A communication perspective on barriers to planned implementation

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A case study of the implementation of a care pathway at Danderyd University Hospital

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Abstract

Organizations continuously undergo planned implementations to improve and develop their way of working, but implementing these changes comes with challenges. Even when the purpose of the implementations is clear and the new way of working is finalized, there is still a high risk that the desired change effects are not reached. This study aims to examine barriers in planned implementations by using a qualitative data gathering method with an inductive design. Our sample consisted of 14 respondents, including 6 doctors and 8 nurses and of these some worked more comprehensively with the implementation. A thematic analysis was made to find barriers and communication was identified as the main barrier. It was then further analyzed through a modified theory of Model I and Model II communication framework. The research provides an understanding of Model II communication, resulting in mutual understanding, which fulfills an extremely important role in planned implementations. If Model I communication is being used, sufficient information transfer is vital for it to be a beneficial communication type in some contexts. This study contributes to the literature on awareness for organizations about potential barriers in an implementation and how these can be related to dysfunctional communication. Awareness of barriers and minimizing the negative effect through enhanced communication can improve organizational change to achieve the desired effect.

Key words: Barrier, Planned implementation, Communication, Change management

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Definition of concepts

SKR	Statens kommuner och regioner (government, municipalities and regions)
Hospital-wide implementation group	Responsible for all implementations at Danderyds University Hospital
Local process group	Responsible for the implementation at that specific department. Consisting of; a physician medical director, nurse director, physician resident, physical therapist if required, nurse and the director of medicine.
APT	Arbetsplatsträff (Workplace meeting)
Weekly meetings	Meetings every week are divided into nurses and physicians separately.

1. Introduction

1.1. Background

One of the most risky endeavors a company can undertake is organizational change. About 70 percent of mergers and acquisitions fail following the integration phase (Dikova et al., 2009). Difficulties with change are not only restricted to mergers and acquisitions, but are true across different types of change processes, such as evolutionary change, strategic or planned change or a mixture of both (Pardo del Val & Martínez Fuentes, 2003). This is reflected in the vast and scattered literature on organsísational change and subfields. Furthermore, if attempted change fails, the consequences may be severe, both in terms of wasted resources, lost trust, competitive position and high opportunity cost. In certain industries, such as the healthcare sector, even more serious consequences may follow, such as lower quality of care provided and adverse health events. Therefore, having a rich understanding about what makes planned interventions fail is of great importance. Change in healthcare typically involves implementation of new strategic interventions. When aspects of the intervention are planned out ahead of it being implemented, it is referred to as a planned implementation.

In recent years, many countries have started implementing care pathways in their healthcare systems. While many terms referring to the same concept can be found in literature, such as “Care Pathways", “Clinical Care Pathways”, “Clinical Pathways”, Standardized Pathways”, “Evidence Based Care Pathways", we will, in this thesis, simply refer to the entirety of them as care pathways. A care pathway constitutes a standardized approach on how to manage patient flows based on symptoms of the patient, and is created using the best available evidence of how optimal care is given (see appendix). The desired outcome is to increase efficiency, quality and equality in the healthcare sector. The patients are in focus and, as a result of the care pathway implementation, their satisfaction with healthcare should increase. Care pathways are adopted each year and with a growing number of implementations, hence the context of implementations becomes necessary to study.

With the recent and upcoming implementations of care pathways in Sweden (Lennartsson, 2021), the country is currently undertaking one of the largest restructuring programs of how

caregivers provide care. For this reform to be successful, it's essential to have good knowledge of potential barriers that may be encountered in the implementation process.

1.2. Research gap

One approach to studying why organizational change fails is by identifying individual barriers to change and drawing conclusions from them. While many barriers already have been found, the results are not very generalizable across different contexts (Means et al., 2020) which leaves room for gaining a more nuanced understanding of the barriers and what causes them. Organizational change takes different forms, such as mergers or acquisitions and implementations, and can be described in different structural change contexts such as, organic, inorganic, incremental, radical, planned and emergent. The implementation of care pathways into healthcare organizations represents a planned change which is interesting to study further as the best approach to implementing pathways is largely unknown (Jabbour et al., 2013) and many barriers exist. Furthermore, most studies on planned change as an implementation take a management perspective which fails to capture nuances of the perception from the lower levels in the organization. After all, many of the barriers to implementation originate from the employees, mainly in the form of change resistance. Another context of the change is the different phases of the change processes.

1.3. Disposition

This thesis will make use of a strictly inductive approach to research. We believe that barriers first have to be identified to enable a deeper understanding about the underlying causes. This provides the basis for the construction of our theoretical contribution.

In order to best capture what aspects of barriers to change are useful to study further, the barriers themselves must first be identified. The inductive approach has a few implications on the structure of the thesis. After the introduction comes a literature review on organizational change. The review will be brief as more emphasis will be placed on discussing our findings in comparison with the existing literature in the discussion section. Thereafter follows the method section, followed by the empirical chapter which ends with a thematic analysis of discovered themes. Based on the findings, a second research question is added. Thereafter a theory will be derived based on the data, which is tested in the following analysis chapter. The thesis ends with a discussion and conclusion of the findings.

1.4. Aim and research question

The aim of the present study is to create knowledge about barriers in planned implementation and, based on empirical findings, use a relevant theory to analyze data. An additional aim is to analyze underlying reasons for identified barriers. Research purpose is to contribute to awareness within hospitals about potential barriers in implementing care pathways and help the implementation process. Our research question is:

What are the barriers to planned implementation?

1.5. Intended contribution

The price of a failed implementation is high for many organizations, especially for healthcare institutions. A balance to be made when conducting change research is whether the research should mainly be practically relevant for practitioners or if it should make a theoretical contribution (Pettigrew et al., 2001). In this thesis, we will attempt both. Our contribution to practitioner-centered literature is to add understanding about factors that could constitute barriers to an implementation. We will also make a theoretical contribution about more detailed aspects of the underlying causes of barriers.

1.6. Main focus and delimitations

The study is limited to finding barriers to a planned implementation and is focused on barriers related to people's behavior. The research is conducted at Danderyd University Hospital, as a case study. Danderyds University Hospital was chosen as an appropriate organization because of its early adoption of the care pathway and the available access to interviews within the premises. After empirical findings, an additional second research question will be added to enable a deeper understanding of barriers. The theoretical framework will be selected after empirical data has been collected. Main focus will be the same, but the additional research question enables narrowing down and gaining a greater understanding in terms of causes.

2. Literature review

2.1. Introduction to organizational change

Change processes in organizations is a widely studied phenomenon. A successful change may be the difference between obtaining a competitive advantage or failing to keep up with the competitors. However, change is not an easy process, as it is widely associated with failure. It can analyzed through the frame of a psychology, which argues that the perceptions among change agents are important to understand (Oreg et al., 2011), or the perspective of structural and strategic considerations, such as the fit of the intervention, the effects on human capital (Oreg et al., 2011), and many more, as suggested in an extensive review by Jacobs et al., (2013).

