



UNIVERSITY OF  
GOTHENBURG

# OCCUPATIONS AND DIGITAL CHALLENGES

A qualitative study about the implementation of  
digital work methods in dental care

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Essay/Thesis:	30 hp
Program and/or course:	Strategic Human Resource Management and Labor Relations
Level:	Second Cycle
Semester/year:	St/2021
Supervisor:	Bertil Rolandsson
Examiner:	Monica Andersson Bäck

# Abstract

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**Purpose:** This research aims to study how a qualified professional occupation experiences the implementation of digitalized work methods in their daily work. More specifically, how dentist professionals respond to the digitalized work methods and identify challenges when implementing digital change in a professional context.

**Theory:** The theoretical framework is based upon the institutional logics perspective. We aim to investigate how the respondents make sense of the organizational change and how these logics are implemented in practice; thus, we are also influenced by the sensemaking perspective.

**Method:** The study takes a qualitative approach, and the empirical data is based on 22 interviews with general dentists and specialist dentists in a Swedish public dental care organization.

**Result:** The result shows that the dentists responded with enthusiasm towards the change; however, skepticism was also prevalent. The study identifies several challenges that dentists encounter during the change process, for example, loss of autonomy and new challenges regarding knowledge sharing and communication. Further, a lack of coherence between the general dentists and specialist dentists was evident and may create tensions as the project progresses. Most respondents viewed this working method to be beneficial for either patients or organizational efficiency or, both.

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# 1. Introduction

Digital solutions in modern day are nowadays a part of everyone's daily lives. The Covid-19 pandemic merely pushed companies to adopt more digital solutions at work. Meetings "in person" are no longer a guarantee, and many needed to adjust to seeing each other and interacting through a screen. Even before the Covid-19 pandemic there was an increase in digital healthcare services; there has been a growing demand to meet professionals through digital solutions. Care professions have long been viewed as challenging to change or digitalize since work depends on the encounter with patients (Rolandsson et al., 2020). However, these days technology enables meeting with a patient without the expert in the same room; you are no longer bound to time and space. This technology manifests uncertainties regarding the relationship between the care provider and the patient, so how do the professionals secure quality of care in this format?

These phenomena make it interesting to investigate how a professional group experiences and handles digital changes in their everyday work. This master's thesis will investigate how a professional group adopts new technology and integrates change management. What characterizes this occupation is their craftsmanship and skills, as well as the ability to operate with a high degree of autonomy and the right to organize or structure their work based on their most suitable perception (Brante, 2011). There is a coherent societal belief in these occupational groups and expectations of certain knowledge. These employee professionals are not easily replaceable, hence there is an inherent exclusivity in professions that one cannot ignore. Hence, when management wants to enforce change in a professional context, they often encounter resistance (Erwin & Garman, 2010). This thesis sets out to examine how employees react to and perceive change in relation to digital tools that are becoming more common in various professions and occupations (SKL, 2016). It can be difficult to grasp, and no one knows what is to come other than change is coming. Research is necessary to help understand these challenges and gain more knowledge regarding the relationship between professionalism and change management. Our master thesis will address how professionalism affects organizational change and how these highly qualified professionals respond to change management. The digital change focuses upon digital tools providing new ways of communication and the ability to provide care to an extensive geography. Further, our thesis

will address how dentists perceive the new digital working methods and its possible affect on their professional capability.

## **1.1 Background**

Digitalization and new technology are usually associated with fear and innovation (Neufeind et al., 2018). Focus has been on automation has heavily been discussed and portrayed as the direction of new technology and the end of some occupations (Neufeind et al., 2018; Rolandsson et al., 2020). As stated above the type of digitalization our thesis is investigating is about tools for communication and providing care services virtually. However, the healthcare sector was initially spared from this rhetoric and discussion due to the nature of the work depending on client relations (Rolandsson et al., 2020). It is essential to understand that personal interaction and the relationship between care provider and patient is vital for the professional to work effectively. It is difficult for a care provider to give a diagnosis or suggestion for treatment without interaction between the parties. Even though health care depends on client relations, they are still susceptible to some forms of digitalization, such as new communication methods. More and more tasks are no longer bound to time and space, or relationships between client and care provider, which implies some tasks can perform virtually. Performing tasks virtually and adopting digital transformation is usually regarded as an activity that will optimize and increase productivity (Dølvik et al., 2020). Moreover, what separates healthcare compared to other services is the inherent expertise and high degree of autonomy. Introducing digital change in any organization is a challenge and often fails (Reay et al., 2017). Adding extra dimensions of autonomy and expertise adds to the complexity of change management, which further complicates an already delicate situation (Evetts, 2009).

As already shown, the development of healthcare services and digital initiatives is continuously ongoing and introducing change in any organization is a challenge. There is no ideal strategy or method to conduct a smooth organizational change. We know this a complex challenge ahead for many organizations. Previous research shows that introducing change in organizations employing occupations with a high degree of autonomy and independence is difficult and complex. New technology often requires a lengthy integration process before users accept it as a given tool, which introduces problems since learning new technology often slows down work and adds to cognitive stress before the employees are comfortable with the technology (Dølvik et al., 2020; Kleiven et al., 2020).

HR professionals, management and researchers all expect organizational change to encounter some sort of resistance, and it can either make or break the organizational change. Both researchers and practitioners can agree that conducting organizational change is challenging and a complex process (Erwin & Garman, 2010).

Our research will address this challenge and investigate how an occupation adopts new technology and working methods initiated top-down. We will study a particular occupation in the healthcare sector associated with providing services to clients and requires higher education. In this case, the new technology changes the way the employees communicate and cooperate; it is a form of digitalization which emphasizes communication by video to provide an alternative way to provide care between general dentists, specialized dentists, and patients. We are interested in investigating how an occupational group responds to these new working methods and potential challenges when introducing this digitalization into the organization.

## **1.2 Purpose and research questions**

This research aims to study how a professional occupation experience implementing digitalized work methods in their daily work. We will explore this in a case study of a dental organization in Sweden, and the occupational group consists of dentists. In order to understand the process of implementing new working practices in a professional context and how the employees experience implementing new working methods, the questions we seek to answer in our research is:

- How do professional dentists respond to the implementation of digitalized work methods?
- What challenges do they encounter when implementing digitalized work methods?

To answer these questions, we will conduct a case study in a public sector organization. The chosen respondent organization is a public dental care organization in Sweden. There are approximately 150 clinics and in total employs around 3000 employees. These 150 clinics are broken up into about 100 dental clinics and 50 specialist clinics. Our chosen respondents consist of general dentists and specialist dentists, and it is essential to distinguish that the specialist dentists have different fields of expertise. Thus, their work tasks are different, which is vital to consider when analyzing responses. Meanwhile, the general dentists have a broader

role, encountering various patients and cases and seek assistance from specialist dentists for more complex cases.

### **1.3 Disposition**

In the following chapters we will first introduce previous research relevant to our thesis. Secondly, there will be an introduction to our chosen theoretical framework and a description of how we will apply the theories to our empirical findings. Thirdly, we will describe our methodology and research approach. We will continue presenting our empirical findings thematically in the chapter results. Fourthly, discuss and analyze our findings in relation to our chosen theoretical framework and previous research. Lastly, present a conclusion of our findings, limitations of our research, and present suggestions for future research.

## 2. Previous research

This chapter we will go through and present previous research that has been deemed relevant for our thesis. Previous research is presented thematically according to these themes: change management and resistance, change management in healthcare organizations, introducing digital change in healthcare organizations, the status of professional work and the rise or fall of professionalism.

### 2.1 Change management and employee reactions

Change management is a well-investigated research field; there are countless definitions, theories, models, and guidelines on the subject focusing on how to conduct smooth organizational change (Fernandez & Rainey, 2006; Andreasson et al., 2015). Previous research show that in today's competitive market organizations need to adapt and renew themselves to survive and stay relevant for the consumers (Mansaray, 2019). To avoid failure in change management processes, organizations emphasize the affected parties, understand, and assess the changes to come, then act and respond to the organizational changes (Cinite & Duxbury, 2018; Godbole, 2017). Studies have shown that organizations generally have blind faith that a good structure and plan will be the winning concept for introducing change. However, structure and plans also need to be followed by social initiatives, for example, setting a shared vision among the workers and creating commitment (Gill, 2002; Kavanagh & Ashkanasy, 2006).

In this field of research, the employee perspective has also been a topical topic and highly investigated. For example, Stensaker and Meyer (2012) present six types of employee reactions regarding handling change management. The first reaction means the employee fully engages themselves in implementing change by taking the initiative and pushing it forward. The second reaction refers to the employee being loyal to the change, adopting the suggested changes while maintaining their daily work. The third reaction is a passive response and consists of distancing oneself from the change and continuing work. The fourth reaction refers to the employee going into a paralysis state, hence not attending to the change, and struggling to attend to daily operations. The fifth reaction is when an employee voluntarily decides to leave the organization. The sixth reaction refers to actively sabotaging the change

initiative by different actions, for example, speaking against the change or the people implementing it.

## **2.2 The recurring failures of change management**

According to previous research change management is plagued by failure, and two-thirds of all significant organizational change fails. One critical aspect that is closely related to change management is resistance. Resistance can take shape as many different actions but usually include stopping, delaying, or altering the intended change (Waddell & Sohal, 1998; Klarner & Diefenbach, 2011; Smollan, 2014). Previous research shows that resistance is a disputed topic, and a unanimous definition of resistance does not exist. However, traditionally resistance has been viewed as a problem solely within individuals and a problematic behavior that management has to put up with and overcome (Georgalis et al., 2015; Piderit, 2000). That being said, resistance is not solely to blame for the lack of success when introducing change. In change management, many view resistance as the enemy of any change process, and change introduced with minimal resistance is regarded as a successful one. However, this view may be misguided as resistance can highlight valid employee concerns about the proposed changes. In many cases the employees do not fear change, but instead they resist uncertainties (Piderit, 2000; Waddell & Sohal, 1998; Erwin & Garman, 2010). Workplaces marked by passivity when implementing change can be problematic due to the lack of energy to incorporate the change. Meanwhile, workplaces who meet strong resistance are often willing to address the problem and adequately implement the change, even if it includes examining and resolving potential uncertainties beforehand. Previous research state that employees are essential to change projects due to their commitment to the project is often the determining factor if the change is successful or not (Wadell & Sohal, 1998; Georgalis et al., 2015). This phenomenon is especially true in healthcare organizations since the organization is dependent on the operative core, such as doctors or dentists. Hence it is crucial to have the core functions onboard to be successful.

## **2.3 Change management in healthcare organizations**

According to Evetts (2009) and Reay et al. (2017) implementing organizational change in a professional context such as the health sector poses many challenges which is also typical what Mintzberg (1983) would describe as professional bureaucracy. Implementing new ways of organizing work or other initiatives can be difficult, as it depends on the willingness of the

professional workers to adapt to the changes (Andreasson et al., 2018). Previous research describes that professional bureaucracy as an organizational structure characterizes rigid structures and is functioning healthily when producing standardized outputs, hence traditionally viewed as slow to adapt to change. The professionals are traditionally used to a high degree of autonomy and decision-making power regarding their work. In that way, health care organizations are simultaneously hierarchical and non-hierarchical. Moreover, when managers try to push new changes or strategies concerning working methods in daily operations it often generates resistance (Andreasson et al., 2018; Andreasson et al., 2015).

Previous research shows that successful organizational change in care organizations is linked to managers ability to involve the professionals in the development work and managers knowledge of change management (Andreasson et al., 2018; Glouberman & Mintzberg, 2001; Andersen & Røvik, 2015). Another critical factor is the management's ability to respect the professional workers' skills and established work routines, thereby avoiding micromanaging the professionals and giving them the freedom to act independently (Andreasson et al., 2015; Andreasson et al., 2018). Healthcare organizations and other industries face demands of increased efficiency and digitalized solutions, however introducing digital change in any organization is said to be a challenge (Cresswell & Sheikh, 2013).

