts about this, was that it would be faster* [in Germany], *so,* [I …] *strongly felt like, I want to get it out of my body as soon as possible, so I don't care how, I'll do that. So then,* [in the Netherlands] *they organized that* [I] *could go* [to Germany]" (Participant 3). All tests were performed in the Netherlands, and as soon as they had scheduled the surgery, I went abroad.

I quickly realized that the German system differed from ours. For instance, *"… we are not used to bringing our own towels, we, I got there without towels* [laughing] *and I should have brought clean towels. … And also, that you have to shower with that red stuff the evening before, and I really thought 'what?' Your hair completely in iodine, … yes, very different. We don't do all that"* (Participant 6). I felt that they could have informed me about this much more in advance. *"You could, for example, … already start to prepare for your stay* [abroad] *… and also for the process that is in front of you. … Very simply, bring your own towels, bring your own soda, your drinks, that stuff, just very simple stuff. … Or that there is a leaflet that says: You'll soon be hospitalized* [abroad], *eh… this pamphlet tells you everything. … Something like that"* (Participant 4).

Anyway, after surgery, I had to stay there for some time. At that point, I believe there was no longer any contact with the Dutch healthcare professionals, even though they had been very involved in the preparations. *"It is really a little like being 'out of sight, out of mind', because there are of course enough patients here that probably require complex*

treatment too... Uh... So yeah, no that, yeah, that feels... Well, it is really like, yeah, who is actually responsible? I think if I would have asked them there, if I would have asked straightforwardly, that they would not really have [had] *an answer to that"* (Participant 3).

Conceptual summary

Marie was involved in the decision to go abroad for healthcare. Her own doctor had informed her about the different treatment options, based on which she decided to go abroad.While her stay had been carefully prepared by professionals in the Netherlands, once abroad, she realized the German system was quite different from what she was used to at home. She felt insufficiently informed about this, which complicated her involvement in her healthcare process. In this vulnerable position, communication with professionals in Germany became increasingly difficult, especially after surgery. Eventually, she felt excluded from the healthcare process and did not know who was responsible for her.

Handover planned by patient: the story of Ellen

I immediately recognized the feeling in my knee. The pain was almost identical to what I had experienced a couple of years before. Therefore, I already knew what I wanted when I visited my family doctor. "*My wife, uh, so that was years ago, … there was a waiting list here in* [the Netherlands] *of three months or four months, she thought that was way too long. … Then* [Belgium] *was recommended to us, so we ended up in* [Belgium]*. We were extremely satisfied with the good man, doctor* [name]*, … so, yeah, when in June I suddenly got pains, … I went to the doctor, 'well', she said, 'we can perform surgery.' I said, 'then I want to, then write me a note for* [Belgium]*'"* (Participant 7).

Of course, some insurance issues had to be settled first. I had to get approval for the entire treatment, which was rather complicated. "*The Dutch health insurance wanted a complete, exact overview of the costs that the* [Belgian] *hospital would incur … I asked the* [Belgian] *hospital to do that but they couldn't. They said there would be so many different small costs, like, all of a sudden you need a blood examination or whatever ….*" (Participant 1). Eventually, the insurance company approved, so I made an appointment with one of the specialists there. I took the patient file my doctor gave me to the specialist. They had a look at it and planned the operation. As I already suspected, everything was organized much more quickly than it would have been in the Netherlands. Besides that, I felt that they really listened to my needs. *"There, they are just warm… … in that sense, it is just a little more people-oriented"* (Participant 5).

The surgery went well, and soon I was back home. As I was still in pain after a couple of weeks, I went back to the doctor. This time I visited a specialist in the Netherlands

because I did not want to travel so far. She decided to take scans again and found some irregularities. I was surprised since I believe they also took scans after surgery and everything seemed fine then. Of course, I had seen both scans, but I could not exactly remember what the Belgian doctor had said about it. After all, I am not a medical expert. *"… None of* [the doctors] *compared them. I had a look at both, but I didn't understand any of it… … and of course, they both spoke a very different language, literally, because one spoke Dutch and the other spoke [French]. I often only understood half of what they said, if at all, you know, sometimes even less. Then it's hard to repeat to the next doctor what the other had said … I think many things got lost really…."* (Participant 1). I was still recovering and it felt like I was expected to take care of many things myself. "*The communication between the different hospitals, … left much to be desired, making you constantly feel: I have to go after it myself. … At one point, I was so sick that I was just not able to handle that sort of stuff, but you are expected to"* (Participant 5).

Conceptual summary

Ellen planned cross-border healthcare herself. She decided to go abroad because she had positive past experiences with healthcare in that country. She organized appointments with professionals and settled insurance issues, without consulting a national contact point for cross-border healthcare. After treatment, complications arose, which put her in a vulnerable position: Although she lacked the translation skills and medical expertise, she felt (and was held) responsible for translating and transferring information regarding her healthcare.

DISCUSSION AND CONCLUSION

Discussion

We crafted three stories relating patients' combined experiences of unplanned cross-border healthcare (Hans) and cross-border healthcare initiated by either the professional (Marie) or the patient (Ellen). Although experiences varied within and across these groups, we found that participants' perspectives overlapped in several ways, regardless of their healthcare pathway. The most important overlaps related to: 1) patients' involvement in the decision-making process, 2) communication with their healthcare providers, and 3) information throughout the healthcare process.

First of all, participants expressed concerns about their involvement in the decision-making process regarding their healthcare. Although participants were sometimes highly involved, for instance in the decision to receive care abroad, in other cases they felt excluded from decisions (e.g., they did not have the opportunity to ask why certain

tests were performed), or they were expected to take the lead in their healthcare (e.g., when asked to translate and transfer information while lacking the competencies to do so). These problems seemed to intensify when patients' illnesses were more severe or when they required acute care.

Such challenges of patient involvement in healthcare (or lack thereof) are no novelty (Vahdat, Hamzehgardeshi, Hessam, & Hamzehgardeshi, 2014). Cross-border barriers such as system, language, and cultural differences, moreover, are known to amplify these challenges (Beuken et al., 2020). Studies on medical traveling have concluded that patients who cross borders are often responsible, for instance for transferring their medical records (Maguire et al., 2016; Verra et al., 2016). Our study confirms these findings, specifying, moreover, that patients who did not plan their healthcare abroad feel excluded from the decision-making process.

Patient involvement has been defined as the "*patient's rights and opportunities to influence and engage in the decision making … through a dialogue attuned to* [their] *preferences, potential and a combination of* [their] *experiential and the professional's expert knowledge"* (Castro, Van Regenmortel, Vanhaecht, Sermeus, & Van Hecke, 2016, p. 1929). In other words, it depends on the extent to which the patient is able, or enabled, to engage in the healthcare process (Thompson, 2007). Involvement should be subject to patients' desires and abilities (Guadagnoli & Ward, 1998). In cross-border healthcare, such conversations about preferences and expectations are complicated by language, system, and cultural barriers, making patient involvement an especially important topic of attention.

Another issue participants commonly encountered were difficulties in communicating with their healthcare providers. Indeed, studies on cross-border healthcare have frequently pointed to challenges of communication, not only between professionals, but also between professionals and patients (Beuken et al., 2020; Footman et al., 2014; Glinos & Baeten, 2014; Groene et al., 2009; Verra et al., 2016). According to Elwyn et al. (2014), professionals should make a deliberate effort to involve patients in their decisions and take the time to consider their preferences. Such deliberate conversations about the healthcare process could offer a solution to the problems that patients encountered in our study. More specifically, if patients and professionals are prepared to have a dialog with each other to discuss preferences when patients cross the border, they may be able to identify and anticipate the potential communication issues that come with international healthcare.

The final point of convergence was that participants lacked information, especially about the organization of cross-border healthcare. Although earlier studies have already

emphasized this shortcoming (Groene et al., 2009; Maguire et al., 2016; Verra et al., 2016), we expected initiatives recently taken by the European Commission to have benefited the participants in our study (van de Steeg et al., 2018). Apparently, this was not the case and this raises concerns, as adequate provision of information about the healthcare process is an important requirement for patient involvement and shared decision-making (Stiggelbout, Pieterse, & De Haes, 2015; Thompson, 2007). Since most patients in our study received little information from their professionals, some sought information themselves. Considering the importance of professionals making deliberate communication efforts (Elwyn et al., 2014), it is not surprising that patients felt that professionals could have helped them to retrieve sufficient information. At the same time, however, professionals, too, feel insufficiently informed and lack control in cross-border healthcare (Beuken et al., 2020). This hypothesis is supported by earlier research, that reported only 12% of the professionals had received information on the management of cross-border care patients (Glonti et al., 2015). These findings underscore the need to provide both professionals and patients with sufficient information.

In conclusion, the three issues raised in this study, albeit no novelty in healthcare, seem to be amplified in cross-border healthcare and handover. To empower patients to be involved in their own healthcare process, these issues should become a topic of conversation between patients and healthcare professionals.

Strengths and limitations

This study has several limitations. First, although cross-border healthcare requires collaboration between multiple stakeholders, including healthcare professionals and insurers, we only investigated patients' perspectives. Second, as we were bounded by the limits of our networks and linguistic restrictions, we only selected participants who spoke Dutch or English, lived in the Netherlands, and/or were of Dutch nationality. Consequently, most participants discussed their experiences from the perspective of the Dutch healthcare system. We are aware that healthcare systems, and people's perceptions thereof, differ largely across countries. On the other hand, we consider the setting in which the study was performed a strength. In terms of international collaboration, the Meuse-Rhine Euroregion truly represents an exemplary region. Third, we acknowledge that the backgrounds of us researchers have shaped our interpretation of the data. Finally, it was beyond the scope of this study to generalize our findings. However, we do believe they may reflect trends in other border regions.

Future research

We see a need for more research on information to guide patients and professionals in cross-border healthcare. Although information for patients already seems to exist, we do not yet know how this information reaches them and how it is interpreted. We welcome further studies into patients' specific information needs in cross-border healthcare. Similarly, professionals seem to be uninformed and possibly unaware of their role in cross-border healthcare. A better understanding of their role in supporting patients in cross-border healthcare may help us to provide them with adequate resources. Lastly, there appears to be uncertainty about patients' responsibility in cross-border healthcare, and professionals may have varying perspectives on patient involvement in decision-making. These varieties are possibly related to cultural differences. We invite researchers to explore cultural or other differences in patient involvement across countries.

Practice implications

The issues that patients in cross-border healthcare face, need addressing. First, patients seeking cross-border healthcare should be more actively informed about such care, preferably by healthcare institutions and professionals. Available information could serve as a starting point. Second, close attention should be paid to professionals' perceptions of patient involvement. Professionals must be made aware of the challenges inherent in cross-border healthcare and of their contribution to patient involvement in the complex process of cross-border handover. Last, the patient stories presented in this study could be used, for instance, in cross-border healthcare and handover training to foster awareness. By promoting patient involvement, both patients and professionals will be better prepared for the challenges of cross-border healthcare and handover.

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CRediT authorship contribution statement

Juliëtte A. Beuken: Conceptualization, Methodology, Investigation, Formal analysis, Writing – original draft, Writing – review & editing. **Mara E.J. Bouwmans:** Conceptualization, Methodology, Investigation, Formal analysis, Supervision. **Daniëlle M.L. Verstegen:** Conceptualization, Methodology, Formal analysis, Supervision. **Diana H.J.M. Dolmans:** Conceptualization, Methodology, Validation, Supervision.

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4

CREATING CROSS-BORDER COLLABORATORS.

Design and evaluation of a workshop on cross-border healthcare for residents in a European border region.

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Submitted

ABSTRACT

Introduction

In European border regions, healthcare providers join forces to make full use of the potential of healthcare. Residents need to be aware of the challenges and opportunities of cross-border healthcare. To increase such awareness, we designed, implemented and evaluated a workshop entitled 'Creating cross-border collaborators' which combined elements of contextual, collaborative and reflective learning. We aimed to understand how this workshop enhanced residents' awareness of the challenges and opportunities of cross-border healthcare.

Methods

Using a mixed-methods approach, we held focus-group interviews with residents (N=16) and surveyed residents (N=13) about their workshop experiences. The workshop was held 3 times for 3 different groups of residents.

Results

In our analysis, we identified the following 4 themes: *1) Attention to cross-border healthcare fostered awareness of its complexity; 2) Real-life examples stimulated recognition of challenges and opportunities; 3) Discussions in interdisciplinary and international groups helped to see different perspectives;* and *4) Reflection made residents think about their own role and perspective.*

Conclusion

According to participating residents, our workshop with elements of contextual, collaborative and reflective learning did improve residents' awareness of cross-border healthcare. Our study highlights the fact that theoretical insights into learning can and should inform the design and evaluation of workshops.

Keywords

Mixed methods; Short education program; Post-graduate education; Design-based research; International healthcare

INTRODUCTION

With rising specialization and centralization of healthcare, we need to make use of medical expertise and resources more efficiently. This call for efficiency extends across national borders, resulting in cross-border healthcare. Especially in border regions, where healthcare providers from different countries are in geographical proximity, cross-border healthcare can be beneficial (Glinos, Baeten, Helble, & Maarse, 2010). In European border regions, healthcare providers join forces, for example to facilitate specialized treatment (Bouwmans et al., 2021) or to support each other in a global crisis such as the Covid-19 pandemic. Additionally, patients can take the initiative themselves to cross borders to a foreign hospital because it offers more specialized care, has a shorter waiting list (Verra, Kroeze, & Ruggeri, 2016) or is closer than the nearest hospital in their own country (Beuken, Bouwmans, Verstegen, & Dolmans, 2021). In reaction to these potential benefits, the European Commission has started to actively promote cross-border healthcare by informing European patients seeking healthcare in other European countries. Additionally, the European Union (EU) proposes and supports regional cross-border initiatives that contribute to the sustainability of regional healthcare systems.