2.2. Barriers to organizational change

2.2.1. Resistance to change

One of the most common reasons that change initiatives fail is because of the resistance to change among the change participants, caused by the unfavorable perception and attitude towards change (Vakola & Nikolaou, 2005; Weber & Weber, 2001).The reasons behind a negative perception of change can be numerous, ranging from parochial self-interest and differences in how change recipients perceive change to situations of misunderstanding and lack of trust (Kotter & Schlesinger, 2009). Resistance can also be the result of change triggered coping mechanisms (DiFonzo & Bordia, 1998). Having a pessimistic feeling towards change and those responsible for the change, is commonly called change cynicism (Wanous et al., 2000) and much research exists that suggests that change cynicism negatively affects outcomes of the attempted change (Barton & Ambrosini, 2013; Stanley et al., 2005). Much research points towards the importance of identifying and addressing this resistance in the pre-implementation phase such as involving the employees in designing roles and processes (Jackson, 1983; Nutt, 1998). This type of participatory approach is often associated with a higher degree of open communication to facilitate discussion. (Miller & Monge, 1985). Reducing ambiguity by communicating clear roles and outcomes is also important to reduce the diffusion of harmful rumors (DiFonzo et al., 1994) Failure to communicate information about the change might cause devastating effects if change recipients hear about the change from external sources outside the company (Bastien, 1987). Also the change

recipients' perception of how well planned the change is, is of relevance. A perception of careful planning had a positive effect on the change recipient's organizational attitude (Rafferty & Griffin, 2006).

2.2.2. Evaluation and feedback

The role of feedback and evaluation in planned implementation is important. This is because an implemented system or intervention is often continuously updated and iterated during the change process. (Lewis & Seibold, 1998). Lewis & Seibold (1998) further recommend evaluating the role between feedback and communication in light of a planned change.

2.2.3. Information

The lack of information about tasks could lead to insufficient knowledge about how to adhere to the implemented system or guidelines. Papa & Papa (1990) discovered that when change recipients received task information about a newly implemented system, it was significantly associated with higher productivity. Consequently, more sharing of information is received positively - people like information as it provides a perceived sense of control, and thus more information is being seeked by the change recipients (Miller et al., 1994). Because of this, Miller et al., (1994) believe that employees communicating with each other to solve problems and share training is beneficial.

2.3. Communication in organizational change

Communication is described in the literature as an important factor for a successful implementation. Communication in organizational change can be defined as a process of spreading information, such as making announcements, communicating feedback, training employees and communicating change programs (Lewis & Seibold, 1998). In a planned change, employees should be continuously informed about the implementation, and clear communication channels should be established with employees (Amiot et al., 2006). Some research has shown that the amount and quality of information, as well as supportive and

effective communication that is communicated to employees, is also important for successful change to take place (Axtell et al., 2002;Wanberg & Banas, 2000). The notion of "effective communication" is not uncommon in the literature but many times the communication is not explicitly described but rather implicit and general (Evans-Lacko et al., 2010). More rarely, communication is defined as a way to create shared understanding among change recipients. A number of studies suggest that the use of a participatory implementation approach requires more open communication and may facilitate better shared understanding about the purpose and design of the change (Miller & Monge, 1985, ;Ford & Ford, 1995). However, most times, the role of communication in shaping the shared understanding is neither explicitly mentioned nor implicitly clear.

3. Methodology

3.1. Study design

In order to achieve a deeper insight into the barriers to the implementation process, the following methodology has been designed to be able to carry out an exploratory study (Saunders et al., 2019). The relevant parts being described in this research are: study design, data collection, data analysis, ethical considerations and method discussion.

3.1.1. An inductive and qualitative approach

The process followed an inductive approach. Empirical data was collected and theory was adapted to the findings from the empirics in order to delimit the study to relevant theories and make a valid analysis. Information about barriers was non-existing before the interviews and therefore the research started with examining data, rather than starting from pre-existing theories. Therefore an inductive method was practiced and when utilizing an inductive approach, there is a margin of error due to not being able to work entirely inductively. There is a risk of still being affected by our biases, shaped by earlier experiences and knowledge.

To find an answer to the research questions, this qualitative study conducted semi structured interviews at Danderyd University Hospital for the Department of Rheumatology. The aim was to capture an in-depth knowledge of barriers for a planned implementation regarding a care pathway. The flexibility found in semi-structured interviews was necessary to be able to dig deeper into interesting aspects that were perceived as contributing to the study. Every individual's experience and knowledge about specific parts of the implementation is unique, therefore semi-structured interviews provide an opportunity to explore some aspects and answers further in addition to the predetermined questions.

3.1.2. Pragmatic study

The constructionist ontology limits the possibility to draw generalizable conclusions (Martin & Nakayama, 1999), - an often key aspect of inductive studies -, about the observations. While a pure positivistic lens on reality may not be plausible, as it fails to capture non visible aspects of communication, such as underlying assumptions, it is useful for inferring contingency aspects of the data (Frey, 2018). The study has therefore taken a pragmatic ontology approach which enables a flexible epistemology. Reality is seen as temporary and

changeable. It is considered important to combine established ontologies and use the best instruments to get a comprehensive view of the problem. When analyzing a practical issue, this approach is reviewed to be the most optimal choice to focus on the relevant aspects of this study (Saunders et al., 2019).

3.1.3. Cross-sectional research

The study is seen as a cross-sectional research. This was chosen to be the best option because of time limitations and the goal to explore the implementation from the beginning to the middle of the process. If there had been more time, a longitudinal research could have been considered to capture more time periods during the implementation and get more comprehensive data.

3.1.4. Case study

This study is referred to as a case study as all interviews were done at Danderyd University Hospital, Division of Medicine, Department of Rheumatology. The aim for this study made it appropriate to choose one organization to create an in-depth insight and be able to analyze the complex structural and managerial insights in a hospital environment (Saunders, Lewis et al. 2019). A case study is a good way to explore a complex issue and could further contribute to future research and more advanced studies. The risk, however, with choosing a case study is specific facilitators and issues connected to that particular organization. Attempts have been made to avoid this, by focusing on relevant data that are considered being relevant for other hospitals as well.

3.2. Data collection

3.2.1. Sample

The data was collected from 14 semi structured interviews lasting an approximate 40 minutes on average. The ambition was to obtain a representative sample of the whole Department of Rheumatology, which is why staff from different levels of the organization were interviewed. Of the people interviewed, 8 were nurses and 6 were doctors. Among the collected interviews, there were both people who were more or less involved in the implementation process (see table 1). There were also three representatives from a broader environment, who

were not exclusively working at the Department of Rheumatology, to obtain a wider view and organizational perspective. Different genders and backgrounds were represented among the interviewees in order to get a nuanced whole of reality.