#### **2.4 Introducing digital change in healthcare organizations**

Previous research shows that healthcare organizations are, in general, slow to adapt technological advancements when compared to other sectors (Cresswell & Sheikh, 2013; Black et al., 2011; Southon et al., 1999; Sandblad et al., 2018). Furthermore, introducing technology within complex organizations is neither simple, nor is it a linear process. Instead, it is dynamic and requires iteration to implement technology successfully. Underlying digital change is a complex system of both social and technological issues affected by internal and external factors (Cresswell & Sheikh, 2013; Chiasson et al., 2007; Sandblad et al., 2018).

Several studies have addressed the importance of social aspects when implementing digital change into healthcare organizations. These factors may include the general competence and technological aptitude of the personnel as well as involvement in the introduction and the project. The opportunity to test early prototypes to ensure the technology is user-friendly and likely to be used by the professionals is considered a vital part of successful implementation (Keshavjee et al., 2006; Gagnon et al., 2012). Further, studies have shown that personnel tend

to reject technologies that undermine their perceived social status or professional autonomy (Ludwick & Doucette, 2009; Gagnon et al., 2012). Furthermore, according to Martin et.al (2020) there exists a divide between traditionalists and newer employees within the healthcare sector. The traditional, more experienced employees tend to reject change and other logics that may interfere with their way of working due to professional prestige. While newer employees tend to be more open to change to change and other logics.

## **2.5 The status of professional work & professionalism**

Occupations with high social status and manifested by autonomy are common traits for the type of group we investigate in our study. However, what defines a profession is a disputed topic (Brante, 2011; Saks, 2012; Evetts, 2009). The general characteristics include, but are not limited to: theoretical knowledge, prolonged education, licensing, collegiality, discretion, mutual ethics, autonomy, and control (Brante, 2011; Freidson, 2001). For this master thesis, we will use the definition of professions as science-based occupations. The science-based occupation involves professionals integrating scientific principles and findings into their practice, moreover, applying formal, organized theoretical knowledge in their field.

Additionally, professions are mostly known for having a high degree of autonomy in daily work, which implies that professionals have a solid mandate to decide what work they will do and how to perform their work. Another critical aspect of a professional's work is that professionals shall be committed to the wellbeing of individuals and society. Hence, professionals have a solid ethical code and are assumed to commit to doing good for the commonwealth (Freidson, 1994, 2001; Brante, 2011, 2013; Franzén, 2020). Lastly, professionals' work is regulated by occupational standards instead of organizational standards (Noordegraaf, 2020).

Previous research shows that professionalism in many cases has undergone change and is a part of further commercialization and result-oriented management. This change has led to a polarized view on the matter; experts have proclaimed this both to be the fall of professionalism and the return of professionalism (Noordegraaf, 2020; Evetts, 2018; Trappenburg & Noordegraaf, 2018; Ulfsdotter Eriksson et al., 2017). Furthermore, Noordegraaf (2020) presents in his research that new technology and the adaptation of technology in professional work is associated with the transformation of professionals' work, which some deem as the fall of professionalism.

Organizational change affects how professional groups organize and practice their work. Even if professionalism is changing, it remains similar in several aspects: authority, legitimacy within the organization, and identification with the profession or occupation rather than the organization itself. The professionals are still seen as highly competent within their selected fields and maintain discretion to deal with intricate problems. What has changed with the influx of new public management is further governance and management, resulting in more organizational control and standardization, resulting in an emphasis on rational authority, hierarchical structures, standardization, and managerial control instead of autonomy, identity, and self-monitoring (Evetts, 2018; Noordegraaf, 2015; Ulfsdotter Eriksson et al., 2017).

However, professionalism is not necessarily fading away but somewhat changing shape in order to survive. There is research that presents a new potential path for professionalism, a combination of professionalism and stakeholder and client perspective. This perspective results in professionalism becoming co-owned and decision-based on clientele and stakeholder data rather than solely trusting the professionals, known as connective professionalism (Noordegraaf, 2015, 2020; Skelcher & Smith, 2015).

### **3. Theoretical framework**

This chapter describes our chosen theoretical framework, the institutional logics perspective, and an explanation of how it will be conceptualized and used for our analysis. In the study, we will investigate professional logic and how it is enacted in relation to the implementation of new technology. Our unit of analysis is how professionals make sense of the implementation process of new digitalized working methods. Furthermore, the institutional logics perspective and sensemaking will be used to understand and explain the dentists' responses to the organizational change and its challenges. This is a suitable theoretical angle since a strong sense of structure and culture exists within healthcare occupations.

#### **3.1 Institutional logics**

In line with initial statements our study is investigating a skilled profession, in this case, dentistry. We will investigate the professionals' approach and responses to new digital working methods in their everyday work through a lens of professional logic. By analyzing this phenomenon through a lens of professional logic, we aim to explain how and why the professionals respond to organizational change in a certain way. However, this does not rule out other logics since professionals can use other logics, such as organizational in collaboration with professional logic to make sense of their new surroundings.

Institutional logics is a metatheoretical framework used for analyzing the interrelationships between institutions, organizations, and individuals in a social context (Thornton et al., 2012). Most of the research concerning institutional logics is about how logics influence individuals and organizations (Cloutier & Langley, 2013). Traditionally, there are seven identified institutional logics: family, religion, state, market, profession, organization, and community (Scott, 2014). Below, we present a table that summarize three logics that is relevant for our study, see Table 1. Each institutional logic can be defined as socially constructed values and drives that organizations and individuals base their choices and act on to organize day-to-day work. It may also be defined as organizational principles or “rules of the game” that employees need to adhere to or otherwise face the consequences from other organization members.

Table 1. Interinstitutional System Ideal Types\*

<b>Categories</b>	<b>Market</b>	<b>Profession</b>	<b>Organization</b>
<b>Root Metaphor</b>	Transaction	Relation network	Hierarchy
<b>Sources of Legitimacy</b>	Share price	Personal expertise	Market position of firm
<b>Sources of Authority</b>	Shareholder activism	Professional association	Top Management
<b>Sources of Identity</b>	Faceless	Association with quality of craft Personal reputation	Bureaucratic roles
<b>Basis of Norms</b>	Self-interest	Associational membership	Firm employment
<b>Basis of Attention</b>	Status in market	Status in profession	Status in hierarchy
<b>Basis of Strategy</b>	Increased profit	Increased personal reputation	Increased size of firm
<b>Informal Control Mechanism</b>	Industry analysis	Celebrity professionals	Organization culture
<b>Economic System</b>	Market capitalism	Personal capitalism	Managerial capitalism

\*Inspired from Thornton, Ocasio and Lounsbury (2012:73)

The institutional logics can either compete or thrive; one logic is usually dominant and controls which specific social and organizational norms are desirable and normalized within an organization. The dominant logic within an organization is based on organizational values combined with occupational and group values (Martin et al., 2020). Following the dominant institutional logic can often be seen as a source of legitimacy and authority. However, in many organizations, the dominant logic can shift depending on employees and occupation. It can create clashing logics where the goals and norms are not compatible (Smets, 2015; Raey, et al., 2017; Martin et al., 2020).

Previous research shows that differentiation and complexity of an organization have an impact on institutional logics. The presence of multiple logics within an organization usually results in conflicting institutional demands (Lander et al., 2013). In an organization where

multiple logics is incompatible it creates contradictions and can be a source of tension. Though, logics do not necessarily have to be in conflict or contradictory instead, it can manifest in harmony. However, institutional logics are not static over time, instead continuously shaped by processes and therefore creating new conditions for the actors to interpret (Greenwood et al., 2011). Even though some logics are conflicting, it has been suggested they may co-exist in specific contexts. In some cases where conflict is damaging for the organization, two competing logics merge as a hybrid logic and keep elements from both logics to co-exist. An example of this is professional logic and organizational logic merging to face new consumer demands of speed and efficiency (Lander et al., 2013; Greenwood et al., 2011). Greenwood (2011) states that it is crucial to see organizations as more than just a manifestation of institutional logics because organizations act as forums where the logics come into practice, where people enact, interpret, and make sense of norms and guidelines of institutional logics.

In our research, the chosen profession is dentistry, which is associated with being one of the classic and pure professions (Brante, 2011). The characteristics of professional logic align with the characteristics of professional occupations. The traits that are most known and associated with professional occupations are: having a high degree of autonomy, knowledge and skills acquired from extensive training and education, solid ethical code, collegiality, and usually these occupations are license protected (Freidson, 2001; Brante, 2011).

On a micro level the institutional logics constrain and enable actors as they serve as a rulebook for interaction. The logic does not define what a person is supposed to do but rather who the person is and how the person relates to the rest of the organization.

As previously described, there usually exists one dominant logic within the organization. That being said, professionals usually draw from multiple different logics to get things done (Lander et al., 2013; Thornton et al., 2012). This is dependent on the situation and which actors are included. For example, dentists may draw from a professional logic when encountering patients and quickly switch to an organizational logic when discussing management related questions. Even though there exists a professional logic, it is essential to note that logics are shaped by individuals and groups (Thornton et al., 2012). The logic is

shaped on a field level and must adhere to organizational rules based on the structure, ownership, and identity of the organization. Thus, rather than passively accepting a logic, the actors shape their reality by translating it into their organizational structure and identity (Thornton et al., 2012).

### **3.2 Applicability of theory in our study**

In line with dentists shaping their reality based on their organizational structure and identity our focus in this study is how dentists tackle these practices when exposed to change involving technology. As previously mentioned, many challenges and tensions usually arise when new technology is introduced in a highly qualified context, therefore it is essential to understand how these professionals understand and interpret the implementation of new technology. This study will address and focus upon how professionals make sense of the imminent changes and how they tackle complexities and tensions between logics. Their reactions and behavior will be understood as them practicing sensemaking. Sensemaking will be used to further understand how and why the dentists react in a specific way. Thus, we will be influenced by what is referred to as sensemaking theory. The institutional logics perspective is a theoretical framework that sheds light on social interactions to understand the perspective and how they are essential to individuals and groups. Hence, in our study, we will use the sensemaking theory by Karl Weick (1995). The core of sensemaking is to give meaning to events; actors must make sense of their day-to-day actions. Workplaces are full of ambiguous activities and choice, and one way to cope with this is to make sense. Some actions and situations are deemed as more critical and based on several properties of sensemaking.

Our analysis will use the institutional logics perspective and the theory of sensemaking to explain how these logics might come into play. Our aim in combining these perspectives is to create a more robust theoretical framework. The actors encounter numerous different institutional logics that help guide their action based on a sense of self-identity. Depending on the organizational context, actors make sense and draw upon different institutional logics and therefore adopt different types of professionalism. The point of departure of our analysis is how change management can be understood and explained in relation to institutional logics and sensemaking. Dentists encounter three different kinds of institutional systems: professional logic, organizational style since the influx of NPM, and market due to the public

sector competing with private dentistry. The different frameworks will be used to understand how and why the dentists react in specific ways to new digital working methods and how they argue about the change.

## 4. Methodology

This chapter is a description of our research design, how we collected data, how we processed the data and carried out our analysis and ethical considerations.

### 4.1 Research design

We chose to conduct a case study, and we collected our primary data from semi-structured interviews. In contrast, our secondary data contains documents and material from the organization regarding the project. The secondary data has been used to get a deeper understanding of the organization, the project, and the implementation plan. We were able to access the secondary data early on in our study before drafting the interview guide. When designing our research project, we wanted our research to be explorative and close to the practitioners. We strived to get a close image of the dentist's own perception of the change and digital tools. Since we wanted to be close to their experience and stay open for variation, we felt that a qualitative study was a suitable choice. We chose to apply an abductive approach for our study. Applying abductive reasoning provides us with the flexibility to revise our initial plan regarding our theoretical framework during our research project (Alvesson & Sköldbberg, 2017).