Cross-border healthcare in border regions comes with challenges for both patients and professionals. Earlier research has demonstrated, for instance, that differences in language, systems and culture can complicate the involvement of patients (Beuken et al., 2021; Groene et al., 2009). Similarly, professionals involved in cross-border healthcare may experience language barriers, inconsistencies in task division, and differences in education, policy and culture (Bouwmans et al., 2021; Groene et al., 2009; Jabakhanji et al., 2015). According to a recent study, healthcare professionals are often unaware of such differences and of how these differences can complicate cross-border healthcare (Beuken et al., 2020). When healthcare professionals have incomplete or inaccurate ideas of each other's responsibilities or competencies, their expectations of how tasks should be divided or how patient care should be arranged might be equally wrong (Beuken et al., 2021; Beuken et al., 2020). This may result in incorrect patient handover, which has time and again been associated with patient safety risks (Kripalani et al., 2007; Merten, Van Galen, & Wagner, 2017). When insufficiently considered and deliberated, cross-border healthcare, rather than bringing benefits, can ultimately pose risks.

Previous studies have reported that cross-border healthcare is not sufficiently covered, if at all, in medical training (Beuken et al., 2020; Bouwmans et al., 2021; Glonti et al., 2015). As a result, physicians working in border regions are not prepared when confronted with cross-border healthcare. By introducing cross-border healthcare in resident training,

future physicians might be better able to recognize relevant differences in cross-border healthcare and to deal with the opportunities and challenges that come with these differences.

We designed a workshop for residents in a European border region entitled 'Creating Cross-Border Collaborators'. The aim of the workshop was to foster awareness of the challenges and opportunities that come with cross-border healthcare. The workshop design was based on three learning principles that fit the aim of the workshop: 1) contextual learning, 2) collaborative learning and 3) reflective learning. The first principle, contextual learning, refers to learning that is centred around authentic problems and tasks to stimulate transfer of learning to practice. It allows participants to learn from and for the context in which their knowledge is to be used (Brown, Collins, & Duguid, 1989; Van Merriënboer, Clark, & De Croock, 2002). The second principle, collaborative learning, entails that participants learn from and with each other, by elaborating on each other's input and noticing differences and similarities in perspectives (Dolmans, 2019; Laal & Ghodsi, 2012). The last principle, reflective learning, refers to participants critically questioning their own ideas. Reflection helps participants to see the limitations of their own perspective and recognize missing information (Kolb, 1984; Moon, 2004). Moments of reflection throughout the workshop will help participants to understand, broaden or change their own views on cross-border healthcare. Table 1 shows how we used the said learning principles to design a workshop for future cross-border collaborators.

We designed and evaluated a workshop about cross-border healthcare for residents in a European border region. Our research question was: *'How does the workshop entitled 'Creating Cross-border Collaborators' with elements of contextual, collaborative and reflective learning enhance residents' awareness of the challenges and opportunities of cross-border healthcare?'*

METHODS

Adopting a design-based research approach (Dolmans & Tigelaar, 2012; McKenney & Reeves, 2012, 2021), we designed a workshop for residents that was based on previous research into healthcare professionals' experiences and on theoretical insights into learning. We evaluated the design of the workshop and its contribution to the intended learning outcomes, using mixed methods consisting of concurrent focus-group interviews (Qual) and surveys (Quant).

Setting

The workshop was developed as part of the SafePAT-project, an Interreg V-A project to improve patient safety in the Meuse-Rhine Euroregion. In this region, the borders of Belgium, the Netherlands and Germany meet. Ever since its establishment in 1976, the region has been a pioneer of cross-border healthcare collaborations (euPrevent, 2019). Healthcare professionals in this region are therefore likely to be involved in cross-border healthcare. We held the workshop three times, twice in June and once in November 2020, for groups of residents from a variety of backgrounds (i.e. radiology, anaesthesiology, microbiology, paediatrics, and cardiology). All participants were residents at the Maastricht UMC+, which is located in the heart of the Meuse-Rhine Euroregion.

Residents from the Maastricht UMC+ are all connected to a regional education network in the south-east of the Netherlands, called OORZON. OORZON provides interdisciplinary education to all residents in the region (e.g., workshops about patient safety, organ donation and healthcare costs). The workshop we developed was included in their program as an elective workshop.

Intervention

The workshop was designed by educationalists and healthcare professionals working in the border region and consisted of three parts: an individual preparatory assignment, an online group session and an individual reflection assignment. Both individual assignments were paper-based. The online group session took place in a secure video-meeting environment (Microsoft Teams, version 1.3.00.30874). Each online session was moderated by two trainers with experience in cross-border healthcare in the Meuse-Rhine Euroregion. Table 1 gives an elaborate description of the workshop parts and of how the learning principles mentioned in the Introduction section were incorporated into the workshop format.

Participants

Participants were recruited through OORZON. All residents connected to this network received an email in which the workshops were announced. Considering the interactive nature of the workshop, we allowed a maximum of eight participants per session. Registration for the workshop was on a first come, first served basis. Twenty-one residents signed up for the workshop, one of whom dropped out before the preparatory assignment due to a lack of time, three of whom dropped out before the online session due to sickness or technical issues, and one of whom did not participate in the evaluation research. The 16 participants remaining were all medical residents in various specialties, including anaesthesiology, medical microbiology, neurology, rehabilitation, rheumatology, paediatrics, psychiatry, radiology and surgery.

Table 1. Description of workshop parts and learning principles

	Preparatory assignment *Half an hour; one to two weeks before the online session*	**Online group session** *Two and a half hours*	**Reflection assignment** *One hour; one to two weeks after the online session*
Workshop part description	Participants describe their personal experiences with and perspectives on cross-border healthcare (perceived pros and cons of cross-border healthcare) and reflect on a paper-based cross-border healthcare case from a healthcare professional perspective.	Participants discuss the preparatory assignment and receive information on cross-border healthcare in the border region. They discuss another paper-based case of a patient crossing a border for healthcare. They discuss how they can deal with the challenges and opportunities of cross-border healthcare in their own context.	Participants reflect on what they learnt from the workshop and how this affected their perspectives on cross-border healthcare.
Contextual learning elements	Participants work with personal experiences and a paper-based case.	Participants work with personal experiences, experiences of other participants and a paper-based case.	Participants transfer outcomes of the workshop to their own context.
Collaborative learning elements	N/A	Participants share and discuss personal experiences and perspectives on paper-based cases, and collaboratively think about how to deal with challenges.	N/A
Reflective learning elements	Participants reflect on personal experiences and describe perspectives in cross-border healthcare.	Participants voice personal experiences with and perspectives on cross-border healthcare and reflect on differences.	Participants reflect on whether and how the workshop changed their perspective on cross-border healthcare.

They had all started training between 2014 and 2020. Five, four and seven residents attended the first, second and third workshop, respectively.

Instruments

Data were collected by means of surveys and focus-group interviews. The respective data collection instruments were iteratively constructed by four authors (JB, DV, MB and DD). The purpose of the survey was to get an overall impression of how participants experienced the workshop and of how the learning principles enhanced or hindered their learning, learning outcomes and the relation between them. The survey consisted of 16 closed-ended items to be rated on a 5-point Likert scale, including an option to elaborate. Items reflected the three principles (e.g., '*The different backgrounds of participants helped me see cross-border healthcare from different points of view.*' which reflected collaborative learning). See Appendix 1 for an overview of the survey items. The purpose of the focus-group interviews was to gain insight into participants' perceptions of the workshop design. Questions addressed the extent to which participants felt that the three learning principles enhanced or hindered their awareness of cross-border healthcare (e.g., '*Did the discussion give you new ideas about challenges and opportunities of cross-border healthcare?*' which reflected collaborative learning). See Appendix 2 for the semi-structured focus-group interview guide.

Procedure

The workshop was held three times, twice in June and once in November 2020. We informed participants about the evaluation survey and interview at registration. Two weeks prior to the online session, participants received the preparatory assignment and a letter informing them about the research procedure. Before the online session took place, they were also asked to give informed consent. Directly after this online session, one of the trainers (DV) conducted the focus group interviews. The focus group interviews took approximately fifteen minutes and were audio-recorded and transcribed non-verbatim by the first author (JB). The surveys were conducted directly after the reflection assignment, one to three weeks after the online session. Surveys were conducted using a licensed online survey tool (Qualtrics).

Analysis

To analyse the survey data, we computed descriptive statistics (means and standard deviations) using Excel, version 16.46. The focus-group-interview data were analysed following the procedure set out by Braun and Clarke (2006): 1) familiarize yourself with your data, 2) generate initial codes, 3) search for themes, 4) review themes, 5) define and name themes, and 6) produce the report. Three authors (JB, MB and SH), all of whom were not involved as trainers, individually analysed the interview transcripts using the

three learning principles and the intended learning outcomes as sensitizing concepts. They concluded this process by discussing their findings to refine the conceptual description.

Reflexivity

The authors have varying academic backgrounds and experiences that influence their perspectives. JB is a qualitatively trained researcher with a degree in Health Sciences. MB is a quantitatively trained researcher with a degree in Psychology. Together, they have interviewed over 50 professionals and patients about their healthcare experiences in border regions. SH is an educationalist with a degree in Learning Sciences. LV is a specialist in anaesthesiology, intensive care medicine and emergency medicine, who, in addition to being a medical education specialist and a researcher in patient safety, works as a cross-border healthcare professional in the Euroregion herself. She was a trainer for two of the workshops. DD is an educational scientist who has researched small-group teaching in medical education from a cognitive, social, and, notably, a student and supervisor perspective. Finally, DV is an educational and cognitive scientist who has conducted research in the field of instructional design and international education. She was a trainer in all three workshops.

Ethical considerations

The study proposal was reviewed and approved by the Maastricht University Health, Medicine and Life Sciences Ethics Review Committee (ID: FHML-REC/2020/005/ Amendment 2).

RESULTS

The focus-group interviews and surveys were concurrently analysed. Whereas the survey data gave us a general impression of the workshop, the focus-group data helped us to understand *how* and *why* the design of the workshop and the underlying learning principles contributed to cross-border healthcare awareness. We will therefore first present the survey data and then report the focus-group interview data.

Thirteen out of 16 respondents completed the survey. Table 2 gives an overview of the survey results. Three participants made use of the open fields to provide additional comments.

The survey results show that, according to participants, the workshop created awareness of both the challenges (M=4.54, SD=0.50, 1–5 scale) and opportunities (M=4.00, SD=0.55) of cross-border healthcare. Participants perceived the examples as realistic (M=4.08, SD=0.47) and as contributing to more awareness (M=3.85, SD 0.86; M=3.69, SD= 0.72). They appreciated each other's diverse backgrounds in the workshop (MM=4.62, SD=0.62) and felt the discussions with others made them more aware of the challenges and opportunities of cross-border healthcare (M=4.23, SD=0.42). Participants gave slightly lower scores for the extent to which the workshop helped them to develop their own perspectives (M=3.77, SD=0.80) or changed their views on cross-border healthcare (M=3.54, SD=0.84).

Across the focus-group interviews, we identified four themes that described participants' perceptions of the workshop: 1) Attention to cross-border healthcare fostered awareness of its complexity, 2) Real-life examples stimulated recognition of challenges and opportunities, 3) Discussions in interdisciplinary and international groups helped to see different perspectives, and 4) Reflection made residents think about their own role and perspective. These themes were related to the intended learning outcome (Theme 1) and the learning principles (Themes 2–4).