Professional role	Role in the implementation
Nurse	Process group, hospital-wide
Nurse	Process group, hospital-wide
Nurse	Participating
Nurse, head of nurses	Process group, local
Nurse	Process group, local
Nurse	Participating
Nurse	Participating
Nurse	Participating
Physician	Participant
Physician	Participant
Physician	Participant
Physician	Process group, local
Physician, head of physician	Process group, local
Physician, operation manager	Process group, hospital-wide

Table 1 Interview sample. Distinguishes between those who work hospital-wide and professional roles.

3.2.2. Interview process

The interviews were conducted during three days at Danderyd University Hospital. All interviews were recorded and took place in a room at the Department of Rheumatology. To put the respondent at ease and feel comfortable, cookies were served during the interviews. We started off the interviews by telling them about the purpose of the interview and the importance of learning from the implementation, as similar implementations are ongoing, or will be ongoing in hospitals across the country soon. The interviews were done in Swedish, because of the majority of the respondents having Swedish as their first language. There was also the option of having the interview in English, but all respondents decided to have the interview in Swedish. The selection process for the interviews was largely based on availability on their behalf. The director of the division and Department of Rheumatology

asked the employees to participate in the interviews as a part of their work tasks which made it easy to collect the appropriate amount of interviews. The majority of the respondents asked if they could read the finished paper and seemed to have a genuine interest in contributing to our evaluation. This indicates reliable answers and meaningful contributions for our study. One potential liability in the data trustworthiness is the time gap between the start of the implementation and the interview which amounts to almost 2 years. Many respondents claimed to have forgotten details about meetings and structures because much time had passed since the implementation started. Others weren't there from the beginning and had started their job at the Department of Rheumatology at a later date.

3.3. Data analysis

All interviews were recorded and transcribed into text. This was done to make sure that nothing was missed and to retain the possibility of finding useful insights from the primary sources. When the data had been processed through recordings and writing, a thematic analysis was made. Firstly, there was a process in finding as many themes as possible, by linking the quotes and looking for patterns. This was then narrowed down to three main takeaways. One important final factor was discovered after discussions and comparing all patterns. *Communication* was found to be the main underlying cause to these barriers, which was then processed through theory.

3.4. Ethical considerations

To reduce the risk of ethical dilemmas, the method was chosen and carefully considered in order to not put the respondents at risk for pain, harm, embarrassment or dilemmas resembling this (Saunders et al., 2019). The respondents interviewed had the opportunity to sign a consent form to feel comfortable about how the data was being handled. Data and the consent form was managed in line with Stockholm School of Economics guidelines. The

respondents were also asked to consent if it was okay to record the interview and, at the slightest hesitation, the decision would be made not to record. In this case, all respondents were willing to cooperate and all were fine with being recorded. In the beginning of the interview it was clearly stated that the respondents had the chance to leave whenever they wanted to and that they were allowed to stop the recording at any point of the interview. Furthermore, interviews started by explaining the purpose of the study and answering any questions of the respondents. In line with regulations for GDPR, the recorded interviews were removed after the study.

3.5. Method discussion

Due to a qualitative study, criticism of the chosen methodology will be based on the criterias of credibility, transferability, dependability and confirmability (Saunders, Lewis et al. 2019). When it comes to credibility there is a potential problem in the interviews being conducted in Swedish. Since the report is written in English there is a risk of deviation in formulations and citations throughout the translation process. The phrasing have been slightly adjusted in translation for easier reading, but the meaning has not been affected. Despite this risk, it was still chosen to conduct the interviews in Swedish as it was considered more important that the interviewees could respond easier in order to to get useful information when the respondent had the opportunity to carry out the interview in their most compatible language. The main source of information was collected from qualitative interviews. If the study would have included observations and other sources, this would have increased credibility. To increase credibility even more, the interviewees could have gotten the opportunity to read the transcripted interviews to get their view of our interpretation. This was not done because of time limitations and availability. However, the data has been carefully reviewed, both by listening to the interviews and transcribing them, to increase credibility. Transferability in the study can be questioned to some extent because the interviews were conducted in only one organization - Danderyd University Hospital. As a consequence of a cross-sectional approach, which focused on individuals in specific settings during a specific time period, it's difficult to generalize the study to broader fields. The criteria of dependability is affected by the choice of semi-structured interviews, which questions whether a similar study would be able to replicate the same answers. The confirmability was affected by the relatively small sample of 14 interviewees.

3.5.1. Reflexive considerations

As external researchers we had interest in this organization because of a personal contact to the top executive manager responsible for the Department of Rheumatology. This gave us an opportunity for physical access and greater knowledge sharing cognitive access at the hospital (Saunders et al., 2019). Previous conversations about the hospital may have created biases that affect our intentions and applicants in our qualitative investigation. Even on an unconscious level this could have affected how we searched for data and further on how we interpret the data. To avoid this to the greatest extent possible, we have been aware of this potential problem and kept it in mind during the course of the study.

4. Empirical data

The empirical data section will present the relevant data in context to the research question. The data reviewed is relevant to find out what potential barriers exist and the reason behind them.

4.1. Organizational climate

When questions were asked about the social climate in the organization the answer was consistently positive and detailed that there was an open climate within the institution. It was found that people never feel afraid to ask questions or express their opinions. Employees always feel that they have the opportunity to make suggestions. When asked if they sometimes feel embarrassed or are afraid to admit a mistake, the answer was a clear no from the respondents. It was also revealed that doctors and nurses talk with each other on a daily basis and their relationship to each other was good and equal.

“I perceive the climate as open and it feels like we all talk about things and if you discover something, it doesn't seem like a problem to bring it up”

“Everyone talks to everyone, everyone respects each other”

The leadership in general at the Department of Rheumatology has been appreciated by the employees. People expressed that they can address any issues that come up and that there is nothing directly negative towards the leadership.

“You never feel like you need to be afraid or that you are not allowed to be heard or seen. You are welcome to share the opinions you have.”

"I think it's good that I can discuss with my managers if there is something, they can bring it up to higher management."

4.2. Structure in the implementation process

4.2.1. Process group

The roles among co-workers and work tasks were stated to be clear in the beginning of implementation. During the process this started to become more blurred which has led to confusion and discussions. An employee was sharing a story about facing disappointment for not being able to follow through the assigned work task and not communicating this to the group. This individual did not understand that this should have been communicated before the meeting.

"I think the roles were clear at first, but the workload became too great for me.."

"It's more indirect, you do this and you do that, but it's not something I feel has been clear really."

4.2.2. Structure in the implementation process

There are divided opinions about the care pathway, but it is comprehensible that there have been structural problems in the implementation in some aspects. Concerns have been expressed about missing important information.