### 4.2 Data collection and sampling frame

We gathered our primary data by conducting 22 in-depth semi-structured interviews. Our reasoning for this choice of method is that we wanted to use a method for data collection which emphasizes respondents' experiences, feelings, and opinions. Moreover, we collected material that provides depth and enables us to analyze the conditions and mechanisms of the organizational change and the implications of their profession. Thus, gathering data through semi-structured interviews was a natural choice (Bryman, 2018; Denscombe, 2014). Also, due to the ongoing Covid-19 pandemic performing observations and interviews face-to-face was not possible. Therefore, we needed to conduct all interviews virtually. We conducted all interviews with the video calling service Zoom. Each interview was scheduled to last approximately 45 minutes, and the range varied from 30 to 49 minutes.

We chose a purposive sampling strategy for our study and collaborated with the organization in order to get in contact with respondents. The respondents were chosen based on the relevance for our research, resulting in two identified sampling groups. The sampling

consisted solely of general dentists and specialized dentists as these were the professions that were mainly affected by the new technology and working methods. The requirements for the interviews were that the respondent had to have participated in the training opportunity provided by the organization and tested the new technology. Clinics were selected based on completing the training opportunities in January and middle February 2021 and achieving a geographical spread. We carried out seven interviews with specialized dentists and 15 with general dentists spread out geographically in the region. We strived to have an equal distribution of respondents regarding general dentists and specialized dentists. However, the organization could not liberate that number of specialized dentists due to Covid-19.

The gatekeeper helped us with contact information to clinic managers, which helped us get in contact with respondents from sampling group 1. Regarding sampling group 2, we received a list of names and contact information to several specialist dentists, which we contacted and asked for their involvement. When scheduling the interviews, we sent out a consent form by email and information regarding the study and instructions for using Zoom; view Appendix 1, 2, and 3. Each interview was recorded and afterwards transcribed for the data analysis.

When conducting the interviews, we followed an interview guide; view Appendix 4. When we conducted the interview guide, we strived to create questions that emphasize the implementation process, respondents overall experience, and how the new working methods affect their work. We chose to structure our interview guide thematically and create questions based on our research questions and secondary data. We also had regular meetings with an organization contact person who was highly involved in the project to create an interview guide with relevant questions. Further, we used secondary data such as risk analysis, project plans, and training material from the organization. After the first couple of interviews we also revised our original interview guide by altering a few questions to capture aspects that were not previously identified by the gatekeeper or the secondary data. We decided on our roles before the interview sessions. One took the role as the lead interviewer, and the other took a less active role focusing on small notes and asking follow-up questions to capture fine details and ask appropriate follow-up questions. After each interview session, we had a short debriefing session where we discussed the outcome of the interview and wrote down potential issues or other interesting aspects concerning the interview.

### **4.3 Description of case study organization and DC project**

The organization is a public sector organization in Sweden employing approximately 3000 employees. The organization has 150 clinics divided between specialist dental clinics and dental clinics, and approximately there are 100 dental clinics and 50 specialist clinics. Presently, the organization is implementing one of their most significant initiatives regarding new ways of working and new technology. With the help of technological equipment, it is possible to perform care sessions virtually, where the patient and specialist dentist do not physically need to meet. When patients are supposed to meet with a specialist dentist, the specialist dentist previously had to visit the patient's home clinic, or the patient needed to travel to the specialist clinic. The specialist clinics are based in large cities, which resulted in longer queue times, especially for patients outside large towns. With the implementation of digital consultations, instead of the actors travelling, the patient instead visits one's home clinic where the patient's ordinary general dentist virtually assists a meeting. The digital consultations, therefore, usually include a patient, a general dentist, and a specialist dentist. The general dentist performs the dental treatment and provides a live feed of the patient's mouth for the specialist dentist, who can coach the general dentist and assess the live feed. The dentists will cooperate and make suggestions for treatment and decide if the patient needs more complex treatment at a specialized clinic or if the home clinic can proceed with treatment according to recommendations from the specialist dentists. Furthermore, the equipment can be helpful without the patient as a communication tool where the professionals discuss patient cases mainly using photos, x-ray images, and patient journals. These forms of virtual treatments refer to digital consultations (DC). The project's focus area is mainly to reduce queue times and create equal care around the region, which saves time and resources and also presumably boosts the competence of the general dentists. It is important to note that even though the project contains advanced solutions, it is not a replacement for dentists nor automatization of their work. It is a form of information and communication technology; it strives to create new networking opportunities between general dentists, specialized dentists, and patients.

The organization has since 2017 planned for the launch of the project. In early 2018 phase one was initiated, mainly focusing on testing and evaluating technological equipment, and was performed in a few pilot clinics. Phase two focused on identifying standardized practices and developing new working methods. Phase three is the final phase and focuses on launching

the project throughout the region, which involves educating the employees and coaching them in the new working methods to ensure that digital consultations become a natural part of their everyday work. The implementation process officially started in January 2021 and is set to be done in June 2021. The main incentives for driving this change are increasing the availability of specialist dental care and equal health care regardless of where the patient lives within the region. Additionally, digital consultations aim to open for closer collaboration between all clinics and continuous learning for the general dentist, which allows them to handle more complex cases.

The current context is important to note due to the unique circumstances surrounding Covid-19. At the time of our study, the organization was highly strained in terms of resources and time. Furthermore, the organization was pushing an additional digitalization project that was being implemented parallel to our chosen project. Finally, there are several areas of specialization regarding the specialist clinics, and there are seven different specialties represented in our study. Readers need to understand that the specialist dentists' work varies depending on the specialization, and therefore their use of the new technology may vary.

This project is, in short, about efficiency; with the implementation of new technology, the organization aims to reduce queue time to specialist clinics and strengthen the competence of the general dentists. Another important aspect is the planning of this project, which has not been a linear process; instead, the project has changed over the years. Moreover, what fits into the concept of DC is broad and not coherent in the organization while this project launched.

The organization had planned an introduction plan, whereas the clinics are offered a short initial theoretical and practical education. For some the education opportunity is the first proper encounter of the DC project and the equipment. After the education there is a ten-week plan that each employee shall follow, which ends with an examination. The examination's purpose is for the general dentist to show that he or she can maneuver the DC equipment and technology. After the ten-week plan, the general dentist should be proficient and ready to use DC equipment with and without a patient. Hence, the ten-week plan is fluid and leaves much room for the employee to be responsible and manage their learning.

Below is a chart of the respondents that participated in the study. As stated in the description of the case study, a few pilot studies have been done before launching the entire project for all

clinics. None of the general dentists for the interviews have been participating in the early testing or planning of DC, though some of the interviewed specialist dentists have had an active part in the growth of the DC project. We have chosen to omit factors such as age, gender, and years in the profession to secure our respondents' anonymity, as these factors are not relevant for our analysis. We have decided to sort the dentists based on their distance to the closest specialist clinic. This is essential since the distance to the specialist clinic is one of the incentives for implementing this new working method. The organization strives to achieve more availability, regardless of where the patient lives. Also, the specialist dentists rarely engage directly with the patient to the same extent as the general dentists, which affects the relationship between patient and care provider.

The general dentists and specialist dentist are divided into four groups: close, medium, far, and situated at the specialist clinic. Close is less than 15 kilometers, and the medium is 15-50 kilometers and far is 50+ kilometers to the nearest specialist clinic.

<b>Respondents</b>	<b>Distance to Specialist clinic</b>
General dentist 1, General dentist 8 <i>Sum: 2</i>	Far, 50 + km
General dentist 4, General dentist 5, General dentist 9, General dentist 11, General dentist 13, General dentist 14, General dentist 15 <i>Sum: 7</i>	Medium, 15 > 50 km
General dentist 2, General dentist 3, General dentist 6, General dentist 7, General dentist 10, General dentist 12 <i>Sum: 6</i>	Close, < 15 km
Specialist dentist 1, Specialist dentist 2, Specialist dentist 3, Specialist dentist 4, Specialist dentist 4, Specialist dentist 5, Specialist dentist 6, Specialist dentist 7 <i>Sum: 7</i>	Specialist clinic

#### **4.4 Data processing and analysis**

Before the transcribing process we decided on a joint structure. Since all the communication with respondents was in Swedish, we decided to keep the original language and transcribe word for word and include any potential pauses not to lose out or change underlying messages. Regarding the analysis method, we chose a thematic analysis due to our study's aim

to investigate respondents' experiences, feelings, and opinions. Bryman (2018) describes thematic analysis as a technique for the researcher to get close to data and identify different meanings of the dataset. To get familiar with the data, we reread our material several times before starting the coding process. Also, to avoid potential biases, we read through all transcripts individually. When we started the first phase of coding, we coded individually and close to the empirical material. We took a grounded approach since we strived to create a rich material of codes, thereby not dismissing anything that could be of interest. The next phase consisted of finding and categorizing themes among our codes. Some examples of emerging codes and themes in our empirical data is “fear of technology”, “availability”, “care quality”, “easy technology”, “knowledge sharing”. After identifying specific themes, we coded the empirical data once more, this time to further investigate our previously identified themes. Entering the final phase of the coding, we sat together to develop, refine, and categorize the dataset and the emerged themes. Following, we analyzed our collected data in the forthcoming chapter named *Results*. Also, during our coding process and while analyzing our empirical material we strived to be open-minded and not have our theoretical framework framing our coding process or analytical process. Which was important for us to not neglect or dismiss any possible patterns or themes in our material.

#### **4.5 Data quality**

The reliability of qualitative data can be hard to measure and assess. It is impossible to determine if the answers would be the same if the interview would be performed again. However, we have tried to manage risk by using a semi-structured interview guide. A semi-structured interview guide allowed us to ask follow-up questions, which enabled respondents to elaborate on specific topics. The only way to properly test the reliability is for another researcher to replicate the study. However, since the study is entirely anonymous, due to ethical reasons, this will prove challenging to perform. Furthermore, the current context with the other digitalization project and the ongoing Covid-19-pandemic is a unique situation that may further skew the results.

Validity is an ongoing process throughout our entire research process and determines whether the study can be measured based on what is intended (Bryman, 2018). In qualitative research, the study's validity can be compromised due to the researchers' preconception and interpretations. To prevent this and strengthen the validity of our research we had several

strategies. For example, when creating the interview guide, we used secondary data and had close contact with a respondent from the project to create an accurate interview guide. We also presented recurring themes from interviews halfway through data collection for our gatekeeper to compare with results from the pilot study. The interviews and transcripts were conducted in the same language to minimize any potential effects of wrong translation or interpretation. Furthermore, by conducting semi-structured interviews and emphasizing follow-up questions and asking the respondents to elaborate their answers, we increased the credibility of their answers and minimized the potential risk of misinterpretation. Moreover, by us two working closely together and both being equally involved in all the data collection steps and data processing, we could minimize the risk of biased interpretations. Finally, in the late stage of writing our analysis, we presented our findings twice for the case organization. We presented the findings to the management team and the DC project group to discuss and reflect upon our results.

In terms of generalizability, it may be possible to apply our findings to similar organizations and professional groups within them if they exhibit similar professional identity. However, it should be noted that professional groups differ in terms of professional identity as well as what their main focus is I.E patient groups for example and therefore may not react in a similar way to the same change.

#### **4.6 Ethics**

When researching the field of social sciences, ethical considerations are of great importance. To summarize, the main areas to be considered are avoiding: any harm to participants, invasion of privacy, deception, and lack of informed consent (Vetenskapsrådet, 2017; Bryman 2018). When scheduling interviews with respondents, each interview participant received information regarding the study and its purpose. All participants were asked to sign a consent form and email it back before the interview; view Appendix 2, which was essential to ensure that each participant was aware of the research outline and had given their consent to be recorded. Moreover, information regarding participants' possibility to withdraw from the study was given when requested. In the table presentation of informants in our results, we decided to leave out some details to minimize any risk of identification. Therefore, it was necessary to leave out the gender, age, and years of experience for the dentists.