Theme 1 – Attention to cross-border healthcare fostered awareness of its complexity

Participants said that the workshop led to a better understanding of the challenges and opportunities that come with cross-border healthcare: "*I really take with me … the awareness of the complexity of the cross-border collaborations. … I think there are many opportunities to make things better.*" (Participant 5, Session 3) They realized that cross-border healthcare can be challenging, but also beneficial when executed properly:

> First, I thought it wasn't particularly a good thing because of the complications that can occur and the lack of information you sometimes have …, but now I feel that if we, if you do it right, then it's really something that … can actually be a positive thing. (Participant 1, Session 1)

As participants talked more about their awareness, they expressed a wish to invest more time in solutions to overcome challenges. During the workshop, "*the majority of the time was more about the challenges …. Maybe the next step is to give more time to speak about the solutions that we can use for this sort* [of] *challenges.*" (Participant 3, Session 3)

Table 2. Summary of survey data (N = 13)

1 = completely disagree; 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = completely agree	
	Mean (SD)
Awareness of cross-border healthcare	
The workshop created awareness of the challenges of cross-border healthcare.	4.54 (0.50)
The workshop created awareness of the opportunities of cross-border healthcare.	4.00 (0.55)
Contextual learning	
The workshop is relevant to my own work.	3.77 (0.70)
Examples (i.e. paper cases) in the workshop were realistic.	4.08 (0.47)
Examples in the workshop helped me see possible challenges of cross-border healthcare in my own work.	3.85 (0.86)
Examples in the workshop helped me see possible opportunities of cross-border healthcare in my work.	3.69 (0.72)
Collaborative learning	
The different backgrounds of participants helped me see cross-border healthcare from different points of view.	4.62 (0.62)
The workshop stimulated discussion about cross-border healthcare between participants.	4.69 (0.46)
The workshop made me think about cross-border healthcare from different angles.	4.44 (0.50)
Sharing and discussing with others made me aware of challenges and opportunities of cross-border healthcare.	4.23 (0.42)
Reflective learning	
The workshop broadened my awareness of cross-border healthcare.	4.38 (0.49)
The workshop helped me to develop my own perspective on cross-border healthcare.	3.77 (0.80)
The workshop changed my view on cross-border healthcare.	3.54 (0.84)

Ultimately, participants felt more prepared for cross-border healthcare. They reported that the workshop made them see how they could deal with and learn from cross-border healthcare: *"Next time I see a patient with … this problem, maybe I would not have all the solutions but at least I can talk to people who maybe will have a good input and a better solution …."* (Participant 1, Session 3)

Theme 2 – Real-life examples stimulated recognition of challenges and opportunities

Participants felt that sharing and discussing real-life examples of cross-border healthcare in the workshop was helpful to see both the challenges and opportunities of cross-border healthcare. They were of the opinion that the examples provided in the workshop were recognizable and stimulated discussions: *"That was a really similar case I had recently, so… Yeah, I could imagine it to happen … Then you have certain key points you can focus on and discuss further …."* (Participant 3, session 1)

Although some participants had not yet experienced cross-border healthcare in practice, they were still able to recognize the examples: *"The example … cannot be completely traced back to* [my specialty]*…, but I do recognize the problems that arise."* (Participant 3, Session 2) Some participants noted that it might be difficult to link what they had learnt in the workshop to practice, especially those who had just started training or had little patient contact in their specialty: *"As the microbiologist … it is more difficult to arrange something for a patient, because we don't see a patient."* (Participant 6, Session 3) For these participants, the examples were especially useful in helping them prepare for practice: *"Thanks to … the case discussion, if you encounter this problem in daily practice, I think I am a little bit more prepared for this situation."* (Participant 1, Session 3)

However, participants also felt that the paper-based cases were all quite similar. They therefore proposed to extend the set of cases to make it more variegated. This would allow them to explore more authentic situations, thereby enhancing the transfer of learning to practice: "*So maybe the case already helps you to go to a certain point, but if you would talk about a different case, you would have a completely different discussion; that is also possible."* (Participant 3, Session 1)

Theme 3 – Discussions in interdisciplinary and international groups helped to see different perspectives

Participants agreed that attending the workshop with an interdisciplinary group of residents added value. In their view, the group discussions made them *"see …* [cross-border collaboration] *from* [the perspective of] *different specialties"* (Participant 3, Session 2) which offered *"…more depth. If I were to discuss this with my colleagues only, I think we*

would say a bit of the same things." (Participant 3, Session 2) Participants also appreciated the fact that the online session was facilitated by trainers from different backgrounds and nationalities. This made them feel more comfortable communicating with colleagues from across the border:

> This is the first time that I speak directly, through video communication, with a colleague across the border. … This is a direct example of how communication might be easier. … It will be much easier for me to pick up the phone and talk to her or video call her. (Participant 4, Session 1)

Notably, participants' suggestions for improvement of the workshop design largely concerned collaborative aspects. For instance, they suggested to "*invite people from the same education level"* (Participant 3, Session 1) and from other countries to the workshop so that they could *"get to know them and also see their experience, and to have different views from them."* (Participant 3, Session 1)

Theme 4 – Reflection made residents think about their own role and perspective

As participants reflected on cross-border healthcare, some contemplated their own role and the responsibilities they had or did not have: "*I often hear "yes, but this is not my responsibility, I am not certified to do that", but I still have to solve it. … you may not be able to solve it yourself; you still have to find someone who will do it for you."* (Participant 1, Session 2) In these reflections, some of the participants considered small things that they themselves could do in cross-border healthcare. One of the participants, for instance, realized that informing patients about practical differences between hospitals, such as the availability or absence of fresh towels, could help: "*You sometimes forget what is important for patients when they are in hospital. … I mean, something as trivial as towels becomes important and it's that easy sometimes."* (Participant 1, Session 1) Although naming such possible actions was easier for some participants than for others, most shared the view that the workshop had expanded their horizon: *"You have less blinders. … You can look a little wider or so at certain things."* (Participant 1, Session 2) Yet, some participants who had little experience with cross-border healthcare had difficulties reflecting on their own role: *"It was difficult for me to reflect on the kind of stages* [in which] *I can be beneficial, I can be of help, and on how can we improve that with my voice?"* (Participant 6, Session 3)

DISCUSSION

The results of our study clearly suggest that the workshop entitled 'Creating Cross-border Collaborators' made residents more aware of challenges and opportunities of cross-border healthcare. Both qualitative and quantitative data demonstrated that all three learning principles helped raise participants' awareness of cross-border healthcare. Working with examples of cross-border healthcare (contextual learning) helped participants to recognize challenges and opportunities in relevant situations. Moreover, being able to discuss cross-border healthcare with peers (collaborative learning) helped them to see different perspectives. Most participants felt that the reflection assignment made them contemplate their own role in delivering cross-border healthcare (reflective learning). For these reasons, we conclude that the workshop, indeed, served its purpose.

Although the three learning principles contributed to participants' learning in their own unique way, our results suggest that there was strong cohesion among them. For example, contextual learning and collaborative learning were mutually reinforcing, as discussing authentic cases in multidisciplinary groups helped participants to recognize how different aspects of a case could be relevant to different stakeholders. Similarly, hearing about the perspectives of others on authentic cases helped participants to recognize and expand their own role and perspectives, hence prompting reflective learning. Although separate appreciation of the integrated learning principles offered helpful insights into how the different workshop elements enhanced learning or how they could be strengthened, we should not forget that their true power lies in their mutual interplay.

Despite residents' positive views about the workshop, they also offered suggestions for further improvement of the workshop design. First, the workshop could benefit from more varied examples of cross-border healthcare. Participants noted the lack of diversity in examples, a suggestion that ties in with earlier research by Van Merriënboer et al. (2002) who underscored the importance of using a varied set of examples to help learners recognize so-called *generalities*, recurring principles, in the real world. By presenting learners with a variety of authentic examples that illustrate these generalities, we equip them to transfer these generalities to their own context. Consequently, the use of similar cases in the workshop may have inhibited participants' ability to recognize general principles in the real world.

Second, including participants with different nationalities and professions could strengthen the workshop. Participants applauded and initiated collaborative learning

in the workshop. Having a variety of backgrounds, they felt they could learn from each other's perspectives, even if their personal experience was limited. Consistent with a studies by O'Keefe, Henderson, and Chick (2017) and Robben et al. (2012), the workshop supported interactions that clarified different perspectives, encouraging participants to learn from professionals from other disciplines. Since cross-border healthcare is an interprofessional endeavour, in which an interprofessional group of, for instance, administrators, nurses, paramedics and physicians collaboratively organize healthcare, a next step could be to provide the workshop in international *and* interprofessional groups. Learning with and from different professions and nationalities might help professionals to see more opportunities to enhance patient care with others. With such a diversified participant group, we should consider challenges similar to those of cross-border healthcare, such as differences in language, education and culture.

Last, reflection on cross-border healthcare requires a certain amount of experience with it. We noticed that critical reflection was challenging for some participants. Previous studies have linked such difficulties with reflective learning to the extent to which learners see value in what they learn (Mann, Gordon, & MacLeod, 2009). As Sandars (2009) stated: *"The experience must be interpreted and integrated into existing knowledge structures to become new or expanded knowledge. Reflection is crucial for this active process of learning"* (Sandars, 2009, p. 686). It might be plausible to assume that dealing with the complexity of cross-border healthcare required a certain level of experience or proficiency that some residents did not yet have. Nevertheless, regardless of their experience, residents did appreciate the complexity of cross-border healthcare and how it required deliberation with other stakeholders.

Our study has a number of strengths. First, we used insights from theory (i.e. literature on how to design education based on learning principles) to analyse, design and evaluate a workshop. The results not only offer suggestions for practice improvement, but also give impetus to reflection on theory. Second, the mixed-methods approach helped us to understand what aspects of learning about cross-border healthcare participants found most helpful and why. Last, many physicians in and out of border regions will come to deal with cross-border healthcare. This study has shown that we *can* prepare them for the complexities that come with it.

The study also has limitations. First, we used a relatively small sample size, especially for the quantitative part of this study. Second, the workshop was of short duration and was offered in a specific context (the Meuse-Rhine Euroregion) for a specific target group (residents). Consequently, the learning principles might require a different application to the tasks or goals when used in different contexts or for different target

groups. Lastly, we did not monitor participants' long-term learning, so we do not know whether and how our workshop, or, better yet, a series of these workshops in which residents discuss relevant cases, will help them to navigate cross-border healthcare.

The workshop designed and evaluated in this study is certainly not the solution to all challenges of cross-border healthcare. However, we strongly believe it should be part of a continuous professional development trajectory for regional healthcare providers. Assuming that good cross-border collaboration requires more practice than a short workshop can offer, future research on cross-border healthcare education should focus on the integration of such small initiatives into the bigger picture of a professional development trajectory. This would call for longitudinal research exploring how healthcare professionals learn to navigate regional healthcare networks, and how education could support this process. Additionally, further research is necessary to determine how adaptations to other contexts and target groups might affect the process and outcomes of the workshop.

Our study emphasizes the need for attention to complex situations such as cross-border healthcare in postgraduate specialty training. A variety of authentic examples can help raise awareness of the challenges and opportunities, even if residents have little experience with cross-border healthcare. As cross-border healthcare is a collaborative effort, it should be taught in a collaborative setting so that participants can learn from and with each other. Furthermore, our study highlights the merits of a thoughtful design and evaluation of workshops. Even when workshops address a very specific topic, broad theoretical insights into learning can and should inform their design and evaluation.

Declaration of conflicting interests
The authors declare that there is no conflict of interest.

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APPENDIX 1
SURVEY

The following questions are part of the evaluation.

Answers to these questions are for research purposes as described in the information letter. If you do not wish to participate in the evaluation of this study, leave all questions blank. Skip to the end of the survey to submit your reflection assignment.

The workshop entitled 'Creating Cross-Border Collaborators' consisted of a preparatory assignment, an online session and a subsequent reflection. In the following questions, please consider all components of the workshop.

Please indicate your agreement with the following statements. (Completely disagree – Disagree – Neither agree nor disagree – Agree – Completely agree)

1) This workshop was interesting.
2) The combination of a preparatory assignment, an online session, and a subsequent reflection contributed to learning
3) This workshop taught me something new.
4) The workshop created awareness of the challenges of international healthcare.
5) The workshop created awareness of the opportunities of international healthcare.
6) The workshop was relevant to my own work.
7) Examples (i.e. paper cases) in the workshop were realistic.
8) Examples in the workshop helped me see possible challenges of international healthcare in my own work.
9) Examples in the workshop helped me see possible opportunities of international healthcare in my work.
10) The different backgrounds of participants helped me see international healthcare from different points of view.
11) The workshop stimulated discussion about international healthcare between participants.
12) The workshop made me think about international healthcare from different angles.
13) Sharing and discussing with others made me aware of challenges and opportunities of international healthcare.
14) The workshop broadened my awareness of international healthcare.
15) The workshop helped me to develop my own perspective on international healthcare.
16) The workshop changed my view on international healthcare.

APPENDIX 2
FOCUS-GROUP INTERVIEW GUIDE

1) We used real-life examples and your personal experiences. (contextual learning)
   a. How do these examples relate to your own experiences?
   b. Do you think you would be able to apply what you learnt to your own practice?
      If so, give an example and explain why. If not, why not?

2) During the online session, you discussed cross-border healthcare with your peers. (collaborative learning)
   a. Were you able to share and discuss differences in ideas and experiences of cross-border healthcare with others?
      Why or why not?
   b. Did this discussion give you new ideas about challenges and opportunities of cross-border healthcare?

3) Throughout the workshop, you reflected on your own ideas of cross-border healthcare. (reflective learning)
   a. How did this workshop help or hinder you in developing your ideas on cross-border healthcare?
      (distinction between individual vs group reflection)
   b. Have your ideas of cross-border healthcare changed?
      What led to this change?

4) What tips and tops do you have?

5

MADE IN CONTEXT.
Expert evaluation of an educational intervention outline aimed at developing a shared understanding of cross-border healthcare.

J.A. Beuken, M.E.J. Bouwmans, D.H.J.M. Dolmans, F.M. Hoven & D.M.L. Verstegen

Submitted

6

GENERAL DISCUSSION

RESEARCH AIMS

With a regional approach to health and healthcare, professionals and patients will cross borders to make use of expertise and facilities in other countries. Cross-border healthcare offers opportunities, but can also be challenging due to differences between countries. We identified two gaps in existing research about cross-border healthcare. First, although previous studies give an indication of the challenges of cross-border healthcare in general, little research is available on cross-border healthcare and international handover from a stakeholder perspective, and on practical needs of the stakeholders involved in cross-border healthcare in border regions. Second, healthcare professionals are not adequately prepared for cross-border healthcare, and little is known about appropriate ways to learn about cross-border healthcare challenges and opportunities. Cross-border healthcare is a complex matter that should be supported by practice and theory, or evidence-based education. We needed to gain insight in how to design education to support healthcare professionals with challenges and opportunities of cross-border healthcare. These two matters resulted in two main research questions we aimed to answer in this thesis:

1) What are perspectives and needs of healthcare professionals and patients in cross-border healthcare in a European border region?
2) How can educational interventions designed with practical needs and theoretical insights in mind, support cross-border healthcare?