"We think it was a good structure, but to some extent, how do you divide this into phases of the work and how should we communicate in the group with each other during the periods between these feedback meetings?"

"What I have noticed later is the need for and lack of knowledge in this local process group's work of process development and business development. It is an identified need that we have addressed. The process groups need to learn more about business development, process development, and improvement knowledge."

4.2.3. Learning by doing

When asking questions about how structured the implementation has been, it showed some differences of opinions. It was predominantly considered as 'learning by doing', even though

there were some divergences in the perception. An important aspect is that everyone in management positions has described this as ‘learning by doing’.

“There is learning by doing and then you have to learn from that process to see how we shape the implementation support generally in a broader sense for the other care processes.”

4.3. Impact on a regional level

There has been inexplicit information from a regional level. The Stockholm region has been giving information on which quality indicators to use for measuring the results of implementing a care pathway. Danderyd University Hospital started early to implement the care pathway in the Department of Rheumatology, which led to them needing to redo part of the process and thus required more work and time. It was found that there is a desire from the leadership team in Danderyd to receive a more structured approach during the entire process from regional level. There has also been a difficulty in obtaining the indicators that have been required to measure the outcome of the care pathway.

“It takes a little long sometimes to restart some things. You don't always have a good plan of what to do. We have brought up at their meeting with whoever is the regional project manager, that we should get more guidelines. It's more of a structural issue.”

“And those were indicators you didn't know how to measure, so you have taken indicators that don't actually exist to measure, so it was perhaps a bit stupid. We had to find our own ways to measure that data.”

4.4. Physicians are sometimes not following the care pathway

4.4.1. High workload and stress

Doctors have a high workload because there is a lack of resources and many patients on the waiting lists. This leads to stress, which affects the doctors' ability to follow the care pathway. Because of stress, the doctors forget which patients should be included in the new system or they don't have time to prioritize the care pathway

.

"There is a clear structure in when we meet the patients, 3, 6 and 12 months, for example, but then there may be doctors who say that instead of coming in 3 months, you should come in 6 months and that is wrong because then we deviate from the care pathway and the equal structure that is being sought. Then we can't follow up either, because data is now registered at every meeting."

"Because we have certain fixed times when the patient should have contact with us after they have received the diagnosis, but if a doctor brings in a patient after three months and comes up with their own time, then they have misunderstood."

4.4.2. Confusion about the starting date

There has not been a clear date nor a coherently communicated reminder for when the care pathway for RA will begin to be applied in daily work for doctors and nurses. This has led to physicians starting to apply the care pathway at different time periods and resulted in them not being in the same phase of the implementation process.

"I think that there needs to be clarity, that is usually where there is a misunderstanding, a bit confusing. A clear start date, because it's been like, should we start this now or should we wait a little longer? Some started following it, others didn't, there was a bit of uncertainty."

"No, not everyone understood the start date. So we who were in the group understood and we tried, we had workshops and working groups to get everyone, but I still feel that everyone is not understood in the care process."

4.4.3. The need to deviate from the care pathway in special cases

It was discovered that doctors sometimes deviate from the care pathway when they feel that it is beneficial for the patient. They stress the importance of patients being the first priority and the care pathway a second. In general, they believe that the care pathway is good, but sometimes they feel the need to deviate from the system.

"No, because we have the opportunity to sort of push the boundaries a bit, that we also decide. It is not like a must that they have to come after three months, for example, you can meet them perhaps earlier. There are no problems there."

"It is a personal approach. We can change a little in the follow-up, but these are exceptions."

4.4.4. Other stakeholders unawareness that doctors deviate from the care pathway

In the previous paragraph, it was revealed that doctors consciously deviate from the care pathway when they believe it is best for the patient's care. It was also discovered that both the management team and nurses in general weren't aware of this phenomenon. This was expressed in an indirect way, by none of the nurses and management mentioning this. It was also expressed by physicians by saying that they haven't communicated this further.

"No, from what I know, we physicians have taken that initiative, I don't even think that those higher up are even aware that we have projected patients up sometimes quite quickly or that we have decided from the beginning from the first visit how we should have it, that is not exactly like the care pathway."

It was an interesting finding that a few persons in the process group showed an understanding for the need to sometimes deviate from the care pathway. However, they emphasize the importance of communicating this to facilitate evaluation of the implementation outcome.

"There may be clear motivations for not following the flow, which I can understand, so the only thing required is that we have open communication."

4.5. Uncertainty in daily work

4.5.1. Inconsistency in handling physicians deviating from the care pathway

It is revealed that a consistent incident, according to the nurses, is doctors not following the care pathway. It is also clear that the nurses take on a big responsibility to make sure that the care pathway are followed. The way the nurses handle doctors' mistakes when following the care pathway, however, is significantly different. Some nurses express that they give feedback directly and provide the physician with a chance to amend the mistake. Management has expressed a concern about the difficulty for nurses to have courage and give feedback to the physicians. This is, however, not something that has been mentioned by the nurses. On the other hand, some nurses have stated that they correct the physicians' mistakes without communicating this to them.

"when they come to the doctor, they can plan for a follow-up, but we say if they should come in three months, because that's how the flow looks like, and the doctor, for example, writes that they should come in 6 months, then I have to correct it so they get the same follow-up that all patients included in this flow must have. I don't inform the doctor that they aren't following the flow unless I have any more questions"

"We give feedback immediately, then they never say no, but then they figure it out for themselves. It's never the case that someone gets angry."

4.5.2. Lack of information and repetition

Nurses state that there has been good information and that they are satisfied with the implementation. Part of the nurses, however, have expressed the absence of repetition and not enough review of work tasks. It's also revealed that they ask many questions and discuss with each other when there are uncertainties.

"Yes, I remember a week ago, because then I would do a 6 months screening and I had never done that before. I understood what to do but then I had to fill in a register and I didn't know

how to do that, I didn't understand what to do simply. I tried, but in the end I went and asked for help"

"What I rather lack is perhaps a follow-up and repetition about the care pathway."