The recording of the interviews, as well as transcriptions, were kept on a password-protected USB. All names and personal details are confidential; we used codes to shield clinics and the participants' identity. Moreover, in the results, pseudonyms were used, which was done to secure anonymity and eliminate the risk of sanctions and other adverse outcomes for the interviewees. Finally, the interview questions were formulated in a way to avoid any insensitive or otherwise uncomfortable questions.

## 5. Results

This chapter will present our results according to themes identified from the empirical data. The identified themes are challenges in loose steering, communicative challenges in knowledge sharing, potential risks in care quality, accessibility and availability and participation and influence.

A common opinion regarding the DC project from most respondents was enthusiasm, further sound reflections regarding pros and cons of the new working method.

### 5.1 Challenges in loose steering

Loose steering from change management is an identified theme in our empirical data regarding how they have chosen to structure and implement the DC project. This theme is broken down in to three subthemes that will be presented below. The subthemes manifest the respondents' different perceptions concerning the DC usage area, handling of the equipment and expectations regarding skill level.

#### 5.1.1 *Difference of opinions regarding DC usage area*

Our empirical material found the respondents had different perceptions of the DC equipment usage area. The specialist dentists shared they mainly saw the usage of this technology and working methods in booked appointments. For example, the general dentist would formally book appointments with specialist dentists to discuss a treatment plan or perform a medical examination. Most of the specialist dentists expressed some concerns regarding the DC equipment to be used in emergency cases. They described that the routine before implementing DC is general dentists contact them by phone and ask for guidance in more complex issues. In this situation, they always try to assist, however, they are limited in the advice that they can give. Moreover, the specialist dentists stressed the importance of good preparation before sessions to make a valid assessment and provide correct guidance and suggestions for treatment. Also, those suitable cases are chosen for a DC, and the specialists pointed out that not all patients are appropriate for a digital consultation. They expressed concerns regarding many having blind faith that technology will solve everything and emphasize the importance of preparation for them to make a valid suggestion for future treatment. This is reflected in the thoughts of Specialist dentist 4 below.

*“And then there are the emergency cases that are completely unsuitable, for example if you have started with an operation or similar and you want help suddenly with remote control, the specialist dentist must save the situation. Then I do not know what kind of training the dentist has had and as a patient I would wonder what is happening. If this would happen, then the technology would be heading towards the wrong direction. If a colleague calls and says he cannot do it, of course you help, but you would also try to limit his expectations for the technology. Hopefully, I will never be in a situation like this”* Specialist dentist 4.

In the other sampling group, the general dentists had different opinions regarding the DC working method. Some shared the same view as many specialist dentists, namely this technology would be most beneficial for booked appointments. Meanwhile, several other general dentists expressed the DC working method is mainly helpful in emergency cases. If they stumble upon a problem or something they are uncertain of how to handle, they saw it as a great opportunity to virtually contact the specialist dentists and get support in how to proceed. This is reflected by General dentist 6 below.

*“The day we have come so far that I will not have to send a referral and book an opportunity, I think it will flow better and you will have greater use of it. Many things must be prepared in order to use it. In my opinion, the technology is most useful in emergency cases. I stand here all alone on a Friday afternoon and there will be a trauma case and I need help, there is no one to ask and I need help now. This is when you want to be able to have someone on the other side who supports you in how to handle the situation.”* General dentist 6.

The general dentists also saw the opportunity to connect to other general dentists if they were alone or new to the dentist profession to receive guidance on issues that were too basic for specialist dentists. Finally, it was common among all the interviewed general dentists that all showed uncertainty regarding which patients or cases were suitable for a DC. Some expressed the responsibility resided with the specialists to figure out and inform the general dentists which cases are applicable depending on specialty. Additionally, several general dentists did not view DC as a new working method but rather a compliment to their regular practices, this is shown in the quotation below by General dentist 11. Regarding the various opinions of the DC equipment usage area among the general dentist, it was not connected to their distance to a specialist clinic. Instead, it varied from individual preferences.

*“It is a bit difficult to see the pros of the technology, it mostly boils down to it being a large device that does the same thing we already do with a phone.”* General dentist 11.

One aspect that stemmed from the lack of steering is how the dentists and specialist dentists saw the need for preparation in terms of material before a DC. The specialist dentists had a unanimous outlook on how every dentist should prepare before a DC; they should treat it as a written consultation. The preparation should include x-rays, pictures, written notes, and the journal should be prepared beforehand. This is reflected in the quote from Specialist dentist 6.

*“The dentist should always send a referral and if something is missing or is incomplete, the meeting will be ineffective. Then I am required to figure out what the issue is, and the dentist will not be prepared, nor will he have mastered the technology. I fear that the technical part and the administrative part will be a problem.”* Specialist dentist 6.

Within the general dentists’ group, two perspectives could be identified. The first group saw preparations as mandatory to not waste their, the specialist or the patient’s time. This perspective is similar to the specialist dentists. The second group of dentists did not see pictures, notes, or x-ray as mandatory. They deemed the images that the technology could produce to be sufficient and being able to skip the surrounding administration was a massive bonus for the project. Some general dentists voiced that DC would not be worth using if preparation and administration were necessary. This is reflected in the quote from General dentist 9.

*“The only thing I think can be a bit sad, you want to make it as smooth as possible. The only thing that gets a little tiring, when you have a patient in the chair, you still have to send a written referral, so then it still will be a lot of work. It is something you do normally. That part I think is a bit unnecessary. There is probably a reason why they want it that way. But it will just be more work and administration for me. And that is what you want to avoid with this new working method, avoid administration because it should reduce time for everyone, not just the patient. It would have been nice to skip the written referral.”* General dentist 9.

### **5.1.2 Difference of opinions regarding difficulty of handling DC equipment**

Another theme identified during the interviews with respondents was the differences in opinions regarding the difficulty of handling DC equipment. The specialist dentists did not

see any difficulties managing their equipment and deemed it an easy transition if one can use a smartphone or computer. However, the specialist dentists raised some concerns regarding the general dentists' equipment for a DC. Many feared the equipment could be complicated for the general dentists to maneuver. For example, holding the camera still to get a good image, getting good light, having a conversation, and getting the general dentist to show the examination area at all or efficiently. This is shown in the quotation below by Specialist dentist 1. However, there were differences in the degree of concern among the specialist dentists. Another thought they raised was that the general dentists usually lacked the receiver perspective according to their experience. The general dentist did not fully understand how handling the technology would translate to the specialists' image.

*“DC is not simple, you should have great respect for that. If you do not understand that it is so easy to believe that technology solves all problems and it may do so, but it requires a lot of adjustment and training for it to be fruitful. I have used it many times and often I only know what the patient’s blouse and socks look like and sometimes you can dangle past a tooth in the camera. It is not easy and camera technology is actually difficult and correct lighting, so we get a good idea of what it looks like. In terms of quality, it is much worse quality compared to meeting patients live, so to speak.”* Specialist dentist 1.

The opinion of the general dentists regarding technology’s difficulty was split between the group members. Some experienced the technology to be easy and did not see any problems in maneuvering the camera efficiently. The other group expressed concern regarding the camera technique in combination with proper patient care and communicating with the specialist dentist. However, none expressed any concern with the technical aspects, only the maneuvering of the equipment. This is reflected in the quote by General dentist 8.

*“I just think that the camera is difficult, that you have to hold still while they give us instructions, they say do not move it so much when we talk to the specialist, because it gets confusing for them with the screen. So you need to find a special method and it is difficult for me as a general dentist to talk, focus on the case, and the camera.”* General dentist 8.

### ***5.1.3 Difference of opinions regarding practicing of handling DC equipment***

The perspective from the specialist dentists relates to their expectations of the difficulty for the general dentists to learn the new working method. According to their perception, after these ten-week-plans and after the final examination, most specialist dentists expect and hope that the general dentists have had the proper time for training to be smooth and efficient for live sessions. They also underlined the importance of being efficient in these consultations for them to be fruitful. Hence everyone must practice and feel comfortable with the DC equipment. Lastly, most specialist dentists did not see any use for themselves to practice due to their technology being very simple to handle.

From the general dentists' perspective, it was a mix of opinions regarding whether it was necessary to practice or not, how to practice, and how much. Some deemed the working method and technology user-friendly and easy to handle, and more than one training session was unnecessary. Instead, they saw that learning by doing a live DC was a more suitable fit for them as long as they had a general understanding of the equipment. This perspective is opposite from several other general dentists that underlined the importance of maneuvering the technology fast and efficiently by mastering the work method before having a digital consultation with a patient and specialist dentist. Which is reflected in the quote from General dentist 10.

*“As a dentist, you have set aside a limited amount of time per patient. If the technology crashes for 15-20 minutes, there will be a domino effect for the rest of the day. That is why we want to work with a flow, because you know that it will work. Well then you will be able to use the whole session without skipping anything. That is precisely why it is important that it is good from the beginning and practice so that you become very fast at maneuvering the equipment.”* General dentist 10.

Several general dentists expressed the need for training; however, their clinic did not have enough resources to liberate time to practice. These dentists tried to use their administration time when suitable to practice. Additionally, during the interviews, many expressed thoughts on the implementation plan, which also had a clear split on opinions. Many appreciated the opportunity to structure their learning as they saw fit. Meanwhile, several general dentists questioned the functionality of the ten-week plan and the main focus of the education

provided by the organization. The information lacked concrete guidance; they had much responsibility to learn and figure out how this work method would be most helpful. This is reflected by General dentist 13 below.

*“Personally, this ten-week-plan. I did not really get it. It looked like we should only practice once, book a time, well now I do not really remember the 10-week plan honestly, but it felt very much like, now we have created a good plan for you. It would have been better if they just gathered all of use and got done with it. I do not think everyone has done these training opportunities, testing the equipment and all. But it should not be that difficult, we have not followed the plan, and perhaps it was not particularly useful. But otherwise, I liked the setting of the education that they arranged, it was good.”* General dentist 13.

## **5.2 Communicative challenges in knowledge sharing**

In the implementation process of DC, concepts such as knowledge sharing, and increased competence have been promoted as incentives for the organizational change. The focus is to strengthen the competence of the general dentist with aid and guidance from specialist dentists. In this theme, two sub-themes were identified and will below be presented. The subthemes manifest the respondents’ different perceptions regarding communication challenges and loss personal interaction.

### **5.2.1 New challenges regarding communication**

The specialist dentists addressed that this form of medical examination brings new challenges for them, mainly focusing on their pedagogical and communicative skills. For example, the specialist dentists could previously rely more on their craftsmanship and show by hand. However, the focus had shifted towards communication and oral instruction. According to them, during a DC, they are solely dependent on their communication skills, which is a tricky situation. This resulted in several specialist dentists expressing worry about not being able to educate or teach the dentists in an efficient manner. This is shown in the quote below by Specialist dentist 5.

*“If we are physically there we can easily show and explain, hopefully educate at the same time. This is possible digitally as well, but we cannot show and explain as efficiently. It is also harder to specify types of bites and if the jaw slides in a specific manner. Aspects like this can be crucial when we decide how to proceed. General dentists often have a very hard time*

*seeing this, but if we are in place, we can show this directly. We cannot show this virtually, we need to show them hands-on. They also do not get the same quality education. I think, as a complement and especially where it is difficult to staff, there is a huge gain and I can really see the value, but I think it is hard to just have it that way. Not being out physically anything. You lose some parts.”* Specialist dentist 5

The general dentist did not view this matter in the same light; instead, they saw increased communication in this format to open up for dialogue and hopefully boost their knowledge and competence. They did not share the specialists' worry of not absorbing or learning through this format. Rather, many general dentists were optimistic the new working method would positively affect their learning and competence due to closer and more frequent contact with specialist dentists. Hence, DC is an opportunity for them to absorb knowledge, discuss possible treatments, and receive guidance either before or during a treatment. This is reflected in the quote from General dentist 7. According to the general dentists, several general dentists described that DC enables them to consult specialists more often and hopefully lead to decreased written communication, which was, according to the general dentists, an opportunity to reduce potential misunderstandings. However, some general dentists expressed that this communication format is good, though not the only way they want to interact with the specialists. Lastly, a few respondents said they might question their capacity and turn to the specialist as a second opinion more often if the option exists.