MAIN FINDINGS

Part 1 – Analysing needs

As we described in **Chapter 2** and **Chapter 3**, there is a variety of situations in which cross-border healthcare takes place. In planned care situations, patients and/or professionals make a conscious decision to cross borders. In unplanned care situations, there is an acute need for cross-border healthcare (e.g., injuries after an accident). In some of these situations, cross-border care happens ad-hoc, but in other situations, there is an ongoing and structural collaboration across the border, usually focusing on a specific patient group. In these settings, cross-border care happens regularly.

In **Chapter 2**, we identified three settings with ongoing collaborations and interviewed 43 healthcare professionals involved in these settings. We found that they have generally positive attitudes towards cross-border healthcare. This attitude is based on the idea that cross-border healthcare benefits patients. Still, these healthcare professionals

struggle with a lack of control over cross-border healthcare situations. They explain that the many differences that exist between 'us' and 'them' (their colleagues across the border), challenge handovers and collaborations. Challenges they mention, relate to information transfer, language barriers, task division and education, policy and financial structures and cultural differences. When professionals have personal contact with their cross-border colleagues, they seem to be able to adapt to differences and handle challenges. Professionals propose that protocols, collaboration agreements and personal contact could help. We concluded that shared understanding of cross-border healthcare is important for good collaboration. Personal contact around meaningful activities like training and case discussions, could contribute to such shared understanding.

In **Chapter 3**, patients in cross-border healthcare, in both planned and unplanned situations, described experiences full of cobblestones. We interviewed eight patients about their personal experiences with cross-border healthcare and constructed three patient stories to describe these experiences. In these stories, we identified three recurring issues. Patients describe problems with involvement, communication with healthcare professionals, and information throughout the healthcare process. These issues are no novelty in healthcare. However, we found that these issues are amplified by cross-border differences in healthcare. Thus, cross-border healthcare calls for special attention to professionals' and patients' mutual expectations in healthcare.

We concluded that professionals and patients both notice a number of cross-border differences in healthcare. Both groups experience challenges and opportunities of cross-border healthcare, and articulate a need to be aware of differences and have a shared understanding of cross-border healthcare.

Part 2 – Designing and evaluating educational interventions

With the needs of professionals and patients in cross-border healthcare in mind, we designed and evaluated two educational interventions to support cross-border healthcare. With both interventions, described in **Chapter 4** and **Chapter 5**, we wanted to strengthen awareness and shared understanding of cross-border healthcare among healthcare professionals. Next to that, we wanted to stimulate healthcare professionals involved in cross-border collaborations to think about ways to improve cross-border healthcare in their *own* practice. These aims were informed by the earlier found divergence in cross-border healthcare situations and learning needs of healthcare professionals. We identified three learning principles that are common in educational theory about learning from and for specific settings: authentic learning, collaborative learning (Chapter 4) or team learning (Chapter 5), and reflective learning.

In **Chapter 4**, we designed a workshop for residents (in Dutch called AIOS) from different specialties on the Dutch side of the border. Participants discussed authentic cross-border healthcare cases from professionals' and patients' perspectives, and personal experiences with cross-border healthcare (authentic learning). The participating residents *did not* collaborate with each other in cross-border healthcare. However, by hearing each other's' different examples, experiences and perspectives, they could *collaborate to learn* about cross-border healthcare. Hence, we applied *collaborative learning* in this workshop. Next to that, they were stimulated to reflect on their own practice and think of ways in which they could contribute to the improvement of cross-border healthcare (reflective learning). According to participants, discussions in interdisciplinary groups helped them to see different perspectives on cross-border healthcare. Examples from cross-border healthcare practice, including patient narratives from Chapter 3, helped them to recognize challenges and opportunities. Reflection stimulated participants to think about their own role in and perspective on cross-border healthcare. Some participants, those with more experience, also expressed that they felt better prepared and came up with concrete ideas about how they could better support cross-border care themselves. They noted that doing such a workshop with international groups of residents would help them to learn more about cross-border differences in healthcare. We concluded that our workshop with authentic, collaborative and reflective learning made residents more aware of cross-border healthcare differences.

In **Chapter 5**, we designed an intervention for healthcare professionals involved in existing cross-border healthcare collaborations. In this intervention, professionals would discuss the challenges and opportunities they experienced in their own collaboration (authentic learning). In contrast to the target group in Chapter 4, these healthcare professionals *do* collaborate in cross-border healthcare. The goal of this intervention, therefore, was to *learn to collaborate* with involved professionals (being nurses, doctors and paramedics from both countries). Hence, we applied *team learning* in this workshop. Next to that, professionals would be stimulated to reflect and think of ways to improve their own collaboration (reflective learning). We evaluated an outline of this intervention with experts in education and healthcare. Most experts felt that the design of the educational intervention was appropriate for the purpose of the workshop. However, the way in which the principles take shape in an intervention must be adapted to contextual differences. Contextual factors (e.g., which professions are involved in a specific cross-border healthcare situation) could impact the intervention (e.g., inviting participants from different professions) and underlying learning principles (e.g., how participants from different professions learn with, about and from each other). Furthermore, experts stressed the importance of a safe learning climate. They emphasized that creating a safe climate can be difficult in the interprofessional and international target group

we proposed for the intervention. Respondents pointed to the complexities of not only different languages, but also different professions and cultures that come together in the intervention. Open discussions could be challenging in these diverse groups because of hierarchical relations between participants. Group facilitators that attend to these dynamics can help participants to take control of what and how they learn together.

We concluded that education with authentic, collaborative or team, and reflective learning principles can support awareness of cross-border differences in healthcare, and support a shared understanding of cross-border healthcare. However, the same differences that challenge cross-border collaborations (e.g., language, hierarchy, culture) also pose challenges for healthcare professionals to learn from, about and with each other. Furthermore, in order to meet specific needs of healthcare professionals, and the unique challenges and opportunities of different situations, educational interventions must always be adapted to the context. There is no one-size-fits-all educational solution for cross-border healthcare.

THEORETICAL IMPLICATIONS

The main findings of this thesis offer new insights into existing research in the field of educational design. We discuss four insights that could be taken into consideration in future research on the design of education: 1) international differences challenge learning in cross-border healthcare, 2) cross-border collaborators learn in a landscape of different practices, 3) educational interventions for cross-border healthcare should be adapted to specific needs, and 4) to learn in cross-border healthcare, we need the perspectives of patients.

International differences challenge learning in cross-border healthcare.
In discussions about cross-border healthcare challenges and opportunities, as we envisioned in the intervention proposed in Chapter 5, professionals would be directly confronted with international differences. For example, professionals may not be able to (fully) understand each other because of the different languages they speak, they may be confronted by the notion that their professional namesake has an entirely different role and tasks, or they may experience different hierarchical dynamics between healthcare professionals. Whereas awareness of such differences was one of our objectives, these international differences can also challenge learning. In addition, previous research tells us that traditional barriers between professions pose challenges for learning, too (Hall, 2005). When such interprofessional barriers intersect with international barriers, their combinations will challenge learning in educational interventions even more. For

example, professionals with less international experience may not be as fluent in foreign languages, which makes it harder for them to express feelings like insecurity. Speaking through a translator – a seemingly obvious solution – may slow down and thereby hinder communication about personal experiences. Also, professionals (e.g., nurses) from one country may be more experienced or feel more comfortable with reflection than professionals from another country, because reflection assignments were more present in their undergraduate education. Such differences in experience with reflection, challenge equal contributions from different participants in discussions (Clark, 2009), an essential part of our interventions. Ultimately, the same differences that challenge cross-border healthcare can challenge professionals from different countries to learn together in cross-border healthcare.

Cross-border collaborators learn in a landscape of different practices.

In cross-border healthcare, there are essentially two levels of collaboration: 1) on a national level, between healthcare professionals on one side of the border, and 2) on an international level, between healthcare professionals across the border. In principle, the latter could be seen as collaborating in a cross-border team that is jointly responsible for the patient's journey (in line with patients' expectations described in Chapter 3). Essentially, professionals involved in cross-border collaborations share common goals and make shared efforts to patient care, and thus work as one team (Xyrichis & Ream, 2008). Therefore, in Chapter 5, we designed an educational intervention informed by team learning principles (Van den Bossche, Gijselaers, Segers, & Kirschner, 2006). Reasoning from this principle, the healthcare professionals who share care for their patients would need to understand what contributions different people have to their shared goal, to adapt their own expectations and contributions accordingly (Cannon-Bowers, Salas, & Converse, 1993). Learning together with the people they work with, we reasoned, would improve collaborations.

To learn to collaborate as a team, however, healthcare professionals have to identify as part of a team. The interviews in Chapter 2 suggested that these professionals primarily felt part of their local team and felt responsible for patients until handover to the 'other side'. They referred to healthcare professionals on the other side of the border as 'them' and 'they', often did not know them personally, and did not have much insight in how healthcare was organized across the border. They seem to work as separate teams on each side of the border, connected by the patients that travel between them. Consequently, even though they have characteristics of a team, they may not identify as one which will inhibit them to learn as a team (Meeuwissen, Gijselaers, Wolfhagen, & Oude Egbrink, 2020). The lack of team identity in cross-border healthcare is not surprising. As stated in the first point of the discussion, the many differences

between professionals from different countries may already challenge their ability to constructively discuss issues. Moreover, professionals in cross-border healthcare often *literally* do not see their work as a team. Due to the physical distance, patients are handed over on paper or on the phone, or not at all (Bouwmans et al., 2021). Therefore, we proposed our interventions would be an opportunity for healthcare professionals to meet each other, talk about how their work connects, and learn with and from each other. However, if professionals do not identify as a team in practice, they may not learn as a team, and team learning principles may not apply. Consequently, our approach to cross-border healthcare 'teams' needs to be reconsidered.

An alternative approach to working and learning together has been seen in developments around learning in communities and landscapes of practice (often referred to as CoP and LoP). According to Wenger (1999), communities of practice are characterized by social connections and mutual engagement (community), joint enterprise (domain) and a shared way of doing things (practice). A landscape of practice describes connections between different communities of practice, which happens when people cross community boundaries (Wenger-Trayner, Fenton-O'Creevy, Hutchinson, Kubiak, & Wenger-Trayner, 2014). By crossing boundaries, people from different communities of practice could learn about each other's community, domain and practice, and see how they are of value to one another. This connects to our effort to bring together healthcare professionals who are of value to each other. Even though they might not directly work together, they can still learn together. Wenger-Trayner et al. (2014) point out that people might be resistant to cross boundaries of their own community of practice into a landscape of different practices. It may be seen as undermining the value of one's own community of practice (Hodson, 2020). As this may also be the case in cross-border healthcare, it is important to emphasize reciprocity throughout cross-border collaborations. Approaching learning in cross-border healthcare as learning in a landscape of different practices, can help us to understand how professionals from different countries can learn from, about and with each other, and how they can improve collaboration.

Educational interventions for cross-border healthcare should be adapted to specific needs.

Throughout this thesis, we saw that cross-border healthcare comes in many shapes and sizes, and there are many contextual differences between situations. Sometimes, cross-border healthcare is an ongoing collaboration between befriended healthcare professionals, and other times, it is a sudden solution for an urgent healthcare need. Consequently, each cross-border healthcare situation will have specific needs for improvement. In our interventions, we attended to the authenticity of each situation by letting participants use their own situation as input for learning (Brown, Collins, &

Duguid, 1989; Van Merriënboer, Clark, & De Croock, 2002). They were to bring their own examples of cross-border healthcare and discuss shared experiences. However, we found that for participants to learn from authentic situations, the educational intervention itself may need to be adapted to the context in which is it implemented.

To make appropriate adaption for different situations, education should be designed in iterations, attending to specific needs while preserving the design features proven to stimulate learning (Cianciolo & Regehr, 2019). For example, our principle that all stakeholders in cross-border healthcare collaborations should be involved, may translate to an intervention with administrative staff, nurses, paramedics and physicians in one setting, while in another setting only physicians and nurse practitioners join. Similarly, the principle that all stakeholders need to feel safe to share their experiences, as elaborated in the first discussion point, may call for little or no preparation in one setting, but require extensive preparation in another. Such adaptions require close collaboration between those who design education and those for who it is intended. This adaption to specific needs also allows education to become part of a continuous process of improvement. Healthcare professionals could not only shape the intervention, but also request or initiate it when they believe it is necessary, repeating it based on emerging needs. By balancing between allocating explicit resources for learning, and facilitating collaborators to determine their own needs (Akkerman, Petter, & de Laat, 2008), educational interventions have a better chance to make impact in practice.

To learn in cross-border healthcare, we need the perspectives of patients.
In this thesis, we have learnt that patients have a unique perspective of cross-border healthcare. They experience healthcare on both sides of the border and experience differences more directly than healthcare professionals do. We found that patients can describe explicit issues and point out what needs to be improved when sharing their personal experience. Given that patients are both an important stakeholder and a valuable source of information, patient perspectives should have a central role in learning to collaborate across borders.