4.6. Thematic Analysis of data

4.6.1. Identification of constructs

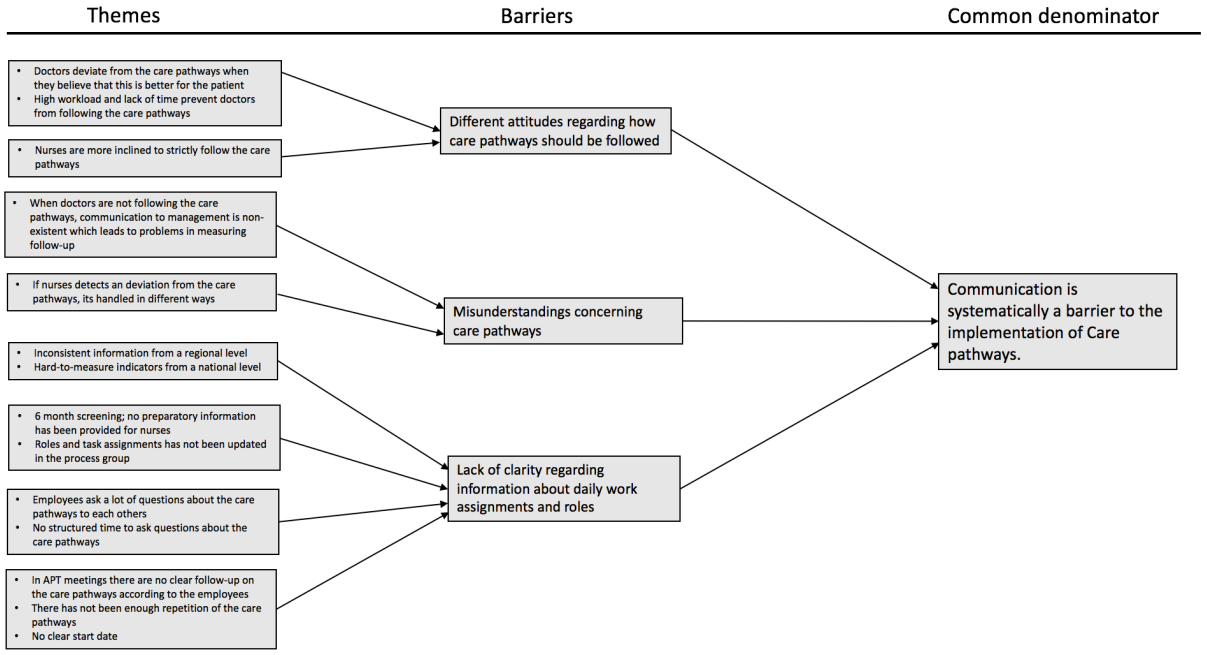

Figure 1, Thematic analysis of data

A thematic analysis was carried out and three main barriers were identified based on empirical findings. (1) Different attitudes regarding how care pathway should be followed. (2) Misunderstandings concerning care pathway. (3) Lack of clarity regarding information about daily work assignments and roles.

4.6.2. Implications of findings

The thematic structuring of the data has revealed an interesting pattern in the barriers identified. Most of the barriers to implementation originate or are influenced by improper

communication in the change process. This discovery is significant and, it highlights the importance of understanding communication processes for a successful implementation. That includes *how* and *when* communication impedes or facilitates an implementation .
Therefore, a theory on communication in an implementation setting is necessary.

4.6.3. Additional research question

With the discovery of the importance of communication, and nature of inductive research, a second research question will be added. As the research question in section 1.4 was formulated to identify the barriers to implementation, it follows logically that this paper would want to make a contribution about how the lack of and different types of communication can negatively affect the implementation process. Therefore, the second research question is stated as following:

"What impact does communication have on barriers in planned implementation?"

5. Theory building

5.1. Defining communication

In order to evaluate the way communication impacts the barriers in the implementation, we will first attempt to formulate a definition of communication. The data collected in the empirical section suggest that this might not be as straightforward as it first appears. With our adoption of a pragmatic ontology, it alowes for a flexible epistemology suitable to capture both meanings and structural aspects of communication. It allows us to make assumptions about the data according to what can be considered reasonable, and makes the best use of our data, rather than being limited to one ontological view (Frey, 2018). This allows us to analyse both structural aspects aspects of the communication as well as how it creates meaning and shared understanding.

5.2. Model I and Model II communication

The data supports a broad classification of two different purposes of communication. One communication theory that has great similarities with these two categories is Model I and Model II communication (Argyris et al.,1985; Argyris & Schön, 1996). The theory categorizes two different styles of communicating. Each style includes a set of aspects that divides them and the styles are referred to as Model I and Model II communication. They broadly argue that Model I communication is closely connected to the exercise of power. Model I is about persuading others about one's own agenda, defensively protecting oneself, and using rational and logical arguments over emotions. On the contrary, Model II communication is largely characterized by open communication, valid information and non defensive relationships. Argyris et al. (1985) go on to claim that Model II communication is always superior.

5.3. A revised definition of Model I and II communication

While the mentioned theory is considered important, especially in the learning literature, we believe it has limitations. Much of the literature emphasizes that the context is important to consider for explaining barriers in implementations (Means et al., 2020), and many implementation models include contextual elements. A strong power perspective may be an important aspect of communication in a context where power struggles are largely or partly

present. From our empirics however, it was evident that inclusion and trust were high among the health practitioner hence reducing the significance of power. We further argue that with low incentives to coerce the information, Model I communication should also be able to transfer valid information and not exclusively Model II communication. With this assumption, another aspect emerges from Model I communication: its' role in transferring information. Argyris et al. (1985) claim Model II communication to always be preferred over Model I communication. We argue that the more one-way focused Model I communication may even be more useful for quick and to the point information transfer and orders, especially in an environment where time is scarce. Some information is also considered not to require mutual understanding because of a small degree of interpretation.

Blomberg (2020) argues that model II communication is closely related to a horizontal way of organizing with focus on collaboration whereas model I more closely resembles top down vertical based communication. Notice the similarities between the implementation of externally constructed guidelines and top down instructions. Blomberg (2020) also interpreted model I and model II communication more similarly to our definition. Therefore we have decided to adopt his description of model I and model II communication (table 2), but may interpret it differently with regards to its usefulness in transferring information. The context under consideration is summarized as irrelevance of power struggles and time pressure. Whenever referred to model I and model II communication for the rest of the thesis, this is the definition of the model we refer to, unless explicitly stated otherwise.

Model I Communication	Model II Communication
If the other person does not understand the problem, they are the problem	Emphasis common goals and mutual understanding
Advocate	Inquire
Use facts, logic, criticism or anything else to get the other person to understand the problem	Combine claims with questions
If the other does not agree, take it as proof that they don't understand the problem (and are thus the problem)	If the other person does not understand, continue investigate the problem using open communication
Do your own analysis	Open communication: question your own (and the other person's) assumption and interpretations together

Table 2: Revised model I and model II communication, Jesper Blomberg (2020)

5.3.1. Definition Model I Communication

The purpose with this communication is to inform, pursue or influence others through providing information. It entails more of a one-way view of communication through the sender's use of ethos and logos to pursue the recipient. Under the assumptions that there are largely no power incentives to coerce the information, the communication style becomes less destructive and more useful for quick information transfers.

5.3.1.1. Information transfer

Communication with the purpose to transfer information is considered central in Model I. Rather than attempting shared understanding, the purpose is, to a greater extent, a one sided diffusion of instructions, knowledge and information.

5.3.2. Definition Model II Communication

The purpose with this communication is to obtain a mutual understanding about processes and problems to avoid misunderstandings. Other implementation frameworks refer to this as creating a shared vision. It emphasizes open communication, asking questions and questioning assumptions.