*“Every time you consult a specialist, your competence increases and if you can do it more often and faster, it automatically becomes better. If you become very comfortable with this, you can manage patients quicker and inform them in a way that they feel this is for their sake. The more you consult, the more competence you gain and the more trained you become. Down the line you become well trained and thus you do not need to consult the specialists as often.”* General dentist 7.

### **5.2.2 Loss of personal interaction**

Several specialist dentists addressed the loss of personal interaction in this format and its potential consequences for knowledge sharing. For example, when a specialist dentist interacts with the general dentists virtually, the communication centers on the patient, meaning the interaction is replaced with log on and log off in a video call. Therefore, the informal communication that takes place before and after the patient sessions disappears. According to the dentists, what was essential regarding informal

communication is that they cannot speak unfiltered. The specialist dentists cannot give direct feedback and pointers to the general dentists, which they usually brought up after treatment sessions. Even though the specialist dentist perhaps is more available in this format and can reach out to several individuals in a workday. It still limits their collaboration and knowledge they can transfer. This is a loss and a concern, according to some specialist dentists. This is reflected in the quote from Specialist dentist 1.

*“I think that that we lose some closeness and the relationship to the dentists even if it also rewards cooperation we still lose the opportunity to show hands on. If I am out showing hands on at a clinic and they wonder what to do, I can say "do this" or set up a time the next time I come in three months or two and we will do it together.”* Specialist dentist 1.

As previously mentioned, most general dentists felt that positive outcomes regarding more frequent collaboration make up for the loss in personal interaction. However, some of the general dentists expressed concerns about choosing their words more carefully or being more restrictive in what questions they ask in front of patients and not having the time after a session to ask follow-up questions or similar to the specialist dentists.

### **5.3 Potential risks in care quality**

In this section the respondents' thoughts and concerns regarding the DC working method will be presented regarding their ability to deliver care of satisfactory quality.

Several of the specialist dentists expressed some concerns regarding this new working method. No one stated the new working method would directly lead to a decreased care quality. Instead, it depended on how the specialist and general dentists handled the new working methods. Many of the specialist dentists saw a potential problem area because they are not in the same room as the patient. The specialist dentist expressed that even though the camera quality is good, it is not comparable to being in the same room and looking at the treatment area themselves. One issue highlighted by the specialist dentists is the forced dependence on the general dentists due to not being in the same room. They express concern that general dentists can choose which area to focus on, both in terms of which x-ray and pictures are sent beforehand and where the camera is focused. Redirecting an entire treatment on the fly is very difficult and time-consuming. If not done, it may cause tunnel vision, which

may affect care quality, according to the specialist. This is reflected in the quote below by Specialist dentist 4.

*“You can never rely on the fact that specialist dentists are omniscient when you show something. Especially with mucus changes, I have previously worked with cancer patients in [REDACTED] often you have actually received a lesson in biology, you thought you knew the answer then something completely different came back. And in the worst case, it is something dangerous like cancer that you never considered. We should not convey a sense of false security. We must also be clear about that. I can happily look, but there is a lot to feel and discuss and talk to the patient and understand what is in between the lines. It can turn out wrong if I am not the one leading the conversation with the patient.”* Specialist dentist 4.

As mentioned previously, there was a difference in opinions regarding the usage area and the suitable cases for this digital consultation. In the light of this lack of coherence, the specialist dentists also raised concerns regarding care quality during a DC. They expressed a worry surrounding the quality of care due to them having to assist in emergency cases with minimum preparation, and it is problematic if the general dentist believes the specialist can virtually come in to save the day. As highlighted during the interviews, some specialists deem their work either more suited for DC or too technical and reliant on themselves performing the procedure. Furthermore, according to them, some aspects are held back by what is appropriate. For example, delivering unfortunate news is not well-suited for DC. It is important to note that the specialist dentist has different areas of expertise. Their working methods and how closely they interact with patients differ based on specialty. However, even though the specialists address that DC limits them and their assessments, they are optimistic that they can develop and refine their skills in this setting. The results above are reflected in the quotation by Specialist dentist 7.

*“It’s good that you become better at making assessments based on less material without touching a patient. You want to develop that ability. Then there is a limit to how far you can go without looking at the patient, but that you become better at making a reasonable assessment, it can be a diagnosis, but it can also be to recommend that the patient comes to us. You might get better at being time efficient as well. That you become better at focusing on what is important, what it says in the journal, photos, but also what the patient says. When*

*you have a little less time to solve a problem you must focus more directly on the problem. It is certainly an ability you can develop.”* Specialist dentist 7.

The interviewed general dentists did not raise the same concerns as the specialist dentists regarding the potential decrease in care quality. Some of the general dentists expressed that the specialists' responsibility is to raise their voice if the material or digital consultation is not sufficient for them to make an assessment. Then the following procedure will be that the patient and specialist dentist instead meet face-to-face at the clinic.

#### **5.4 Accessibility and availability**

In this section, we will present the respondents' views regarding incentives for the change in terms of accessibility and availability.

During the interviews, a common theme identified was availability for patients. When speaking to the general dentists and specialist dentists, many felt that availability and equal care were critical for the entire project. The issue surrounding availability and equal care stems from where the specialist clinics are located. Clinics in smaller municipalities may have several hours to the nearest specialist clinic and even more if the patient does not have access to a car. The difficulty regarding travel is especially prevalent within patient groups that are socially economically vulnerable, such as elderly, low-income earners or patients suffering from illness. That is why DC is essential, according to many of the dentists, since the technology enables more innovative solutions for their patients. This is reflected below in the quote by General dentist 10.

*“It is also beneficial because otherwise the patient may have to travel far to get the specialist clinic to get the treatment. There may not be a specialist clinic within a several miles radius. Now they can receive specialist consultation and treatment in the same room. It makes it easier, especially for the elderly, or people who have difficulty traveling longer distances. That is a good thing. It will make up for the fact that it (DC) may be a little difficult to learn. Then I do not think anyone will find it difficult to learn but it is well with everything that is new, it takes some time in the beginning [...] the benefits are still so much greater, greater than the difficulty of learning it. That way, I think everyone will learn, but it will take longer for some.”* General dentist 10.

DC can partially remove the need for travel for both patients and employees by having the consultations locally. A common theme during the interviews was the problematic aspect of staffing and the need for increased efficiency. However, most general dentists believed DC would lead to fewer staffing issues and hopefully put less pressure on the specialist dentists. Several of the general dentists also had an economic perspective in mind while discussing this project. However, it emphasized other aspects such as more available care for patients and presumably an increase of knowledge for themselves.

As previously stated, DC increases the availability aspect, but it also increases the accessibility to patients, which is seen as beneficial by many specialist dentists. The improved accessibility should dramatically decrease travel time for specialized dentists, similarly to patients who live far away from the specialist clinics. Several specialist dentists increased their perception of the organization's aim of this project, which most assumed to be about efficiency and reducing costs. Specialist dentist 1 address this matter below.

*“It is difficult to staff today, and it is a way to solve some issues without people having to travel 250 km and then find that they could solve it themselves. We do not have the ability to staff some clinics. For example, in [REDACTED], people need to commute to [REDACTED] instead. That is not reasonable. Then you probably save money if you do not have specialists who are out and about to visit different clinics.”* Specialist dentist 1.

## **5.5 Participation and influence**

In this section comes a description of employees' perception of their involvement in the change process and a short introduction of their experience regarding the implementation plan and communication surrounding the project. Further, the theme is broken down in to two subthemes concerning skepticism and DC equipment challenges.

According to both specialist and general dentists, there was a variation in the knowledge regarding the DC project. However, they all shared the view that little, or lack of communication was a common element regarding the project. For example, some expressed first hearing about the project a week before the official training opportunity. Meanwhile, others explained that the equipment was stored in the basement for months, which resulted in some employees wondering if the project had been cancelled. This is reflected in the quote

below by General dentist 13. Even if both sampling groups described a lack of information regarding the project, it was clear that the general dentist had lower knowledge regarding the project. Even if the dentists expressed that information and communication regarding the project and implementation could have been better, it still did not affect their positive attitude towards the project.

*“We got the equipment in the middle of the holiday and no one knew what it was. Then stood and dusted in a corner for a long time.”* General dentist 13.

The specialist dentists had different views on their involvement in the change; some felt a lack of participation in the project, others expressed that either they or a close colleague have been involved and raised their voice in the project. The general dentists expressed very low to no participation in the project, though most did not raise any concerns regarding this matter. Instead, they said that their role is to take the initiative no; they were responsible for implementing the work method and influencing how it is intended to be used. This is reflected in the quote below by General dentist 2.

*“We are involved now that it has already been purchased and decided. Without adding any value if I think it is positive or negative with the technology itself, I can still say that we have not been involved at all. It has been carried out centrally, if it is not the case that people have been asked about it long before I started at the clinic”* General dentist 2.

As stated above, most expressed their involvement started immediately when the equipment arrived at the clinics; it was important for them to plan and organize their learning. Moreover, the dentists addressed the importance of the work to come regarding this implementation. For example that the organization follow-up on pros and cons and alter the project to make this new working method as efficient as it can be. The aspect of follow-up was described as critical by both specialist dentists and general dentists alike. This is reflected in the quotation below by General dentist 9.

*“Basically no, we do not have much to say about it. It is out and everything is already somehow implemented to some extent. Then I do not know if it will be afterwards if you can turn to someone and share our opinions. If there will be any kind of questionnaire because I think that is important. A few months after everyone has started using it, because it is really*

*unnecessary to spend a lot of money on something that is not used. But until now, no, but I hope I will be involved from now on”* General dentist 9.

### **5.5.1 Skeptical views on the DC project**

Both dentist groups are excited about the change and see it as a step in the right direction. But there was a sense of skepticism towards the new working method, especially by the specialist group.

Several of the specialist dentists described themselves as wary towards various aspects of this new working method, many of which we have already touched on as themes in this chapter. Some examples included communicative challenges in knowledge sharing, care quality and loss of personal interaction. Another criticism the specialist dentists raised is that some expressed worry about implementing this project, questioning if management had considered the nature of the work and challenges in work differing based on specialty. Instead, they described a feeling that this project had neglected the dentists' different needs and working methods. They felt that management had not done a sufficient analysis before launching the project. This is reflected in the quote below by Specialist 5.

*“It feels like it has been quite set in stone that this should be introduced and that it should be done everywhere and maybe not really. We have had the feeling in our specialty that you do not really look at differences in specialist areas but it has instead been a wide introduction right over and so it should work for everyone. But as I said, I have not been involved in the discussions, so I do not know exactly how it has looked, but it does have a bit of the feeling that I have gotten.”* Specialist dentist 5.

Moreover, several specialist dentists addressed that some skepticism lies within the lack of information they received regarding the project as well as previous results from the test clinics. They underlined the importance of spreading real experiences, both good and bad, to improve the project. This is reflected in the quote below by Specialist 2.

*“I think specialist dentists can be skeptical to test only for the sake of testing. Because it is precious with our time so this must lead to something. The organization must have positive examples, how others have done at different clinics, what was successfully, what was not? It is important to share those things and we have the opportunity to make improvements around it.”* Specialist dentist 2.

### **5.5.2 DC equipment challenges**

As mentioned above, the general dentists were mostly excited in our sample regarding this new change, but there were also various concerns and opinions. Mainly regarding the actual equipment and how management had structured the introduction. Even though many appreciated the free planning and opportunity for self-learning, many felt the introduction and educational phase had too much emphasis on the digital equipment, while lacking concrete guidance or connection to their daily practices. This is reflected in the quote below by General dentist 6.