To engage patients in learning is an art in itself. In response to this finding, we used cases written from patients' perspectives as input for discussions about cross-border healthcare in the interventions. However, this 'use' of patient perspectives in education is often referred to as tokenism (Arnstein, 1969). In actual participation, patients become interactive allies in learning, and have decision-making power (Rowland et al., 2019). In cross-border healthcare, this would encompass that patients help to recognize strengths and weaknesses, and to identify learning needs. Careful deliberation between patients and healthcare professionals can serve as a vehicle for patient participation

(Elwyn et al., 2014), but in some situations, we could take it one step further. When we approach patients as a full-fledged stakeholder, we can also ask them to contribute to or participate in educational interventions, so they can take part in discussions that lead to improvement.

When we attempt to engage patients in education and learning for cross-border care, we need to consider some pitfalls. First, it is important to reflect on the dependency relationship between patients and healthcare professionals. Patients who still depend on healthcare professionals might downplay their own experiences. Second, the patients who participate can share only their personal experiences. Even if we strive to include a diverse group of patients, some will not be able to participate, for example because of a lack of time, awareness, energy, or other resources. Thus, the heard perspective may not be representative for an entire population (Rowland & Kumagai, 2018), and should be complemented with experiences of patients who are unable to directly participate. Third, healthcare professionals may find it challenging to see their patients as partners in learning, especially when this is not yet common practice, or even goes against cultural-historical norms. Literature on partnerships between teachers and students, a relationship somewhat comparable to that between professionals and patients, stresses that people need to redefine assumptions about their roles and responsibilities, which can lead to insecurity (Könings, Mordang, Smeenk, Stassen, & Ramani, 2020). Patient participation in cross-border healthcare education requires careful preparation of both patients and professionals.

STRENGTHS AND LIMITATIONS

The research in this thesis has several strengths and limitations. A strength of our research is that it was conducted in the Meuse-Rhine Euroregion, a region known for its pioneering position in cross-border healthcare collaborations. We were able to build on the collective expertise in the region, and contribute to its growth. Second, we involved and closely collaborated with various stakeholders (patients, nurses, paramedics, doctors, administrative staff, managers, educationalists etc.) in the entire project and in our different studies. This made our research comprehensive and strengthened the impact it had on various stakeholders in different countries. Third, research, education and practice were intertwined. We used theoretical insights and practical experiences in the design of our educational interventions, which resulted in relevant outcomes for both cross-border healthcare practice and theoretical understanding of the impact of context on the learning principles we applied. There are also limitations. Our first intervention for residents was only of short duration and took place online with a small

number of voluntary participants. These participants perceived that they learned from the intervention, but we did not investigate long-term impact on practice. Second, we did not implement our second intervention for healthcare professionals (due to a virus you may have heard of). While our expert evaluation study strongly suggests that the design is appropriate and can be of value, we did not investigate its impact on cross-border healthcare. Third, although we collaborated with stakeholders from all three countries in the border-region, a Dutch perspective on healthcare predominates this thesis. Most of the experiences came from Dutch patients and professionals, and were analysed mainly by researchers raised in Dutch healthcare traditions. This has influenced the research presented in this thesis.

FUTURE RESEARCH

The reflections on our findings and limitations of the current research offer a number of directions for future research. First, we can further investigate how healthcare professionals in cross-border healthcare (can) learn together, starting with investigating the impact of the educational interventions we designed on cross-border healthcare. The framework of landscapes of practice could help to interpret how these interventions contribute to collaborative learning and professionals' navigation in this landscape of practice. Second, we could observe cross-border collaboration in practice, and investigate the impact of more continuous processes of learning, for example with longitudinal interventions to support cross-border healthcare. Third, we need more insights in different ways to engage different stakeholders, including patients, in cross-border healthcare improvement. Research on the different relationships between stakeholders (e.g., between healthcare professionals and patients, or nurses and physicians, from different countries) in cross-border healthcare, and how this affects education and learning, is needed. We could explore ways to (re)design educational interventions together with these different stakeholders, and observe how stakeholders interact, for example using co-design methods.

PRACTICAL IMPLICATIONS

Based on the findings of this thesis, we believe any expert in education or healthcare who aims to improve cross-border collaboration should consider the following questions:

How are they/you working together?

Before thinking of how to improve cross-border healthcare, ask what cross-border healthcare collaboration in this situation looks like. It is important to understand what the reason for working together is in the first place, to know what drives a collaboration. In some cases, collaborations might take place because there is or was an urgent need (e.g., lack of ICU capacity in a pandemic). In other cases, befriended physicians who saw an opportunity to exchange expertise initiated a collaboration. These reasons to collaborate shape stakeholders' perspectives on the collaboration. Simultaneously, it is important to know who is involved in cross-border healthcare (paramedics, nurses, physicians, administrative staff, managers, etc., on both sides of the border), how they think they are contributing to cross-border care, and why they collaborate.

What are their/your specific needs?

To improve cross-border healthcare situations, it is important to understand specific needs that stakeholders may have. Different stakeholders in different countries may struggle with different things, and educational interventions should be adapted to this. For example, in some collaborations, language barriers form a challenge that obstructs any form of communication, which requires trainers to speak both languages or invite a translator. Different cultural and hierarchical structures between people could clash and cause unsafe situations, in which case it may be wise to organize separate (preparatory) discussions with groups of stakeholders. At the same time, in any of these situations, stakeholders will know best what their specific needs are. They should be trusted to have a say in what an educational intervention should address and how it should be addressed. In preparing an educational intervention, conversations with different stakeholders or observations of cross-border healthcare practice by trainers could be helpful.

How can they/you continue to improve?

Cross-border healthcare is often not a stable situation. Stakeholders and their needs change over time, so improving these collaborations needs to be a continuous effort. Try to build this continuation into interventions by planning reflections and setting goals for next steps at the end. When meetings happen regularly, stakeholders get returning opportunities to express their needs. This could be done by asking stakeholders to

regularly share cross-border healthcare experiences and keeping track of returning issues, or directly asking stakeholders about their needs in periodic evaluations.

What can their/your patients contribute?

Patients can be a valuable source of information in cross-border healthcare, and might help to answer the questions above. Think of what their perspective contributes and how they can be involved in improving cross-border healthcare. In some situations, (ex-)patients may be able to participate in educational interventions as one of the stakeholders. In other situations, it may be more feasible to collect some of their experiences and share these with other stakeholders. Anyhow, ensure that patients are at the centre, not on the side-line, of improvement.

CONCLUSION

In this project, we investigated cross-border collaborations in healthcare in border regions, and made efforts to support learning to collaborate across borders. We can conclude that even in a relatively small border region like the Meuse-Rhine Euroregion, there is no one-size-fits-all solution. We should not limit our efforts to standardization, but invest in harmony. The power of collaboration lies in the diversity of collaborators, and their continuous adaption to each other. Such waves towards harmony are very similar to making music in a band or orchestra, or to singing in a choir. Playing or singing the same melody, although seemingly easy, is simply impossible due to the different reach and qualities of our instruments and voices. Besides that, all doing the same would be incredibly dull. Music is beautiful because of the endless combinations of harmony; the infinite surprises it brings us if we are able to listen to each other. The same holds for the unique profession of healthcare.

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IMPACT

If you ask me about the impact we have made with our research, my thoughts directly go to many casual conversations I've had over the past couple of years: with colleagues over lunch, with friends and family at parties, and with fellow choir members in the pub. These conversations have helped me to reflect on how my work relates to others. Thus, for the impact chapter, I have chosen to write down a conversation I could have had with one of my peers, in which I implicitly answer the following questions:

1) What was the main objective of the research described in this dissertation and what are its most important results and conclusions?
2) In what ways do the results from this research contribute to science, social sectors and to social challenges?
3) To whom can the results be of interest/relevance and why?
4) In what way can these target groups be involved and informed about the research results, so that the knowledge gained can be used in the future?

Oh, so you did a PhD? What was it about?

In border regions, people cross borders on a daily basis for all sorts of things, for example for groceries, family visits culture, or gasoline. Additionally, people in these regions cross borders for healthcare. They do so because healthcare could be better, cheaper, faster or just closer than it is in their own country. When this happens, patients, nurses and doctors will notice differences in healthcare between countries. However, we know little about how these differences relate to challenges and opportunities to collaborate in healthcare.

For this reason, we talked to patients, nurses and doctors about their experiences with cross-border healthcare. They told us there are many differences between countries that cause challenges in cross-border healthcare. Some are easy to recognize; people speak a different language, use a different IT-system, or work with different procedures. Others are less obvious. Because of differences in education, organization and culture, ways in which patients, nurses and doctors interact with each other, differ between countries. These differences are not necessarily a problem, but it can be confusing when people expect things to be the same.

Sounds like something you cannot really do anything about.

Well, imagine taking a bite out of something that you expect to be sweet, but it is salty instead. If you did not know, you might be disappointed or even upset (and spit it out if

no one is watching). But if someone would tell you beforehand, 'You might think this is sweet, but it's actually salty', you probably will not mind so much.

If you are aware of differences, you are much better prepared to deal with them. For this reason, we thought it would be helpful if patients, nurses and doctors understood the differences in healthcare between countries. You could do this by simply telling them the differences, but not every cross-border healthcare situation is the same. In some cases, people do not understand a word of what the other says, while in other cases, dialects are so similar to each other that language is not even an issue. For every single situation, patients, nurses and doctors have to recognize themselves what the differences are, and find ways to deal with them. Therefore, to help nurses and doctors – we call them healthcare professionals – in cross-border healthcare, we did not tell them the differences, but we described ways in which they can identify these differences themselves. Most importantly, they need to sit together, discus what goes well and what could be done better, and think about ways to improve how they collaborate.

Okay, problem solved than?

As they say in German: Jein. Yes and no. These differences are fluid. So those discussions about differences, which we by the way facilitated in educational interventions, need to take place more than once. Actually, I think it should become much more a part of healthcare. I know, it sounds a little vague… If something does not go the way we expected it to, our response is often to 'get over it' as soon as possible. I think that to improve, we need to recognize those moments, and take time to learn from them. That is a bit uncomfortable at first, but if people do that more often, it can become part of their routine. Learning to collaborate across borders is not something we can just do. It is something we need to keep doing.

I am a little surprised. What is the 'science' in this?

People have asked that more than once… I would say that the science is in the way I connected theory and practice. In thinking about different ways in which we can improve cross-border healthcare, I relied both on practical experiences *and* on educational theory. But such theoretical ideas had not yet been used in these cross-border healthcare situations before. I had to translate them into interventions and see if they still worked.

For example, we knew already, from other research, that if we want people with different backgrounds to learn to collaborate, they need to see what their shared goal is; what

they could achieve if they collaborate. They also need to understand what contributions different people have to that goal and learn to adapt their own expectations and contributions accordingly. To support that process, we wanted healthcare professionals discuss their experiences with the people they actually worked with across the border. Our idea was that even if they do not see each other that often, this would help them understand each other's roles, and understand and improve how things were going. These theoretical ideas, learning together and learning from and for practice, worked quite well in our cross-border healthcare situations, but we also noticed some things that did not work. We found that although healthcare professionals can learn *together* about cross-border healthcare, they will not always learn to *collaborate* in cross-border healthcare. We may need to have a closer look into this difference and the impact it has on how we design our education.

Ah, I see... I think... Do you have other examples?

Sure. I mentioned earlier that we really wanted healthcare professionals to recognize what they needed for their own cross-border healthcare situation, right? I initially thought it would be enough to ask them to bring their own experiences to the intervention, and have them learn from those. I could use the same tasks and ask the same questions to different groups of healthcare professionals. But these situations may simply be too different to use the exact same intervention. A group of nurses and doctors that barely see each other may need a different preparation and different tasks than a group of physicians who see each other weekly. Of course, they can still learn from and for their own situation, but we need to consider *how* they can do this, given the context.

So healthcare professionals should just get the support they need to learn.

Yeah, but they are not the only ones who can learn from this. After all, everyone living in the EU can be(come) a patient in cross-border healthcare. Some patients do this very consciously. They weigh their different options, with or without the help of a doctor, and *decide* to go abroad. Others get into accidents and have no say in where they are going. What a patient can do, will differ each time. Still, I noticed that patients actually have a unique perspective. I learned that they are often the only one seeing healthcare on both sides the border. I think it is important that patients are aware of this, too.

If those patients are aware that they are a valuable source of information, they can help healthcare professionals to identify the differences I talked about earlier. That is of course easiest if you are asked to talk about your experiences, but even if no one asks, you should still try to voice things that you found remarkable. Explain to your doctor

or nurse what surprised you, and what you would have liked to know beforehand. That way, they can prepare the *next* patient better than the previous one.

Hmmm... So many different ideas. What is your conclusion then?

I think it is important to listen to each other, understand what is going on and see how you can adapt to each other. Sure, agreements on what to do in certain situations help a lot, but to collaborate, you need to keep listening to each other and adapt to changes. It is actually not unlike singing in a choir. To sing together, scores might help you to know what you need to sing and the conductor will give you cues on when to sing. But to really sing a song together, you need to listen, understand what the other singers are doing, and adapt to that while also sticking to your own part. Just like learning to sing in a choir, learning to collaborate means learning to constantly and collaboratively reflect. Educational interventions, when consciously designed, can support stakeholders in healthcare from different countries to learn and improve together.