5.3.2.1. Mutual understanding

Communication with the purpose to gain mutual understanding is central in Model II. Mutual understanding is defined as people involved in the communication exchange attempting to achieve a mutual understanding of oneothers perspective and beliefs about a problem or situation.

5.4. Theoretical framework

In this section, a communication framework will be constructed based on model I and model II communication and the findings from the thematic analysis (Figure 2). It posits that communication can be both a facilitator and a barrier to an implementation depending on the context, purpose, sufficientness and type of communication. An explanation of the different parts and how they were derived follows below.

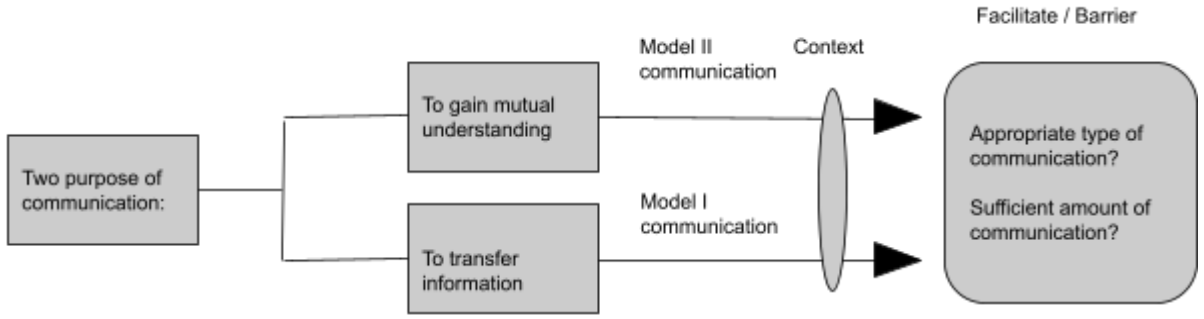

Figure 2: A framework on the impact of communications in an Implementation

5.4.1. Framework discussion

One limitation with the framework is its use of bipolar classifications. There may be many other purposes of communication, such as specific personal reasons or intentions relating to power. One could question the usefulness of the framework if it largely fails to explain communication when strong resistance to change is present as it's a very significant part of the change literature. One could also argue that providing information and facts is relevant in shaping a mutual understanding and that the purposes therefore aren't mutually exclusive.
The same argument can be applied to a bipolar classification of communication as either model I or model II. It may very well be a mixture of both on a continuum at any given time.

Despite this, we believe the framework is a valuable contribution. The point isn't to view the framework as overly prescriptive or as an absolute truth. Communication is a complex subject and by making broad categorizations, it makes it easier to apply to an analysis. The theoretical framework provides a useful way of modeling different aspects of how communication facilitates or constitutes a barrier in an implementation. We believe a coherent communication framework that links context and different aspects of communication with barriers in an implementation setting is lacking in the literature. The theoretical context in which we aim to make a contribution is depicted in Figure 3.

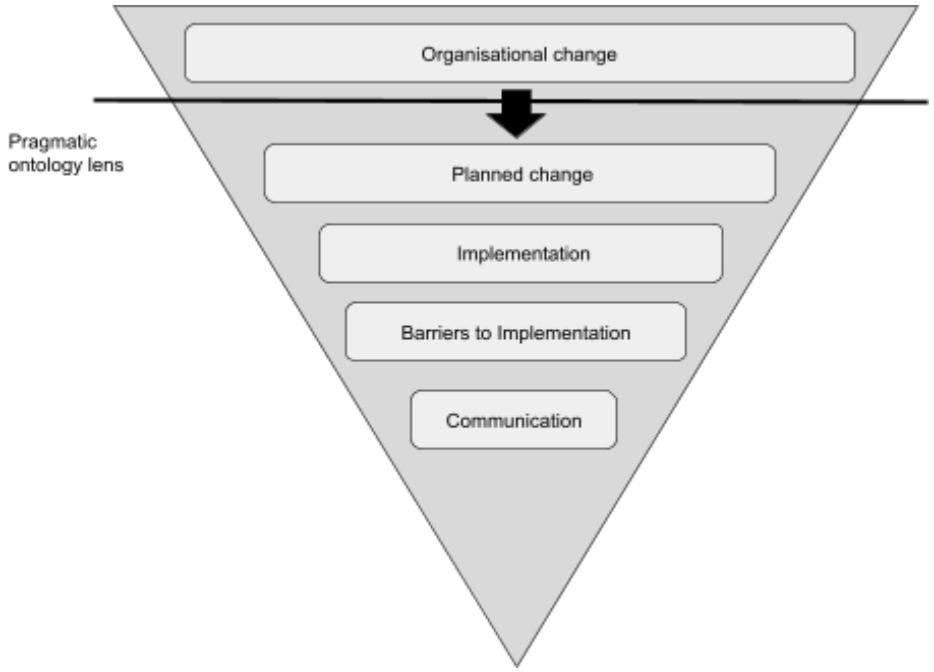

Figure 3 - Research context

6. Analysis

As presented in figure 1, important barriers to implementation have been identified. It was revealed by the thematic analysis that identified barriers had a connection to communication. In order to extend the analysis, a theoretical framework developed in Section 5 will be used. Our analysis aims to examine what effect different types and amounts of communication have on barriers found in the analysis.

6.1. Model II communication

Model II communication has been shown to be a contributing factor in creating mutual understanding for organizations. Empirical findings have revealed barriers of; (1) Different attitudes regarding how care pathway should be followed. (2) Misunderstandings concerning care pathway. These barriers indicate a potential lack of mutual understanding. Misunderstandings occur on different levels, both between physicians and nurses; and employees and higher management. The analysis will begin by describing people's different cognitive schemas, mental structure of preconceived ideas, and then examine this in context to the phenomenon of shared understanding.

6.1.1. Physicians cognitive schemas

What can be found in empirical data is that some physicians are consciously deviating from the care pathway when they believe that this is more beneficial to the patient. They were using the opportunities to deviate from the care pathway structure when needed. Data additionally shows that the physicians didn’t see any problem with such behaviour. The physicians have expressed that the patient was perceived as a higher priority than the care pathway. The opportunity to deviate from the flow and to have a personal approach is something that is not mentioned by nurses and management, but only by the physicians themselves. It's clear that doctors are seeing the care pathway more as a guideline and maintain their degrees of freedom to some extent.

6.1.2. Nurses cognitive schemas

Nurses' perception about the care pathway is shown to be different. They are more strict about following the care pathway and view it more as a structure that needs to be followed, as opposed to perceiving it as a guideline. Both physicians and nurses agree that it is the nurses

who take the greatest responsibility for care pathway. This is because physicians expressed that nurses have a very good knowledge about the care pathway and that they are helping the physicians not to forget to place patients in the care pathway system. Nurses are shown to take the care pathway more seriously and they are not questioning its underlying assumptions.