*“The only information we have received is that you should talk to each other, discuss and create a sense of security. But they never say how we should create security, how colleagues should feel secure. There are no concrete tips on how we should proceed to succeed, that we only talk about creating conditions but not what we should do to create suitable conditions. It's just a time in my calendar that disappears that I could have spent on something else”*  
General dentist 6.

Some general dentists expressed that the training sessions would have been better if they were structured and were modelled after example cases to better incentivize practicing. Other concerns raised were the size of the DC equipment; some general dentists expressed that the equipment is too big and clumsy, the cords too short, the wall sockets had problems, and the equipment being generally difficult to maneuver and/or store in their clinic. These concerns seemed to not affect the general dentists' overall opinion though many expressed these apparent flaws.

One of the few aspects that most general dentists and specialist dentists agree on was that both felt confident that they could choose not to use the technology if they deemed the care results would be unsatisfactory. This was especially true among the general dentists who described that DC is something that they must decide if it was an appropriate method or not for each patient. Meanwhile, the specialist dentists viewed this change as more or less mandatory, and they would give it a try and later evaluate it. Furthermore, there was also a difference of opinions and perceptions regarding the expectations if DC would be a part of their daily practices. Some discarded the new working method and technology due to other failed attempts in the organization. Others had a more positive view and believed more of these

changes and initiatives would occur in the organization. This is reflected in the quotation below by General dentist 2.

*“You need to practice more, I think. Above all, you need to remember that it exists. It shall be a part of everyday life, I think that is the biggest challenge. Assuming that the pandemic one day disappears, and we return to everyday life, I think it easily happens that it just stays hidden in the storage. We need to bring this device into our everyday lives, I think is the biggest challenge. I think it can be great, but I also think there is a risk that it disappears, that it is not used in the end which often happens with new technology at the clinic. But I hope it does not happen, we will see.” General dentist 2.*

## 6. Discussion

The discussion chapter will follow the same structure as the results. We will use an institutional logics perspective to explain and rationalize their responses based on professional logic. Further, we will discuss potential challenges that may arise as a direct result of the chosen implementation method. We also want to underline that this change process is not colored by resistance and most of the respondents expressed engagement and positivity towards the change. Our results do not indicate any struggle between the organization and the professionals, however there are tensions which are important to be aware of.

### 6.1 Loose steering and professional autonomy

A theme that we identified during the interviews with respondents was lack of coherence. There was a clear split regarding expectations in several aspects of the project DC. This division was identified primarily between specialist dentists and general dentists. However, there were differences within these groups as well. Hence, lack of coherence acts as a central theme, and in the following paragraphs, we will present subthemes connected to lack of coherence. Professionalism will be used to understand where the lack of coherence originates from including how the theme may impact and cause challenges for the organization.

The lack of coherence originates from the chosen implementation strategy and how loose it was. As mentioned in the results, three areas lack coherence between the groups: usage area, preparation, and competence requirements for the general dentists. The organization applied a management style known as “trust-based leadership” which contributed to the loose steering and thus the issue. Furthermore, inadequate communication from management is an aspect that has further emphasized the lack of coherence.

As mentioned in the results, the implementation plan and information were cited as vague. For example, how much training was necessary and organizing was up to the individual, which the dentists mostly appreciated as it aligns with the professional logic, considering their proclivity for autonomous learning (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). Even though the general dentists appreciated it, it may result in tensions between the two groups due to a lack of coherence. Because comparing the two main groups, specialist dentists and general dentists, there is a clear difference in expectations. Most general dentists have repeatedly described the project and technology as relatively easy to handle and only

requires a small amount of practice. However, the perspective of the specialist dentists is the opposite, fear that the general dentists will not be able to handle the equipment appropriately and efficiently enough. Thus, there is a clear gap in expectations in how to handle the first DC after the implementation. The loose steering may not prove problematic until the training phase ends and the dentists begin performing consultations, and the two groups start interacting with different expectations. This may result in a high degree of tensions between the two groups due to the vastly different expectations and efficiency demands and may result in the project being abandoned or used rarely for only niche cases.

One potential tension that can emerge from loose steering due to the dentists not having clear guidance from the management is that they will design and find their working ways and procedures that fit the technology. Based on the institutional logic of professionalism, this response is not unique and aligns well with previous research on the subject (Thornton, Ocasio & Lounsbury, 2012). Professional occupations are almost always granted a high degree of autonomy and the ability to handle potential issues in whichever way they deem appropriate. The profession of dentistry is not different, and as explained during the interviews, there usually exist several solutions to a single problem. Hence, without a clear direction from management, it is natural for dentists to seek opportunities for when to use the technology, even if it proves to be ineffective (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). Even though the trying nature of professionals may be fruitful in many aspects surrounding work, this may prove damaging to the project due to a lack of coherence between dentists and specialist dentists regarding when and how to use the technology. One example of how interviews have shed light on this issue is the question surrounding emergency use and if it is a suitable option for the technology. Many general dentists expressed wishes, with many viewing the technology as something that can assist during emergency patients and considered it as the most practical aspect of the technology. On the other hand, the specialist dentists saw emergency use as a potential risk factor, specifically that general dentists would see them as saviors that would solve any potential crisis that they found themselves in.

Based on previous research, implementing change within a professional organization is difficult (Evetts, 2009; Reay et al., 2017). Factors such as autonomy and the ability to influence are crucial for the employees. Management must respect established work routines and give freedom to act independently. However, this approach also enables potential

tensions, as highlighted above, but may result in even harsher resistance if management attempt to micromanage the employees (Andreasson et al., 2018; Glouberman & Mintzberg, 2001; Andersen & Røvik, 2015). This creates a situation where the organization must tread lightly to find an appropriate balance in management's engagement.

## **6.2 Specialist dentist's loss of autonomy**

As shown in our results, specialist dentists have identified communication challenges in knowledge sharing and potential risks in care quality in a digital consultation. An explanation of the specialist dentists' responses to the new working method is that they are partially being stripped of control and autonomy during a DC which is one of the key factors of professional legitimacy (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). Even though during a DC, specialists usually steer the consultation, they are dependent on the skills and willingness of the general dentists. Nevertheless, while the specialist dentists are more available in this format and can reach out to several individuals in a workday, they are limited due to the virtual format. Even if the project leaves room for interpretation in how it may be utilized, this mainly falls on the general dentists. In contrast, the specialist dentists are locked with few options in how to utilize the technology. The specialist dentists' loss of autonomy becomes apparent in some areas. For example, specialist dentists feel exposed during a DC, especially in emergency cases, and to some extent in booked sessions. Once again, this feeling of exposure rests upon loss of autonomy since the specialist dentists are dependent on the generalist dentist knowledge, attitude, and preparations for the meeting. Before, the specialist dentist could rely primarily on their clinical knowledge and skill. This tension risks being further elevated if the dentists have different perceptions and expectations regarding preparation and what usage area suits DC. If the two groups' opinions differ, it could stress the specialist dentist even further and ultimately lead to the specialist dentists rejecting the DC project.

Regarding the responses from the general dentists, none shared the same concerns as the specialist dentists about risks in care quality or challenges in knowledge sharing. The believed outcome of this working method would be increased competence. The effects of this implementation are, as stated previously, loss of autonomy for specialists, although, a boost of autonomy for the general dentist. The general dentists experience increased autonomy due to broader knowledge in more procedures. The foundation of professional logic is mainly

independence and self-determination. With the implementation of DC, the general dentist presumably increases their expertise; they will be able to help more patients and take on more complex cases. This leads to a higher legitimacy within the occupation (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). Meanwhile, the specialist dentists in this format become more distant from the patients; their nature of work goes from independent to dependent. Though the specialists have always been in some aspects dependent on the generalist dentists, however, it is to a greater extent now.

Our thoughts on dentist's responses reflect how this technology affects them; either the project will undermine or improve their professional autonomy. As previous research has shown, new digital working methods that undermine perceived social status or professional autonomy have a higher risk of being rejected by the professional occupation (Ludwick & Doucette, 2009; Gagnon et al., 2012). The specialist dentists' responses and views on potential risks in care quality can be an expression of their loss of autonomy. Hence, one potential issue which may arise from the diminishing autonomy is that the specialist dentists may not use DC. The specialists may deem the quality too low and therefore entirely avoid using DC or use it and be forced to have physical consultation either way after a DC. This would force specialist dentists to accept the decrease in autonomy or reject the new digitalized work methods.

### **6.3 Availability vs accessibility**

The new technology brings great opportunities for the organization to meet efficiency demands. The aspects of accessibility and availability and how they value these aspects are interesting from an institutional logic perspective (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). Availability can be in short described as the ease and speed in which patients can receive specialist care, and primarily takes a patient perspective. Accessibility has two dimensions; one is how specialist dentists can increase their efficiency by avoiding any potential travel time by using DC, while another is the dentist's accessibility to specialist dentists, how fast they can receive mentorship at an understaffed clinic or use the technology as a safety during a potential emergency. Availability in this context can be translated to “benefit to society” and accessibility to “organizational efficiency” (Lander et al., 2013; Greenwood et al., 2011).

How the dentists will react to digital consultations is difficult to predict, however using institutional logics and sensemaking it is possible to make a best guess. The specialist dentists face two different logics, professional and organizational and must draw from both in order to make sense of the change. As previously explained, there are several aspects surrounding the change they worry about including a worsened care quality and ability to properly teach colleagues. Furthermore, the change can be explained as a loss of autonomy due to less options in treatment. From the institutional logic of professionalism this change should, in theory, be received negatively (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). However, this is not the case based on the interviews. This could be explained by them using two logics, organizational and professional logics. The availability aspect mainly draws from professional logic and caters towards society and benefits the patients. Accessibility draws from the organizational logic, and caters towards increased efficiency, an aspect that many of the specialists deem as necessary in order to survive the changing market. To summarize, to make sense of the change and accept it, the specialist dentists draw from two different logics, organizational and professionalism (Lander et al., 2013; Greenwood et al., 2011). It is hard to justify the change by only drawing from one logic, because it would mean that they accept a decrease in autonomy. However, looking from an organizational logic perspective, the specialist dentists are aware of the challenges the organization is facing with staffing demands, therefore aware that new digital work methods are necessary. It is thus easier to accept and make sense of the change since from a professional logic this helps patients and from an organizational logic it is more efficient, even though the result is a decrease in autonomy. Therefore, it is necessary to understand both sides in order to make sense of the change and justify it (Lander et al., 2013; Greenwood et al., 2011).

The dentist's reaction to the change is significantly more positive than the specialist dentists. Many of the general dentists did not bring up a single negative aspect, as the availability will significantly improve queue times and help patients that struggle with illness or similar issues. The accessibility and improved dialogue with the specialists will improve their competence and the patients in the long run. From a professional logic the new working method does not hinder them from remaining autonomous in their work (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). Furthermore, from a patient perspective the new change has been continuously described as something that improves the health care on multiple levels, for example cheaper, faster, and drastically reduced travel time for patients. This aspect is

especially interesting since it aligns with the professional logic and is something in this case many dentists identified with. Many of the dentists especially the general dentist expressed that this change would improve quality of care for their patients which is the most crucial aspect of this change. This aligns with the professional logic and the need to contribute to welfare (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012).

Another aspect that includes everyone, regardless of if the change is perceived as positive or negative, is that none of dentists see the change as mandatory. It is hard to locate exactly why but based on previous research and the institutional logic that guide them, one explanation can be that previous changes could be ignored or otherwise transformed into ways that fit them and their daily work without interference from management (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). Considering the loose steering and how little management is involved the dentists may perceive this change to fall out in a similar vein.

#### **6.4 Positive without participation and influence**

Previous research foremost expresses the importance of employee participation and influence in organizational change. Lack of communication and absence of participation is usually the core reasons why change management fails (Andreasson et al., 2018; Glouberman & Mintzberg, 2001; Andersen & Røvik, 2015). However, in this case we have two sample groups, where most do not express any participation in the project, and they all were accepting the of lack participation. In the sampling groups there was a span of opinions, for example there were several younger professionals that were enthusiastic about new technology and respondents that were indifferent and those who was more skeptical and not enthusiastic. It is interesting to reflect upon why these respondents are accepting the change even though the project lacks the basics in how to conduct smooth organizational change.