It is so interesting that someone actually does research about this... Do others know about it?

I am always happy to hear that. I really enjoy sharing it with people, and had multiple opportunities to do so over the past years. For one, we used all this research to make those interventions I mentioned. One of those, a workshop we made for doctors in their residency training, is still provided in the hospital. Next to that, we have written a couple of scientific articles about our work. I presented these and organized discussions at conferences in different countries too. I even presented our work at an expert round table on a European regulation for cross-border healthcare, for the European Commission. We also informed people with our project website (www.safepat.eu) and social media. I made a flyer for patients in the region and we recorded some videos in which we talk about our work. We really invested in our visibility. Actually, we are also working on a new project, called COMPAS, in which we hope to take this idea of learning together in the region further. In such future projects, I also hope to learn more about what people are actually doing, and work together with them to develop new educational interventions in which we fine-tune these ideas further.

You know, conversations like these are very helpful too. Oftentimes, when I talk about our work, people share their own experiences with me, and I get new ideas from that. I am curious to hear what you have to say about this. Let's get another drink, shall we?

SUMMARIES

NEDERLANDSE SAMENVATTTING

In Hoofdstuk 1 introduceren we het onderzoek in deze thesis. Met grensoverschrijdende zorg (waarbij patiënten en zorgprofessionals landsgrenzen oversteken) in grensregio's kunnen we optimaal gebruik maken van regionale zorgmogelijkheden. Echter, door verschillen tussen landen zijn er ook uitdagingen bij grensoverschrijdende zorg in grensregio's. Die zijn onvoldoende onderzocht. Daarnaast is er weinig ervaring met het opleiden van zorgprofessionals voor grensoverschrijdende zorg. Als we weten hoe zorgprofessionals kunnen leren om grensoverschrijdend samen te werken, kan optimaal gebruik gemaakt worden van regionale zorgmogelijkheden. In deze thesis onderzoeken we daarom twee hoofdvragen:

1) Wat zijn de perspectieven en behoeften van zorgprofessionals en patiënten in de grensoverschrijdende gezondheidszorg in een Europese grensregio?
2) Hoe kan onderwijs dat is ontworpen met praktische behoeften en theoretische inzichten, grensoverschrijdende gezondheidszorg ondersteunen?

In Hoofdstuk 2 presenteren we een behoefteanalyse van grensoverschrijdende zorg in de grensregio Euregio Maas-Rijn. Het doel was om inzicht te krijgen in de uitdagingen en mogelijkheden van grensoverschrijdende zorg die zorgprofessionals ervaren. Voor de behoefteanalyse vroegen we zorgprofessionals in de grensregio (N=43) naar hun ervaringen met acute of electieve grensoverschrijdende zorg. Zij staan over het algemeen positief tegenover grensoverschrijdende zorg, maar benoemen ook verschillende uitdagingen die leiden tot minder controle op grensoverschrijdende zorgsituaties. Zij benoemen verschillen in informatieoverdracht, taal, taakverdeling en opleiding, beleid en financiële structuren, en cultuur als belemmerend voor samenwerking. Zorgprofessionals denken dat protocollen, samenwerkingsafspraken en persoonlijke ontmoetingen kunnen helpen met de omgang met verschillen. De conclusie van het onderzoek is dat gedeeld begrip van grensoverschrijdende zorg belangrijk is voor goede samenwerking. Persoonlijke ontmoetingen rond betekenisvolle activiteiten, zoals onderwijs en casusbesprekingen, kunnen bijdragen aan dit gedeelde begrip.

In Hoofdstuk 3 gaan we in op de ervaringen van patiënten in grensoverschrijdende zorg. Het doel was om zicht te krijgen op de behoeften van deze patiënten. We vroegen patiënten (N=8) om hun ervaring met grensoverschrijdende zorg met ons te delen. Deze ervaringen werden samengevoegd in drie verhalen. In deze drie verschillende verhalen, komen drie problemen steeds terug: problemen met patiëntbetrokkenheid bij het besluiten over hun zorg, problemen met communicatie met zorgverleners, en problemen met informatie gedurende het hele zorgproces. De conclusie van het

onderzoek is dat bestaande problemen worden versterkt door grensoverschrijdende verschillen. In grensoverschrijdende zorg is meer aandacht nodig voor wederzijdse verwachtingen van patiënten en zorgprofessionals.

In Hoofdstuk 4 ontwikkelden en evalueerden we een workshop voor artsen in opleiding tot specialist (AIOS). Het doel was om te kijken welke leerprincipes bijdragen aan bewustwording van de uitdagingen en mogelijkheden van grensoverschrijdende zorg. We organiseerden drie workshops van vier uur, waarin we contextueel, collaboratief en reflectief leren toepasten in verschillende opdrachten. De deelnemende AIOS (N=16) benoemden dat de leerprincipes bijdragen aan hun bewustwording van grensoverschrijdende zorg. Praktijkvoorbeelden stimuleerden herkenning van uitdagingen en kansen, discussies in interdisciplinaire en internationale groepen hielpen om verschillende perspectieven te zien, en reflectie zette de deelnemers aan het denken over hun eigen rol en perspectief. De resultaten bieden ook aanwijzingen tot verdere verbetering van de workshop. We concluderen dat theoretische inzichten in leren kunnen en moeten bijdragen aan het ontwerp en de evaluatie van dit soort workshops.

In Hoofdstuk 5 ontwikkelden en evalueerden we een onderwijsinterventie voor zorgprofessionals die actief betrokken zijn bij grensoverschrijdend onderwijs. Het doel was om te kijken welke leerprincipes kunnen helpen bij het verbeteren van bestaande grensoverschrijdende samenwerkingen. We ontwierpen een interventie waarin we authentiek, team, en reflectief leren toepasten in verschillende opdrachten. Het ontwerp werd geëvalueerd met experts (N=11) op het gebied van zorg en onderwijs. Zij benoemden dat de drie leerprincipes kunnen bijdragen aan gedeeld begrip van grensoverschrijdende gezondheidszorg. Echter, de manier waarop de principes vorm krijgen in een interventie moet worden aangepast aan contextuele verschillen. Ook benoemen de experts het belang van een veilige sfeer. Ze benadrukken dat het creëren van een veilige sfeer moeilijk kan zijn in interprofessionele en internationale groep. Er zitten grenzen aan de mogelijkheden om in die samenstelling gezamenlijk te reflecteren en te leren. Dit laatste wordt ook bemoeilijkt doordat de samenwerkende zorgprofessionals zich mogelijk niet identificeren als een team dat grensoverschrijdend samenwerkt. Daarom moet de interventie gericht zijn op leren en samenwerking tussen de verschillende teams die betrokken zijn bij grensoverschrijdende gezondheidszorg (in *landscapes of practice*), in plaats van op het idee dat zorgprofessionals uit verschillende landen één team vormen.

In Hoofdstuk 6 beantwoorden we ten eerste de onderzoeksvragen die we in de introductie stelden.

1) Wat zijn de perspectieven en behoeften van zorgprofessionals en patiënten in de grensoverschrijdende gezondheidszorg in een Europese grensregio?

Zowel zorgprofessionals als patiënten zien de mogelijkheden van grensoverschrijdende zorg, maar ervaren ook uitdagingen door internationale verschillen. We kunnen concluderen dat het gebrek aan besef van verschillen tussen zorgprofessionals in verschillende landen, leidt tot uitdagingen voor zowel henzelf als hun patiënten. Zowel zorgprofessionals als patiënten hebben behoefte aan bewustzijn van de verschillen in gezondheidszorg tussen landen, en de uitdagingen en kansen die gepaard gaan met grensoverschrijdende gezondheidszorg.

2) Hoe kan onderwijs dat is ontworpen met praktische behoeften en theoretische inzichten, grensoverschrijdende gezondheidszorg ondersteunen?

Onderwijs met authentieke, collaboratieve en reflectieve leerprincipes kan ondersteuning bieden bij de verbetering van grensoverschrijdende zorg. Echter, dezelfde verschillen die spelen in grensoverschrijdende samenwerkingen (bijv. taal, hiërarchie, cultuur), vormen ook uitdagingen voor zorgprofessionals om samen te leren. Om te kunnen voldoen aan specifieke behoeften van zorgprofessionals, en de unieke uitdagingen en kansen van verschillende situaties, moeten educatieve interventies telkens worden aangepast aan de context. Een pasklare oplossing voor grensoverschrijdende gezondheidszorg bestaat niet.

Reflecterend op de antwoorden op de onderzoeksvragen, zijn er een aantal punten waar we verder over kunnen discussiëren. Ten eerste zagen we dat samen leren wordt bemoeilijkt door interprofessionele en internationale verschillen. Met name de intersecties van deze verschillen kunnen ertoe leiden dat zorgprofessionals uit verschillende landen niet vanzelfsprekend samen kunnen reflecteren op hun samenwerking. Ten tweede zullen zorgprofessionals die grensoverschrijdend samenwerken, zichzelf niet altijd identificeren als grensoverschrijdend team. Dit bemoeilijkt het toepassen van teamleerprincipes op deze groepen. Door de focus te verleggen naar zogenaamde *landscapes of practice*, waarin de nadruk ligt om connecties tussen verschillende groepen zorgprofessionals, kunnen zorgprofessionals toch van en met elkaar leren. Ten derde dient onderwijsontwerp voor grensoverschrijdende gezondheidszorg te worden aangepast aan specifieke behoeften. Omdat grensoverschrijdende zorg in de praktijk zeer gevarieerd is, zal per situatie moeten worden gekeken naar de specifieke behoeften van zorgprofessionals.

Onderwijsontwerp met duidelijke leerprincipes kan als leidraad dienen, waarbij context-specifieke aanpassingen worden gedaan in samenspraak tussen onderwijskundigen en zorgprofessionals. Ten vierde hebben we de perspectieven van patiënten nodig om te leren in grensoverschrijdende gezondheidszorg. Hun perspectief blijkt uniek. In het betrekken van patiënten in onderwijs voor grensoverschrijdende zorg, moet onder anderen rekening worden gehouden met de bereidheid van zowel patiënten als zorgprofessionals om van en met elkaar te leren.

Als laatste worden in dit hoofdstuk praktische implicaties, sterke en zwakke punten van het onderzoek, en mogelijke toekomstige onderzoeksrichtingen benoemd.

DEUTSCHE ZUSAMMENFASSUNG

In Kapitel 1 stellen wir die Dissertation vor. Die grenzüberschreitende Versorgung in Grenzregionen (bei der Patienten ebenso wie Gesundheits- und Pflegefachkräfte Landesgrenzen passieren) ermöglicht es uns, die regionalen Gesundheits- und Pflegeangebote optimal zu nutzen. Aufgrund von Unterschieden zwischen den Ländern gibt es jedoch auch Herausforderungen bei der grenzüberschreitenden Versorgung in Grenzregionen. Diese wurden bisher nur unzureichend untersucht. Hinzu kommt, dass es nur wenig Erfahrung in der Ausbildung von Gesundheits- und Pflegefachkräften für die grenzüberschreitende Versorgung gibt. Wenn wir wissen, wie Gesundheits- und Pflegefachkräfte lernen können, über Landesgrenzen hinweg zusammenzuarbeiten, können wir regionale Möglichkeiten im Gesundheits- und Pflegebereich optimal nutzen. In dieser Dissertation widmen wir uns daher zwei Hauptforschungsfragen:

1) Welche Perspektiven und Bedürfnisse haben Gesundheits- und Pflegefachkräfte ebenso wie Patienten im Bereich der grenzüberschreitenden Versorgung in einer europäischen Grenzregion?
2) Wie kann eine auf praktische Bedürfnisse und theoretische Erkenntnisse ausgerichtete Ausbildung die grenzüberschreitende Versorgung unterstützen?

In Kapitel 2 präsentieren wir eine Bedarfsanalyse für die grenzüberschreitende Versorgung in der Grenzregion Euregio Maas-Rhein. Ziel war es, Einblicke in die Herausforderungen und Möglichkeiten der grenzüberschreitenden Versorgung zu gewinnen, die Gesundheits- und Pflegefachkräfte erleben. Für die Bedarfsanalyse haben wir Gesundheits- und Pflegefachkräfte in der Grenzregion (N=43) zu ihren Erfahrungen mit der grenzüberschreitenden Akut- oder Wahlversorgung befragt. Sie stehen der grenzüberschreitenden Versorgung im Allgemeinen positiv gegenüber, nennen aber auch verschiedene Herausforderungen, die zu einer geringeren Kontrolle über grenzüberschreitende Versorgungssituationen führen. Ihren Angaben zufolge stellen Unterschiede in der Informationsvermittlung, Sprache, Aufgabenverteilung, Ausbildung, Politik, Kultur und im Bereich der finanziellen Strukturen Hindernisse für eine Zusammenarbeit dar. Die befragten Gesundheits- und Pflegefachkräfte denken, dass Protokolle, Kooperationsabsprachen und persönliche Treffen dabei helfen können, diese Unterschiede zu überwinden. Die Studie hat ergeben, dass ein gemeinsames Verständnis von grenzüberschreitender Versorgung wichtig für eine gute Zusammenarbeit ist. Persönliche Treffen rund um bedeutsame Aktivitäten wie Unterricht und Fallbesprechungen können zu diesem gemeinsamen Verständnis beitragen.