6.1.3. Management cognitive schemas

From a management perspective it's considered important to follow the care pathway. Some co-workers in the top of the organization were not aware of the physicians' view in regards to having a personal approach on how to follow the care pathway. However, it's also stated that a few people working in the process group, which are also working at the clinic, are understanding the need to sometimes deviate from the care pathway. The only concern is that this should be communicated, which was not done at the time of the observation and interviews. A concern from the process group is that there will be difficulties in measuring indicators and results of the implementation if it is not communicated that physicians sometimes choose to deviate from the care pathway.

6.1.4. Mutual understanding

Seeing the different cognitive schemas in the context of the care pathway is indicating different perceptions on how to work with this. Further the awareness of the different cognitive schemes will be discussed.

It's clear that the different stakeholders are not aware of each other's cognitive schemas. These different perceptions are not being communicated neither to each other nor to the management team. Data is clear about nurses only mentioning stress and high workload as an explanation to why physicians are not following the prescribed care pathway. Even if this has been revealed as one important reason, it's also essential to understand that physicians are sometimes deviating from the care pathway by their own volition. The reason for time pressure is known by all people involved and therefore it's easy for nurses to think that this is always the case. This could lead to misunderstandings and, in the worst case, nurses changing a conscious decision made by the physician believing that the physician only forgot. The majority of people in the management team were not aware of physicians' cognitive schemes. This is shown by the management team not identifying them and not showing awareness

about them during the interviews. It's also stated by physicians who expressed that the management probably is not aware about it. The consequences of this are difficulties in measuring the outcome of implementation. Not understanding each other's cognitive schemas is pointing towards a lack of mutual understanding.

This indicates that the wrong type of communication is being used. Since Model II has been proved to lead to mutual understandings, the organization has been using insufficient amounts of Model II communication. The organization has a great potential of embracing a Model II approach and a mutual understanding. This is thanks to a good organizational climate, respect for each other and good relationships in general within and between various professional groups.

6.2. Model I communication

One barrier found was not considered relevant to mutual understanding. This barrier is following: (3) Lack of clarity regarding information about daily work assignments and roles.

The organization is using model I communication and this type of communication is not viewed as wrong when the goal is to transfer information which does not have a high degree of interpretation. This is because of a stressful environment and that it's not considered important to reach a mutual understanding in this case. The information has not been received in an adequate way or the information has not been given at all. This is supported by the empirical findings showing employees have not understood or received this information which has led to confusion. This is apparent due to their lack of understanding, for example, in filling in the 6-month register and awareness about the start date. According to data, the employees are experiencing a lack of structure in the implementation and the hospital-wide implementation team is expressing a high degree of learning by doing. They are experiencing no clear follow-up in APT meetings, little repetition of the care pathway and no structured feedback. The insufficient information transfer is considered a consequence of lack of structure in feedback which has led to lack of information for employees. This has further led to barriers in the implementation as discussed earlier.

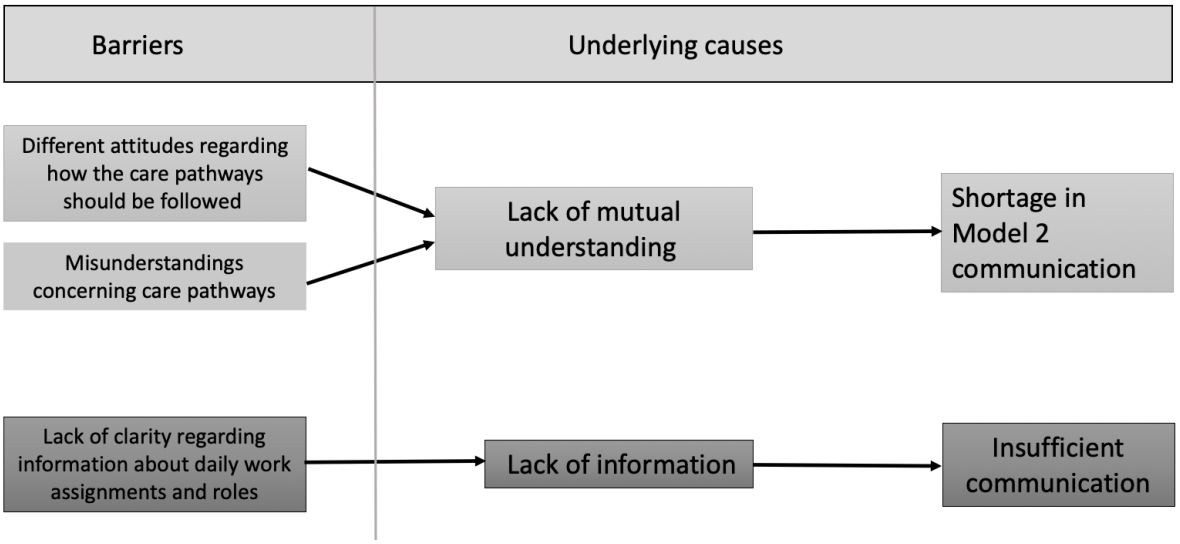

Figure 4; Barriers and underlying causes

7. Discussion

7.1. Answers to research questions

Organizational change comes with risk. Even when the purpose for the change is clear and the new way of working is finalized in a planned implementation, there is still a high risk that the desired effect by the change is not reached because of barriers in the implementation phase. The aim for this study was to examine barriers to the planned implementation process. After the collection of data, a second research question was formulated, relating to the communication in the implementation process. The first research question was stated as following:

" What are the barriers to a planned implementation?"

The first part of the research question was answered after empirical findings and discovered through a thematic analysis. The data collected showed a variety of barriers that caused inefficiencies, either in the form of wasted time, higher cost or negative impact on the quality of care provided in the implementation process. These were; (1) Different attitudes regarding how care pathway should be followed. (2) Misunderstandings concerning care pathway. (3) Lack of clarity regarding information about daily work assignments and roles. Communication was identified as a common link between found barriers and hence another research question was formulated:

"What impact does communication have on barriers in planned implementation?"

The second part of the research question was based on communication being discovered as a key factor in found barriers. From analyzing data through a selected framework, many insights have been reached. It was firstly revealed that barriers (1) and (2) are a consequence of an underlying communication cause - a lack of mutual understanding. It was further discussed that not having enough Model II communication in the organization is an important factor in why the organization has not reached a mutual understanding regarding the care pathway. Too much Model I information would therefore constitute a barrier to the implementation by hampering mutual understanding. Barrier (3) were not considered to be related to mutual understanding but rather that the main reason behind this barrier was

insufficient information or no information at all. A critical finding in our study is that model II communication fulfills an extremely important role in planned implementations and lack of this communication type leads to not having mutual understanding. In situations when mutual understanding is not necessary however, model I communication may be unproblematic and maybe even preferred if time is scarce and information is requested.