From the dentists' point of view, looking at how they make sense of the organizational change and drawing from professional logic (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). The implementation of this project can be described as a double-edged sword. Based on the employee reactions being primarily positive even though the dentists have been left out during the planning and design of the technology, the chosen implementation strategy has proven successful so far. This may be due to the general dentists keeping autonomy in their day-to-day work; however, which only serves to reinforce the importance of including them

in the process of deciding how the technology will be used rather than how it is designed. This may however prove to be a challenge for the organization and can be explained as a double-edged sword. The dentists have a foundation to test and try different solutions as a way of their day-to-day work based on their professional logic (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). This may result in lower efficiency for the organization while they determine optimal ways to use the technology, including which procedures are possible to perform virtually. The evident solution to fix this potential problem is to implement standardization and dictate which procedures that fit the technology well. However, as previously explained this would remove some aspects surrounding the specialist dentist's autonomy and could result in negative or passive responses from the dentists based on the professional logic (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012). This aspect makes it incredibly important to have continuous follow up which was requested from the dentists during the interviews to capture optimal working ways based on their testing.

As mentioned above, previous research shows that introducing change in health care organizations is complex. Professional prestige is a factor that usually affects organizational change and changes that undermine the professionals tend to be rejected (Ludwick & Doucette, 2009; Gagnon et al., 2012). As Martin et al. (2020) presented, that senior doctors may reject change due to their high level of professional prestige. However, this does not align with our empirical findings. Professional prestige is not the determining factor in our sample instead we have identified two perspectives that is perceived more important by both specialists and generalist's dentists. Our findings show the outcome for the patient and the organization are the most vital when accepting or rejecting change.

### **6.5 Valid employee concerns**

As mentioned in our previous research, resistance or opinions about the new working method are not necessarily negative. Resistance may indicate that employees are involved in the work and do not explicitly oppose change and the way they work, but rather want to cope with potential uncertainties they feel about the change (Keshavjee et al., 2006; Gagnon et al., 2012). This fits in well with our empirical findings which show skepticism and positivity towards the implementation of new working methods. However, it is essential to not directly portray their skepticism as resistance to change. Instead, we see their skepticism as part of their professional logic. The profession of dentistry is investigative in nature, it is part of their

role to be critical and question what lies in front of them. It is demonstrated in how they treat patients, investigate, understand, reflect and continuously learn in order to find the most proper solutions. Hence, it is natural for them to question when new working methods or new technology is being introduced, since the scientific method is an integral part of their profession. Therefore, we do not understand their skepticism as exhibiting resistance to change rather them staying true to their professional logic and making sense of the changes that are being brought to them top-down (Freidson, 1994, 2001; Brante, 2011; Thornton et al., 2012).

## 7. Conclusion

In our final chapter, we summarize our main findings from the study in relation to our research questions and shortly reflect upon our findings from a managerial perspective. Further, will we present the study's limitations and provide suggestions for future research.

The general dentists were optimistic towards this change because the new working method will presumably lead to increased competence and them being able to handle more complex treatments. The general dentists saw this technology as a method to get quick feedback and aid from specialist dentists both in unscheduled and scheduled treatments. The DC working method enables general dentists to become more autonomous in their daily work and therefore develop and strengthen their professional identity as well as legitimacy.

Furthermore, another important incentive for this change is the outcomes for patients which was something repeatedly seen as a key factor for the general dentists' positive responses. We determine that the distance to the specialist clinics did not matter regarding their opinion of this new working method. Instead, most general dentists shared the same view and arguments regarding this change. Therefore, we conclude that the general dentists' responses to the implementation of the new digitalized working method is positive and rests upon their professional logic. In this case how they make sense of the change is that possible outcomes are aligned with their professionalism, it generates better care and again increases their knowledge and independence.

The specialist dentists' responses to this change are more skeptical compared to the general dentists, which is understandable if one makes sense of the change from their point of view. The specialist dentists are firstly becoming dependent on the general dentists in their work. They are supposed to maintain a good quality in their work, however, now through the means of a colleague. A specialist dentist becomes limited in what they can do and what conclusions they can reach through a digital consultation. Even though the specialists in this case are experiencing a decrease of autonomy, they make sense of this change by drawing from other logics as well, for instance the organizational logic. The specialist dentist understands the organization's efficiency demands and knows that changes are needed in order to face welfare demands. Hence, the decrease of autonomy is accepted and understood due to efficiency demands. This aligns what researchers have described as the fall of professionalism however,

we view this as a transformation rather than a fall of professionalism. The occupation understands the new demands that the organization is facing, and their profession is facing and moving forward.

As previously stated, the loss of autonomy is a direct challenge for the specialist dentist, further that they are expected to deliver or maintain the same quality in their work while experiencing limitations, which can result in specialist dentists refusing to use the new working method or use it minimally. Another challenge they encounter during the implementation of this new working method is the lack of coherence as a direct result of managerial strategy. Even though the loose steering has been appreciated by most respondents it opens for other challenges, such as lack of coherence, which is something that the organization and the occupational groups will see more of when the final stage of the implementation plan is due. It is a risk that the two groups have different views regarding the usage area, specifically what patients are suitable and how skilled one shall be before booking a DC. If their perceptions and expectations are too different it risks reflecting badly on the DC project and the equipment's potential efficiency.

Professional prestige may be a vital factor why change in the healthcare sector is complex. Perceived social status is closely related to exclusivity in their work, and thus often a basis concerning why employees oppose change that invades or alters their working methods. This is however not the case in our study, prestige is not a determining factor, rather the aspects surrounding the patient and organizational efficiency are the determining factors.

To summarize, our thesis address how a professional occupation handles change management, how they experience new digital tools and their effects on their professional capability. Once again, it is interesting to see the division between these two groups and the different challenges. The dentists express different concerns regarding this change; however, it mostly comes down to patient care and maintaining adequate care to patients. In the public sector, organizations have a clear purpose, providing services to their inhabitants. Thus, it is interesting that most research regarding professionals' centers around the relationship between management and the professionals. In our thesis, we have steered our research to center around the professionals' experiences and their ability to continue delivering to the

commonwealth with these new digital working methods. We have concluded what is most important for this occupational group in this change process; it all centers around the patients and the dentist's ability to deliver good quality care.

### **7.1 Organizational challenges**

The challenges that the professional dentists have encountered in this organizational change, also reflect challenges from an organizational perspective. Based on previous research healthcare organizations face difficult challenges when introducing change. Challenges identified in this study are presented below.

The loose steering that the organization used when implementing the new working methods may prove difficult in the long run. As explained in the discussion this may result in a lack of coherence between the employee groups, and therefore create tensions based on different expectations surrounding the project. The same problematic aspect can be identified regarding employee participation. There is a strong need to be included in designing how the working method should be used. This creates a situation that may result in tensions between the employee groups due to different expectations and area of usage. However, based on professional logic and previous research, trying to implement projects or change within highly qualified employee groups using a micro-manage or top-down steering has resulted in backlash and resistance. This puts the organization in a predicament, either choosing loose steering or allowing the employees to design the usage area. Both options will prove challenging for the organization in separate ways.

The highly qualified employees within the organization show a strong need to critically analyze the new working method and constantly improve it. Furthermore, the employees possess a high degree of autonomy and the ability to shape the project into their own idea. This creates an environment that is hard to handle for every party involved, while putting pressure on HR and management to have a dialogue with the professionals in order to intercept potential complaints or wishes surrounding the project. From a management point of view this requires them to have a thorough understanding how the occupation operates to fulfill their needs and respond to requests quickly. This is an enormous challenge for HR and management, and as presented in our previous research, more and more public organizations face a demand for increased efficiency. Thus, the need to perform organizational change

within professional organizations will only increase, and the need for research in how to do it smoothly will only grow further.

Lastly, as shown in our empirical material, it is not necessarily the group that is forced to learn a new technology that will be critical aspect of the change. In our case, the organization expressed worry regarding how the general dentists would respond to the new digital working methods, however, very few general dentists pinpointed the technology as an issue. The group that had the most concerns regarding the DC project was the specialist dentists, even though the change is minimal in terms of technology and what they are forced to learn. In this case technology is not the issue rather the restrictions that comes with the technology. This creates an interesting case where professional organizations do not face the same issues as traditional organizations where the issue usually lies within leaning the new technology in an effective manner. In professional organizations the outcome of the change centers around client/patient relationships, autonomy and professional prestige, Hence, when implementing change in healthcare organizations those factors need to be addressed in order to successfully implement change.

To conclude, our study portrays two important lessons; firstly, it is important to understand and what kind of digitalization the organization is implementing and adjust the change strategy accordingly. In our case the technology is about communication practices. Further, it is important to consider how the digital change will affect their professional identity, since the group that faces the most significant digital change is not necessarily group that will oppose change.

## **7.2 Limitations and suggestions for further research**

One of our study's limitations that our study is restricted to an early phase in the implementation plan. If the study analyzed the whole process, it would provide more robust findings and how the employees' reactions would play out and how the professionals would interact with each other. Thus, a suggestion for further research on the subject would be to analyze different phases of the implementation project or a long-term research project.

Another suggestion for future research is to continue analyzing the other groups of highly qualified professionals in healthcare. How they cope and react to changes as a group, especially regarding their adaptation of new digital work methods would be interesting to investigate. Lastly, new, and up to date research from a managerial perspective and HR

perspective in this context would be beneficial. Management and HR reflect upon challenges in introducing change in a highly skilled occupation and describing their perception and previous experiences.

## 8. Reference list

Alvesson, M., & Sköldböck, K. (2017). *Interpretation and reflection: Philosophy of science and qualitative method*. (Third edition). Lund: Studentlitteratur AB.

Andersen, H., & Røvik, K. A. (2015). Lost in translation: a case-study of the travel of lean thinking in a hospital. *BMC health services research*, 15(1), 1-9.

Andreasson, J., Dellve, L., & Eriksson, A. (2015) Healthcare manager's views on and approaches to implement models for improving care processes. *Journal of Nursing Management* 24(2), 219–227.

Andreasson, J., Ljungar, E., Åhlström, L., Hermansson, J., & Dellve, L. (2018). Professional Bureaucracy and Health Care Managers' Planned Change Strategies: Governance in Swedish Health Care. *Nordic Journal Of Working Life Studies* 8(1), 23-41.

Black, A. D., Car, J., Pagliari, C., Anandan, C., Cresswell, K., Bokun, T., ... & Sheikh, A. (2011). The impact of eHealth on the quality and safety of health care: a systematic overview. *PLoS medicine*, 8(1).

Brante, T. (2011). Professions as Science-Based Occupations. *Professions and Professionalism*, 1(1).

Brante, T. (2013). The professional landscape: The historical development of professions in Sweden. *Professions and Professionalism*, 3(2).

Bryman, A. (2018). *Social research methods*. (Third edition). Solna: Liber.

Chiasson, M., Reddy, M., Kaplan, B., & Davidson, E. (2007). Expanding multi-disciplinary approaches to healthcare information technologies: What does information systems offer medical informatics? *International Journal of Medical Informatics*, 76(1), 89-97.

Cinite, I., & Duxbury, L. (2018). Measuring the Behavioral Properties of Commitment and Resistance to Organizational Change. *The Journal of Applied Behavioral Science*, 54(2), 113-139.

Cloutier, C., & Langley, A. (2013). The Logic of Institutional Logics: Insights From French Pragmatist Sociology. *Journal of Management Inquiry*, 22(4), 360-380.

Cresswell, K., & Sheikh, A. (2013). Organizational issues in the implementation and adoption of health information technology innovations: An interpretative review. *International Journal of Medical Informatics*, 82(5), 73-86.