In Kapitel 3 gehen wir auf die Erfahrungen von Patienten mit grenzüberschreitender Versorgung ein. Ziel war es, Einblicke in die Bedürfnisse dieser Patienten zu gewinnen. Wir haben Patienten (N=8) gebeten, uns ihre Erfahrungen mit grenzüberschreitender Versorgung zu schildern. Diese Erfahrungen haben wir in drei Geschichten zusammengeführt. In diesen drei unterschiedlichen Geschichten tauchen drei Probleme immer wieder auf: Probleme bei der Einbeziehung des Patienten in die Entscheidungsfindung über seine Versorgung, Probleme bei der Kommunikation mit den Dienstleistern und Probleme bei der Vermittlung von Informationen während des gesamten Versorgungsprozesses. Die Studie kommt zu dem Schluss, dass bereits bestehende Probleme durch grenzüberschreitende Unterschiede noch verschärft werden. In der grenzüberschreitenden Versorgung müssen die gegenseitigen Erwartungen der Patienten auf der einen und der Gesundheits- und Pflegefachkräfte auf der anderen Seite stärker berücksichtigt werden.

In Kapitel 4 haben wir einen Workshop für Ärzte entwickelt und evaluiert, die gerade eine Weiterbildung zum Facharzt absolvieren (angehende Fachärzte). Ziel war es zu beleuchten, welche Lernprinzipien dazu beitragen, das Bewusstsein in Bezug auf die Herausforderungen und Möglichkeiten der grenzüberschreitenden Versorgung zu schärfen. Wir haben drei vierstündige Workshops organisiert, in denen wir bei unterschiedlichen Aufgabenstellungen das kontextbezogene, kollaborative und reflexive Lernen angewandt haben. Die teilnehmenden angehenden Fachärzte (N=16) gaben an, dass die Lernprinzipien zu ihrem Bewusstsein für grenzüberschreitende Pflege beitragen. Praxisbeispiele regten das Erkennen von Herausforderungen und Chancen an. Diskussionen in interdisziplinären und internationalen Gruppen halfen, unterschiedliche Perspektiven zu sehen. Reflexion brachte die Teilnehmer dazu, über ihre eigene Rolle und Perspektive nachzudenken. Die Ergebnisse bieten auch Anhaltspunkte für eine weitere Verbesserung des Workshops. Wir kommen zu dem Schluss, dass theoretische Einblicke in das Lernen zur Gestaltung und Evaluierung von Workshops dieser Art beitragen können und müssen.

In Kapitel 5 haben wir eine pädagogische Intervention für Gesundheits- und Pflegefachkräfte entwickelt und evaluiert, die aktiv an der grenzüberschreitenden Bildung beteiligt sind. Ziel war es, herauszufinden, welche Lernprinzipien dazu beitragen können, bereits bestehende grenzüberschreitende Kooperationen zu verbessern. Wir haben eine Intervention entworfen, bei der wir in verschiedenen Aufgabenstellungen authentisches, teamorientiertes und reflexives Lernen anwendeten. Der Entwurf wurde mit Experten (N=11) aus dem Gesundheits- und Pflege- sowie dem Bildungsbereich evaluiert. Sie stellten fest, dass die drei Lernprinzipien zu einem gemeinsamen Verständnis der grenzüberschreitenden Gesundheitsversorgung beitragen können.

Allerdings muss die Art und Weise, in der die Prinzipien in einer Intervention ausgestaltet werden, kontextuellen Unterschieden angepasst werden. Die Experten erwähnen auch die Bedeutung einer sicheren Atmosphäre. Sie betonen, dass es in interprofessionellen und internationalen Gruppen schwierig sein kann, eine sichere Atmosphäre zu schaffen. Den Möglichkeiten, in dieser Zusammensetzung gemeinsam zu reflektieren und zu lernen, sind Grenzen gesetzt. Letzteres wird auch dadurch erschwert, dass sich die zusammenarbeitenden Gesundheits- und Pflegefachkräfte möglicherweise nicht als Teil eines Teams identifizieren, das grenzüberschreitend zusammenarbeitet. Daher sollte sich die Intervention auf das Lernen und die Zusammenarbeit zwischen den verschiedenen Teams konzentrieren, die an der grenzüberschreitenden Versorgung beteiligt sind (in *landscapes of practice*), und nicht darauf, dass Gesundheits- und Pflegefachkräfte aus verschiedenen Ländern ein Team bilden.

In Kapitel 6 beantworten wir zunächst die Forschungsfragen, die wir in der Einleitung gestellt haben.

1) Welche Perspektiven und Bedürfnisse haben Gesundheits- und Pflegefachkräfte ebenso wie Patienten im Bereich der grenzüberschreitenden Versorgung in einer europäischen Grenzregion?

Sowohl Gesundheits- und Pflegefachkräfte als auch Patienten sehen die Möglichkeiten der grenzüberschreitenden Versorgung, erleben allerdings auch Herausforderungen aufgrund internationaler Unterschiede. Wir kommen zu dem Schluss, dass das mangelnde Bewusstsein für die Unterschiede zwischen den Gesundheits- und Pflegefachkräften in den verschiedenen Ländern zu Herausforderungen für sie selbst und ihre Patienten führt. Sowohl Gesundheits- und Pflegefachkräfte als auch Patienten müssen sich der Unterschiede in der Versorgung zwischen den Ländern sowie der Herausforderungen und Chancen bewusst sein, die mit der grenzüberschreitenden Gesundheitsversorgung verbunden sind.

2) Wie kann eine auf praktische Bedürfnisse und theoretische Erkenntnisse ausgerichtete Ausbildung die grenzüberschreitende Versorgung unterstützen?

Bildung mit authentischen, kollaborativen und reflexiven Lernprinzipien kann die Verbesserung der grenzüberschreitenden Versorgung unterstützen. Dieselben Unterschiede, die bei grenzüberschreitenden Kooperationen auftreten (z. B. Sprache, Hierarchie, Kultur), stellen jedoch auch Herausforderungen für das gemeinsame Lernen von Gesundheits- und Pflegefachkräften dar. Um den spezifischen Bedürfnissen von Gesundheits- und Pflegefachkräften sowie den einzigartigen Herausforderungen

und Chancen unterschiedlicher Situationen gerecht zu werden, müssen pädagogische Interventionen immer an den Kontext angepasst werden. Eine Universallösung für grenzüberschreitende Versorgung gibt es nicht.

Wenn wir über die Antworten auf die Studienfragen nachdenken, gibt es eine Reihe von Punkten, die wir weiter diskutieren können. Erstens haben wir festgestellt, dass ein gemeinsames Lernen durch interprofessionelle und internationale Unterschiede erschwert wird. Insbesondere die Überschneidungen dieser Unterschiede können dazu führen, dass Gesundheits- und Pflegefachkräfte aus unterschiedlichen Ländern nicht ohne Weiteres in der Lage sind, ihre Zusammenarbeit gemeinsam zu reflektieren. Zweitens identifizieren sich Gesundheits- und Pflegefachkräfte, die grenzüberschreitend zusammenarbeiten, nicht immer als Teil eines grenzüberschreitend agierenden Teams. Dieser Umstand macht es schwierig, die Prinzipien des Teamlernens auf diese Gruppen anzuwenden. Durch die Verlagerung des Fokus auf sogenannte *landscapes of practice*, in denen die Verbindungen zwischen verschiedenen Berufsgruppen im Gesundheits- und Pflegewesen im Vordergrund stehen, können Gesundheits- und Pflegefachkräfte dennoch von- und miteinander lernen. Drittens ist es notwendig, die Ausbildungsgestaltung für grenzüberschreitende Versorgung an spezifische Bedürfnisse anzupassen. Da die grenzüberschreitende Versorgung in der Praxis sehr vielfältig ist, sind die spezifischen Bedürfnisse von Gesundheits- und Pflegefachkräften in jeder Situation individuell zu betrachten. Als Orientierungshilfe kann ein pädagogischer Entwurf mit klaren Lernprinzipien dienen, wobei in Absprache zwischen Pädagogen und Gesundheits- und Pflegefachkräften kontextspezifische Anpassungen vorgenommen werden. Viertens brauchen wir die Perspektiven der Patienten, um im Bereich der grenzüberschreitenden Versorgung zu lernen. Ihre Perspektive erweist sich als einzigartig. Bei der Einbeziehung von Patienten in die Ausbildung zur grenzüberschreitenden Versorgung sollte unter anderem die Bereitschaft sowohl der Patienten als auch der Gesundheits- und Pflegefachkräfte, voneinander und miteinander zu lernen, Berücksichtigung finden.

Abschließend gehen wir in diesem Kapitel auf praktische Auswirkungen, Stärken und Schwächen der Dissertation sowie auf mögliche künftige Forschungsrichtungen ein.

RÉSUMÉ FRANÇAIS

Dans le Chapitre 1, nous introduisons l'enquête de cette thèse. Grâce à des soins transfrontaliers (à l'occasion desquels des patients et professionnels des soins de santé traversent des frontières nationales) dans des régions frontalières, nous pouvons optimiser l'utilisation des possibilités de soins de santé régionaux. Toutefois, certaines différences entre pays dressent également des barrières dans le cas de soins de santé transfrontaliers dans des régions frontalières. Elles n'ont pas fait l'objet d'études suffisamment approfondies. L'expérience en formation de professionnels des soins de santé pour les soins transfrontaliers est par ailleurs limitée. En sachant comment des professionnels des soins de santé peuvent apprendre à collaborer, il serait possible d'optimiser l'utilisation des possibilités régionales. C'est pourquoi nous examinons deux questions essentielles dans cette thèse :

1) Quelles sont les perspectives et quels sont les besoins des professionnels des soins de santé et des patients en soins de santé transfrontaliers dans une région transfrontalière européenne ?
2) Comment un enseignement conçu selon des besoins pratiques et des compréhensions théoriques peut-il soutenir les soins de santé transfrontaliers ?

Dans le Chapitre 2, nous présentons l'analyse des besoins en soins de santé transfrontaliers dans la région frontalière Eurorégion Meuse-Rhin. L'objectif était de déterminer les défis et opportunités des soins de santé transfrontaliers rencontrés par les professionnels des soins de santé. Pour l'analyse des besoins, nous avons demandé aux professionnels des soins de santé dans la région transfrontalière (N=43) de décrire leur expérience avec les soins transfrontaliers urgents ou électifs. Leur position face aux soins de santé transfrontaliers est plutôt positive, tout en pointant toutefois différents défis menant à un plus faible contrôle sur les situations de soins de santé transfrontaliers. Ils dénoncent des différences de transmission d'informations, de langue, de répartition des tâches et de formation, de politique et structure financière, ainsi que des différences culturelles faisant obstacle à la collaboration. Les professionnels des soins de santé estiment que des protocoles, accords de collaboration et rencontres personnelles pourraient aider à aplanir les différences. La conclusion de l'enquête démontre qu'un concept partagé des soins de santé transfrontaliers est essentiel à une bonne collaboration. Des rencontres personnelles dans le cadre d'activités significatives, comme l'enseignement et les études de cas, pourraient participer à ce concept partagé.

Dans le Chapitre 3, nous abordons les expériences de patients dans les soins de santé transfrontaliers. L'objectif était d'obtenir une vue d'ensemble sur les besoins de ces patients. Nous avons demandé à des patients (N=8) de partager avec nous leur expérience dans les soins de santé transfrontaliers. Ces expériences ont été ajoutées dans trois histoires. Trois problèmes apparaissent systématiquement dans ces trois récits différents : des problèmes d'implication des patients dans les décisions médicales prises à leur sujet ; des problèmes de communication avec les dispensateurs de soins ; des problèmes d'information tout au long du processus de soins. La conclusion de l'enquête démontre que les problèmes existants sont renforcés par les différences transfrontalières. Les soins de santé transfrontaliers nécessitent une attention accrue au niveau des attentes réciproques des patients et des professionnels des soins de santé.

Dans le Chapitre 4, nous avons développé et évalué un atelier pour médecins en formation de spécialisation (AIOS). L'objectif était de déterminer quels principes pédagogiques participent à la prise de conscience des défis et opportunités des soins de santé transfrontaliers. Nous avons organisé trois ateliers de quatre heures, au cours desquels nous avons appliqué l'apprentissage contextuel, collaboratif et réflectif dans différentes missions. Les AIOS participants (N=16) ont déclaré que les principes pédagogiques participent à leur prise de conscience des soins de santé transfrontaliers. Des exemples pratiques ont stimulé la reconnaissance de défis et opportunités, des discussions dans des groupes interdisciplinaires et internationaux ont aidé à envisager des perspectives différentes, et la réflexion a incité les participants à s'interroger sur leurs propres rôles et perspectives. Les résultats ouvrent par ailleurs la voie à de futures améliorations de l'atelier. Nous en concluons que les compréhensions théoriques dans l'apprentissage peuvent et doivent participer à la conception et à l'évaluation de ce type d'atelier.