7.2. Discussion of contributions

Many of the barriers discovered in our case study resonate with previously discovered barriers. The importance of receiving sufficient information is in agreement with the findings of (Bierly et al., 2000) who believes it to be essential in an implementation context. However, some scholars have found that too much information enables employees to pursue personal agendas (Bierly et al., 2000) and is a source of power that could make them more likely to resist the implementation (Oreg, 2006), Nothing indicates that would be the case from our findings but we rather observed information to be important to enable adherence to the implemented system. Lack of clarity was also shown to be closely connected to communication on feedback, which Lewis & Seibold (1998) called for more research on in the context of a planned change. Our findings resonate with (Amiot et al., 2006) suggestion that structured feedback on iterations of the implemented system is important to increase clarity of information. Same is true for timely reminders of information, such as a reminder close in time to the start date of the implementation, or a refresher close in time on how a future aspect of the implemented system is to be carried out. These findings are very significant in the specific context of planned implementations of care pathways as little is said in the literature about this. A review of many studies on barriers to implementation of care pathways did not explicitly mention lack of feedback and reminders as barriers (Evans-Lacko et al., 2010).

Another finding from our study is that model II and not model I communication should be used to gain mutual understanding about a problem or situation. Argyris et al. (1985) argue that mutual understanding can be obtained from communication. However, there is no clear agreement about this in change literature, and many definitions of communication exist. Some scholars define communication more in line with model I communication (Lewis & Seibold, 1998; Rycroft-Malone & Bucknall, 2010). Others mention effective communication

as important but do not provide a definition of it (Mendel et al., 2007). Sometimes, persuasive communication is considered appropriate to create a shared vision such as in a controlled approach such as described by Churchman & Schainblatt (1965). They argue trust is largely insignificant when leaders have power. Perhaps this implies that the presence of strong resistance would increase the need for more persuasive and less open communication in some cases. Another way of looking at our results is that model I communication was unsuccessful in being able to reach a mutual understanding and barriers was more closely related to lack of a shared vision rather than active resistance. Regardless, this emphasizes the importance of mutual understanding even in the implementation phase.

Lastly, a short discussion of the finding in light of the study purpose will follow. The best approach to implement the pathways was said to be unknown (Jabbour et al., 2013). The study identifies many barriers that could impede communication and provides insight into the type of communication that should be used. However, the greatest contribution to the literature on pathway implementation is likely the insights about the importance of defining communication. Many evaluative frameworks are used by practitioners to guide implementation but many of them don't have a clear definition of communication. Even fewer take a dual purpose perspective of communication as suggested by an extensive review on pathway implementation frameworks (Manojlovich et al., 2015). There is a need to improve the communication perspective in these.

7.3. Managerial implications

Several recommendations to managers are made. Firstly, the study identifies a number of barriers to an implementation, listed in the beginning of the discussion, of which managers should be vary of in an implementation. Secondly, an open communication style, that we define as model II communication, is important to use to facilitate mutual understanding and avoid misunderstandings.

7.4. Limitations with study

The study has several limitations that should be brought to light. This study was a case study in a single department of one health institute. God interpersonal relations, high trust and no strong power conflicts was observed. Such a specific context may provide poor generalisability of our findings and limit the usefulness of our framework. Furthermore, only

one implementation of one pathway was studied. If large differences exist between pathways, some barriers may be more or less relevant to other types of pathways. Another potential limitation is our pragmatic ontology. While providing flexibility for how to make sense of data, it's also subject to our subjective biases when selecting what constitutes the best way to interpret the data. A limitation with the study design was the narrow focus on only the barriers. An initial research question aimed at identifying both may have provided a more complete understanding about the implementation. Some aspects about barriers may simultaneously facilitate other processes in the implementation but these nuances fell outside the scope of our research question, and what we had collected data about. Finally, the choice of an inductive study has come with both benefits and limitations. Without it, we wouldn't have discovered the theme of communication to center our study around. On the other hand, we weren't able to ask many specific questions related to their communication patters.

7.5. Recommendations for future research

The planned implementation literature acknowledges that communication is an important aspect of implementations, but our results suggest communication is more than only important; it is an omnipresent aspect. With regards to this, communication has received remarkably little attention in the implementation literature. Therefore we have two recommendations for further research:

1) More research should try to study how strong an impact communication has on barriers in an implementation. This should be assessed for different environmental contexts.

2) Researchers should try to improve our communication framework by testing different contexts for when our version of model I and model II communication hamper or facilitate the implementation. Also, how well does it work in a context with present power struggles?

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9. Appendix

Health and care pathways in Sweden

It has been proven to be an unequal opportunity to receive health care in different regions in Sweden. Patients with the likelihood of having rheumatoid arthritis have unequal conditions of getting a new appointment within a shorter period of time. It has also been shown that only 31% had an opportunity to do a cardiovascular screening within the first year. There are also differences in how patient data is registered in SRK, Svensk Reumatologis Kvalitetsregister (Lennartsson, F., 2021).

Care pathways are a national initiative and are a collaboration on a national and regional level. These pathways are primarily a support for a structured way of working and equal knowledge for health care staff in contacts with patients. This process is being implemented in five to six units at Danderyd University Hospital. Care pathways is focusing on the patient's journey from symptoms of rheumatoid arthritis to a follow-up after 12 month or the alternative that a diagnosis can be excluded. The process is based on recommendations from the European alliance of associations for rheumatology, Svensk Reumatologisk förening and Svenska läkaresällskapet. The desired outcome is to increase efficiency, quality and equality in the health sector. The patients are in focus and their satisfaction with health care should increase. (Sveriges kommuner och regioner, 2020).

Standardized care pathway (personcentrerade sammanhållna vårdförlopp- PSVF) was first implemented in 2018 for cancer as an effort to reduce waiting times within the healthcare sector. From late 2020 and forward, there has been ongoing work with implementing care pathways for a variety of different medical conditions. In 2021, more than 10 new care pathways for different diseases were introduced. A pathway can best be described as a flow of how patients are treated and what healthcare services they are offered at different stages depending on standardized medical guidelines. After a few reports from socialstyrelsen, evaluating the new PSVF for cancer, it was largely deemed a success. Some of the conclusions include shorter waiting times, happier patients and increased equality in care offered in different regions. Learning is another aspect of the PSVF that is heavily emphasized. Since The PSVF is a national initiative, it is constructed as a set of guidelines, or

tools, that outlines what needs to be done in different stages of the diagnosis for the patient. But since the process and demands of patients and systems vary greatly between regions, the PSVF is adaptive and flexible in nature to meet the different needs. Consequently, PSVF are NOT a directive governing the management and organizational aspect of the care but rather a guide as to what should be included. This means that each hospital is free to decide how they want to implement it according to their needs.