Dans le Chapitre 5, nous avons développé et évalué une intervention éducative pour des professionnels des soins de santé activement concernés par l'enseignement transfrontalier. L'objectif était de découvrir quels principes pédagogiques peuvent aider à améliorer les collaborations transfrontalières existantes. Nous avons conçu une intervention au cours de laquelle nous avons appliqué l'apprentissage authentique, en équipe et réflectif dans différentes missions. La conception a été évaluée avec des experts (N=11) dans le domaine des soins et de l'enseignement. Ils ont déclaré que les trois principes pédagogiques peuvent participer à une compréhension partagée des soins de santé transfrontaliers. Toutefois, la manière dont les principes prennent forme dans une intervention doit être adaptée aux différences contextuelles. Les experts ont également pointé l'importance d'un climat sécurisant. Ils précisent que créer un tel climat peut s'avérer difficile dans un groupe à la fois interprofessionnel et international.

Il y a des limites aux possibilités de réflexion et d'apprentissage collectifs dans cette conjoncture. L'apprentissage est par ailleurs compliqué par le fait que les professionnels des soins de santé amenés à collaborer pourraient ne pas s'identifier comme une équipe travaillant ensemble de manière transfrontalière. C'est pourquoi l'intervention doit s'orienter vers l'apprentissage et la collaboration entre les différentes équipes concernées par les soins de santé transfrontaliers (dans des *landscapes of practice*), plutôt que vers l'idée que les professionnels des soins de santé de différents pays forment une seule et même équipe.

Dans le Chapitre 6, nous répondons premièrement aux questions de l'enquête que nous avions posées dans l'introduction.

1) Quelles sont les perspectives et quels sont les besoins des professionnels des soins de santé et des patients en soins de santé transfrontaliers dans une région transfrontalière européenne ?

Tant les professionnels des soins de santé que les patients perçoivent les opportunités des soins de santé transfrontaliers, tout en constatant des défis dus aux différences internationales. Nous pouvons en conclure que le manque de notion des différences entre les professionnels des soins de santé de différents pays soulève des défis tant pour eux-mêmes que pour leurs patients. Les professionnels des soins de santé comme les patients ont besoin de prendre conscience des différences dans les soins de santé entre les pays, tout comme des défis et opportunités qui vont de pair avec les soins de santé transfrontaliers.

2) Comment un enseignement conçu selon des besoins pratiques et des compréhensions théoriques peut-il soutenir les soins de santé transfrontaliers ?

Un enseignement affichant des principes pédagogiques authentiques, collaboratifs et réflectifs peut aider à améliorer les soins de santé transfrontaliers. Toutefois, ces mêmes différences influençant les collaborations transfrontalières (comme la langue, la hiérarchie, la culture) représentent autant de défis pour l'apprentissage commun des professionnels des soins de santé. Afin de pouvoir satisfaire à certains besoins spécifiques des professionnels des soins de santé, tout comme aux défis et opportunités uniques de différentes situations, les interventions éducatives doivent systématiquement être adaptées au contexte. Il n'existe pas de solution prête à l'emploi pour les soins de santé transfrontaliers.

Une réflexion sur les réponses obtenues pour les questions de l'enquête mène à un certain nombre de points qui méritent une discussion plus approfondie. Tout d'abord, nous avons constaté que l'apprentissage commun est entravé par les différences interprofessionnelles et internationales. Les intersections de ces différences peuvent en l'occurrence mener à ce qu'il n'aille pas de soi que des professionnels des soins de santé de différents pays puissent réfléchir ensemble à leur collaboration. Ensuite, les professionnels des soins de santé qui collaborent de manière transfrontalière ne s'identifieront pas toujours comme une équipe transfrontalière. Ce qui complique l'application des principes pédagogiques en équipe à ces groupes. En déplaçant le focus vers les fameux *landscapes of practice*, dans lesquels l'accent est mis sur les connexions entre différents groupes de professionnels des soins de santé, ces derniers peuvent malgré tout apprendre ensemble et les uns des autres. Troisièmement, la conception pédagogique pour les soins de santé transfrontaliers doit être adaptée à des besoins spécifiques. Comme ils sont très variés dans la pratique, chaque situation devra être examinée en fonction des besoins spécifiques des professionnels des soins de santé. Une conception pédagogique avec les principes pédagogiques clairs peut servir de fil conducteur, à l'occasion duquel des adaptations spécifiques liées au contexte ont lieu en concertation entre enseignants et professionnels des soins de santé. Quatrièmement, nous avons besoin des perspectives des patients pour l'apprentissage dans les soins de santé transfrontaliers. Leur perspective semble unique. Si l'on implique des patients dans l'enseignement pour les soins de santé transfrontaliers, il faut entre autres tenir compte de la volonté effective d'apprendre ensemble et les uns des autres de la part tant des patients que des professionnels des soins de santé.

Enfin, ce chapitre évoque des implications pratiques, les points forts et faibles de l'enquête et les éventuelles pistes pour de futures enquêtes.

ENGLISH SUMMARY

In Chapter 1, we introduce the research in this thesis. Cross-border healthcare (when patients and healthcare professionals cross national borders) in border regions allows us to make optimal use of regional healthcare opportunities. However, differences between countries can result in challenges in cross-border healthcare in border regions, which have been insufficiently researched. In addition, we do not know how to train healthcare professionals for cross-border healthcare. If we know how healthcare professionals can learn to collaborate across borders, we can make optimal use of regional healthcare opportunities. In this thesis, we therefore investigate two main research questions:

1) What are the perspectives and needs of healthcare professionals and patients in cross-border healthcare in a European border region?
2) How can education designed with practical needs and theoretical insights in mind, support cross-border healthcare?

In Chapter 2, we present a needs analysis of cross-border healthcare in the border region. The aim was to gain insight into the challenges and opportunities of cross-border care that healthcare professionals experience. For the needs analysis, we asked healthcare professionals in the Meuse-Rhine Euroregion (N=43) about their experiences with acute or planned cross-border healthcare. They are generally positive about cross-border healthcare, but also mention that various challenges cause them to have less control over cross-border healthcare situations. They identify differences in information transfer, language, division of tasks and training, policy and financial structures, and culture as obstacles in collaboration. Healthcare professionals believe that protocols, collaboration agreements and in-person meetings can help to deal with differences. The conclusion of the study is that a shared understanding of cross-border healthcare is important for good collaboration. In-person meetings around meaningful activities, such as trainings and case discussions, can contribute to this shared understanding.

In Chapter 3, we discuss the experiences of patients in cross-border healthcare. The aim was to gain insight into the needs of these patients. We asked patients (N=8) to share their experience with cross-border healthcare with us. These experiences were merged into three stories. In all stories, three issues recurred: issues with patient involvement in decision-making about their healthcare, problems in communication with healthcare professionals, and problems with information throughout the healthcare process. The conclusion of the study is that existing problems are amplified by cross-border differences. In cross-border care, more attention is needed for the mutual expectations of patients and healthcare professionals.

In chapter 4, we designed and evaluated a workshop for residents (AIOS). The aim was to see which learning principles contribute to awareness of the challenges and opportunities of cross-border healthcare. We organized three four-hour workshops, in which we applied contextual, collaborative and reflective learning in different assignments. The participating residents (N=16) stated that the applied learning principles contribute to their awareness of cross-border care. Authentic examples stimulated recognition of challenges and opportunities. Discussions in interdisciplinary and international groups helped to see different perspectives, and reflection made the participants think about their own role and perspective. The results also provide indications for further improvement of the workshop. We conclude that theoretical insights into learning can and should contribute to the design and evaluation of these types of workshops.

In Chapter 5, we designed and evaluated an educational intervention for healthcare professionals who are actively involved in cross-border education. The aim was to see which learning principles can help improve existing cross-border collaborations. We designed an intervention in which we applied authentic, team, and reflective learning in different assignments. The design was evaluated with experts (N=11) in the field of healthcare and education. They stated that the three learning principles can contribute to a shared understanding of cross-border healthcare. However, the way in which the principles take shape in an intervention must be adapted to contextual differences. The experts also mention the importance of a safe learning climate. They emphasize that creating a safe climate can be difficult in interprofessional and international group, and there are limits to the possibilities of such groups to reflect and learn together. The latter is also challenged by the notion that healthcare professionals may not identify as a team that collaborates across borders. Therefore, the intervention should focus on learning and collaboration between the different teams involved (in landscapes of practice) in cross-border healthcare, rather than relying on the idea that healthcare professionals from different countries form one team.

In Chapter 6, we first answer the research questions that we posed in the introduction.

1) What are the perspectives and needs of healthcare professionals and patients in cross-border healthcare in a European border region?

Both healthcare professionals and patients see the opportunities of cross-border healthcare, but also experience challenges due to differences between countries. We can conclude that the lack of awareness of these differences leads to challenges for both healthcare professionals and their patients. Both healthcare professionals and patients

need to be aware of the differences in healthcare between countries, and the challenges and opportunities associated with cross-border healthcare.

2) How can education designed with practical needs and theoretical insights in mind, support cross-border healthcare?

Education with authentic, collaborative and reflective learning principles can support the improvement of cross-border care. However, the same differences that challenge cross-border collaborations (e.g., language, hierarchy, culture) also pose challenges for healthcare professionals to learn together. In order to meet the specific needs of healthcare professionals and the unique challenges and opportunities of different situations, educational interventions must always be adapted to the context. There is no one-size-fits-all solution for cross-border healthcare.

Reflecting on the answers to the research questions, there are a number of points on which we can further discuss. First, we saw that collaborative learning is hampered by interprofessional and international differences. Due to the intersections of these differences, healthcare professionals from different countries cannot automatically reflect on their collaboration together. Second, healthcare professionals who work together across borders will not always identify themselves as a cross-border team. This challenges the application of team learning principles on these groups. By shifting the focus to so-called landscapes of practice, in which the emphasis is on connections between different groups of healthcare professionals, healthcare professionals can still learn from and with each other. Third, educational design for cross-border healthcare should be adapted to specific needs. Because cross-border healthcare is very diverse in practice, the specific needs of healthcare professionals will have to be considered for each situation. Educational design with clear learning principles can serve as a guideline, whereby context-specific adjustments are made in consultation between educationalists and healthcare professionals. Fourth, we need patients' perspectives to learn in cross-border healthcare. Their perspective is unique. Involving patients in education for cross-border care should take into account, among other things, the willingness of both patients and healthcare professionals to learn from and with each other.

Finally, the chapter presents practical implications, strengths and weaknesses of the research, and possible future research directions.

ADDENDUM

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Sometimes all you hear about is the hate,
but there is more love in this world than you could possibly imagine.
– Charlie Mackesy

ABOUT THE AUTHOR

Juliët (Juliëtte Anna Beuken) was born in Hoorn on July 17th 1993. As a child, she enjoyed learning about both science and art. In secondary school (Tabor College Werenfridus) she combined beta courses with philosophy and theatre. Next to that, her parents supported her to take lessons in singing, acting and piano. She went on to study Health and Life Sciences (BSc) and Management, Policy and Entrepreneurship in Health and Life Sciences (MSc) at Vrije Universiteit Amsterdam. Research internships for both studies inspired her to pursue a career in academia. After working as a junior researcher at Radboudumc, she moved from 'north to south' to start her doctoral research at Maastricht University in 2017. She conducted research on healthcare in the Meuse-Rhine Euroregion and collaborated with professionals from Belgium, Germany and the Netherlands within the Interreg-project SafePAT. She also obtained her University Teaching Qualification and started teaching in health sciences and medicine. Next to that, she took up singing with the best University Choir of Maastricht. After finishing her thesis in 2021, she started working as a postdoctoral researcher in a European project on patient safety education, within the Interreg-project COMPAS. She continues to enjoy living and working in Maastricht, combining her love for art and science in everything she does.

Picture by Miriam Groot

LIST OF PUBLICATIONS

Published papers directly related to this thesis

Beuken, J. A., Bouwmans, M. E. J., Verstegen, D. M. L., & Dolmans, D. H. J. M. (2021). Out of sight, out of mind? A qualitative study of patients' perspectives on cross-border healthcare in a European border region. *Patient Education and Counseling, 104*(10), 2559-2564.

Bouwmans, M. E. J., Beuken, J. A., Verstegen, D. M. L., van Kersbergen, L., Dolmans, D. H. J. M., Vogt, L., & Sopka, S. (2021). Patient handover in a European border region: Cross-sectional survey study among healthcare workers to explore the status quo, potential risks, and solutions. *International Journal of Care Coordination, 24*(2), 72-81.

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Published papers not directly related to this thesis

Beuken, J. A., de Nooijer, J., & Stalmeijer, R. E. (2021). Practicing what we preach for successful interprofessional education. *The Clinical Teache, 18*(6), 682-684.

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Selection of presentations

In de grensregio, voor de grensregio – Ontwerp en evaluatie van een interventie voor artsen in opleiding over internationale zorg. *Paper presentation at Onderwijs Research Dagen (ORD) 2021*

Knowing me, knowing you. – Establishing shared mental models to support healthcare professionals in cross-border collaboration in a European border-region. *Short Communication at Association for Medical Education in Europe (AMEE) 2020*

Out of sight, out of mind? International patient handover from a patient perspective. *Oral presentation at International Conference on Communication in Healthcare (ICCH) 2019*

Going the Extra Mile. International Patient handover from a healthcare professional perspective. *Oral presentation at International Conference on Communication in Healthcare (ICCH) 2019*

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List update February 8, 2021 (the list will be updated every year in January)

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405. Van der Meulen, A.N. (28-02-2019) *Social cognition of children and young adults in context*. Amsterdam: Vrije Universiteit Amsterdam

406. Schep, M. (06-03-2019) *Guidance for guiding. Professionalization of guides in museums of art and history*. Amsterdam: University of Amsterdam

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