Denscombe, M. (2014). *The good research guide: for small-scale social research projects*. (Third edition). Lund: Studentlitteratur AB.

Dølvik, J E., Alasoini, T., Hedenus, A., Ilsøe, A., Larsen, T P., Røed Steen, J., & Rolandsson, B., (2020) Chapter five: Digitalization of services - A diverse picture. In Rolandsson (ed.) *Digital Transformations of Traditional Work in the Nordic Countries*. Köpenhamn: Nordiska Ministerrådet.

Erwin, D., & Garman, A. (2010). Resistance to organizational change: Linking research and practice. *Leadership & Organization Development Journal*, 31(1), 39-56.

Evetts, J. (2009). New professionalism and new management: Changes, continuities, and consequences. *Comparative sociology*, 8(2), 247-266.

Evetts, J. (2018). Professions in turbulent times: Changes, challenges and opportunities. *Sociologia*, 88(88), 43-59.

Fernandez, S., & Rainey, H. G. (2006). Managing successful organizational change in the public sector. *Public Administration Review*, 66(2), 168-176.

Franzén, C. (2020). The Complexities of Boundaries, Task Claims, and Professional Identity in Teamwork: from Dentists' Perspective. *Professions and Professionalism*, 10(1).

Freidson, E. (1994). *Professionalism reborn: Theory, prophecy, and policy*. Oxford: Polity Press.

Freidson, E. (2001). *Professionalism, the third logic: On the practice of knowledge*. Cambridge: Blackwell Publishers.

Gagnon, M. P., Desmartis, M., Labrecque, M., Car, J., Pagliari, C., Pluye, P., ... & Légaré, F. (2012). Systematic review of factors influencing the adoption of information and communication technologies by healthcare professionals. *Journal of medical systems*, 36(1), 241-277.

Georgalis, J., Samaratunge, R., Kimberley, N., & Lu, Y. (2015). Change process characteristics and resistance to organisational change: The role of employee perceptions of justice. *Australian Journal of Management*, 40(1), 89-113.

Gill, R. (2002). Change management--or change leadership? *Journal of change management*, 3(4), 307-318.

Glouberman, S., & Mintzberg, H. (2001) Managing the Care of Health and the Cure of Disease- Part I: Differentiation. *Health Care Management Review*, 26(1): 56–69.

Godbole, P., Burke, D., & Aylott, J. (Eds.). (2017). *Why Hospitals Fail: Between Theory and Practice*. Cham: Springer International Publishing AG.

Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E. R., & Lounsbury, M. (2011). Institutional complexity and organizational responses. *Academy of Management annals*, 5(1), 317-371.

Kavanagh, M. H., & Ashkanasy, N. M. (2006). The impact of leadership and change management strategy on organizational culture and individual acceptance of change during a merger. *British journal of management*, 17(1), 81-S103.

Keshavjee, K., Bosomworth, J., Copen, J., Lai, J., Küçükyazici, B., Lilani, R., & Holbrook, A. M. (2006). Best practices in EMR implementation: a systematic review. *AMIA Symposium*, 982.

Klarner, P., & Diefenbach. (2011). Employee emotions during organizational change—Towards a new research agenda. *Scandinavian Journal of Management*, 27(3), 332-340.

Kleiven, H., Ljunggren, B., & Solbjør, M. (2020). Health professionals' experiences with the implementation of a digital medication dispenser in home care services – a qualitative study. *BMC Health Services Research*, 20(1), 1-10.

Lander, M., Koene, B., & Linssen, S. (2013). Committed to professionalism: Organizational responses of mid-tier accounting firms to conflicting institutional logics. *Accounting, Organizations and Society*, 38(2), 130-148.

Ludwick, D. A., & Doucette, J. (2009). Adopting electronic medical records in primary care: lessons learned from health information systems implementation experience in seven countries. *International journal of medical informatics*, 78(1), 22-31.

Mansaray, H. E. (2019). The Role of Leadership Style in Organisational Change Management: A Literature Review. *Journal of Human Resource Management*, 7(1), 18-31.

Martin, G., Bushfield, S., Siebert, S., & Howieson, B. (2020). Changing logics in healthcare and their effects on the identity motives and identity work of doctors. *Organization Studies*.

Mintzberg, H. (1983) *Structure in Fives. Designing Effective Organizations*. Engelwood-Cliffs: Prentice-Hall.

Neufeind, M., O'Reilly, J., & Ranft, F. (Eds.). (2018). *Work in the digital age: Challenges of the fourth industrial revolution*. London: Rowman & Littlefield.

- Noordegraaf, M. (2015). Hybrid professionalism and beyond: (New) Forms of public professionalism in changing organizational and societal contexts. *Journal of Professions and Organization*, 2(2), 187-206.
- Noordegraaf, M. (2020). Protective or connective professionalism? How connected professionals can (still) act as autonomous and authoritative experts. *Journal of Professions and Organization*, 7(2), 205-223.
- Piderit, S. K. (2000). Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *Academy of management review*, 25(4), 783-794.
- Reay, T., Goodrick, E., Waldorff, S. B., & Casebeer, A. (2017). Getting leopards to change their spots: Co-creating a new professional role identity. *Academy of Management Journal*, 60(3), 1043-1070.
- Rolandsson, B., Alasoini, T., Berglund, T., Dølvik, J. E., Hedenus, A., Ilsøe, A., & Hjelm, E. (2020). *Digital Transformations of Traditional Work in the Nordic Countries*. Köpenhamn: Nordiska Ministerrådet.
- Rolandsson, B., Alasoini, T., Berglund, T., Dølvik., (2020). Chapter one: Introduction. In Rolandsson (ed.) *Digital Transformations of Traditional Work in the Nordic Countries*. Köpenhamn: Nordiska Ministerrådet.
- Saks, M. (2012). Defining a profession: The role of knowledge and expertise. *Professions and Professionalism*, 2(1).
- Scott, W. (2014). *Institutions and organizations: Ideas, interests and identities*. (Fourth edition). Thousand Oaks: California.
- Skelcher, C., & Smith, S. (2015). Theorizing hybridity: institutional logics, complex organizations, and actor identities: the best case of nonprofits. *Public Administration*, 93(2), 433-448.

Smets, M., Jarzabkowski, P., Burke, G., & Spee, P. (2015). Reinsurance trading in Lloyd's of London: Balancing conflicting-yet-complementary logics in practice. *Academy of Management Journal*, 58(3), 932-970.

Smollan, R. K. (2014). Control and the emotional rollercoaster of organizational change. *International Journal of Organizational Analysis*, 22(3), 399-419.

Stensaker, I. G., & Meyer, C. B. (2012). Change experience and employee reactions: developing capabilities for change. *Personnel review*, 41(1), 106-124.

Southon, G., Sauer, C., & Dampney, K. (1999). Lessons from a failed information systems initiative: Issues for complex organisations. *International Journal of Medical Informatics*, 55(1), 33-46.

Sveriges Kommuner och Landsting. *Healthcare 2035*. Stockholm: SKL.

<https://webbutik.skr.se/bilder/artiklar/pdf/7585-389-5.pdf?issuusl=ignore>

Thornton, P., Ocasio, W., & Lounsbury, M. (2012). *The institutional logics perspective: A new approach to culture, structure, and process*. Oxford: Oxford University Press

Trappenburg, M., & Noordegraaf, M. (2018). Fighting the Enemy Within? Challenging Minor Principles of Professionalism in Care and Welfare. *Professions and Professionalism*, 8(1), 2265-2265.

Ulfsdotter Eriksson, Y., Berg, K., Boman, U. W., & Hakeberg, M. (2017). Contract care in dentistry: sense-making of the concept and in practice when multiple institutional logics are at play. *Sociology of health & illness*, 39(7), 1035-1049.

Vetenskapsrådet. (2017). *Good Research practice*. Stockholm: Vetenskapsrådet.

Waddell, D., & Sohal, A. (1998). Resistance: A constructive tool for change management. *Management Decision*, 36(8), 543-548

Weick, K. (1995). *Sensemaking in organizations*. Thousand Oaks: California.

## 9. Appendices

### Appendix 1 - Interview request

Hello,

We have received your contact information because you have been asked to participate in our study on [REDACTED] implementation of digital consultations.

In this email, we have attached an information letter and consent form about participation. We would be grateful if you could read the document and confirm your participation by filling in the form and sending it back to us.

The interviews plan to be conducted during weeks 7 - 10 digitally via Zoom!

Below you see a schedule for interview times, with suggestions for free times slots that we will keep up to date. [REDACTED]

Please send feedback here by email, at which time you wish to reserve, and we will provide feedback with a confirmation. If no time works, please feel free to contact us, and we can see if we can solve it.

We wish you a pleasant day.

With kind regards,

Josefine Rebinder-Lindström & David Nilsson

## **Appendix 2 - Ethics form**

### **Information for participants**

In this document you will find information about the student project “Implementation of digital consultations” for a master’s thesis and what it means to participate. The master's thesis is done by Josefine Rebinder-Lindström & David Nilsson with responsible supervisor Bertil Rolandsson (Associate Professor) at the Department of Sociology and Work Science at the University of Gothenburg.

### **What kind of project are you and why do you want me to participate?**

This is a collaboration with [REDACTED]. The purpose of the study is to investigate employees' experience and experience of the introduction of the new ways of working in the form of digital aids in digital consultations (DC).

We contact you because we are interested in your experiences with the introduction of digital consultations.

### **How is the study done?**

The study will be conducted through digital interviews, via Zoom. The invitation is sent out by email after agreement on time and date.

The sample for the study consists of general dentists and specialist dentists.

Your workplace has been selected, partly because you have undergone training prior to the introduction of digital consultations and to try to get some spread geographically.

The interviews will be conducted during weeks 7-10 and are expected to take about 45 minutes.

Your name and personal details are confidential and will not be used orally or in writing in any text that the study leads to. We would like to record the interview to have the opportunity to listen to it and write it down afterwards. The interview file will be stored on a password-protected computer. Your name will not appear on any of these files - just a code that hides your identity.

If you regret it, you can choose to end your participation at any time. When the results of the study are presented / published, the identity of all participants will be protected with the help of a pseudonym

**What happens to my information?**

The collected material will be used to write a master's thesis and the material may be used in an academic journal or report aimed at user groups and discussed at seminars. The information is kept in secure storage and is only available to relevant researchers. Your answers will be anonymized so that unauthorized persons cannot access them. The material may later be published in a report or article in an academic journal.

**How do I get information about the results of the study?**

The results will be published in a master's thesis that is expected to be completed in June 2021. The study will be published on GUPEA, <https://gupea.ub.gu.se/>

**Participation is voluntary**

Your participation is voluntary, and consent is given in writing. You can ask questions about the project before signing a 'consent form'. If you regret it, you can choose to end your participation at any time during the ongoing interview and you do not have to state why you no longer want to participate. You also have the right to delete data afterwards.

**Contact details**

Josefine Rebinder-Lindström

Phonenumber: [REDACTED]

Email: [REDACTED]

David Nilsson

Phonenumber: [REDACTED]

Email: [REDACTED]

Responsible supervisor

Bertil Rolandsson

Associate Professor at the Department of Sociology and Work Science

Email: [REDACTED]

**Consent to participate**

I have read and fully understood the scope and implications of participating in this student MA project. Any questions I had were answered satisfactorily.

- I agree to participate
  
- I agree to my personal details being handled as described above

<b>Date and place</b>	<b>Name and signature (Participant)</b>
<b>Date and place</b>	<b>Names and signatures (students)</b>

### **Appendix 3 - Interview confirmation**

Hello [REDACTED],

Here is your confirmation of our interview regarding implementation of digital consultations.

Date: [REDACTED]

Time: [REDACTED]

Zoom will be used to perform the interview. To join the meeting, we recommend that you download the application from [REDACTED]

Here is an instructional video that shows how to download the software.

[REDACTED]

If you have a computer that you are not allowed to install Zoom or have problems with the installation, you can still attend meetings directly in the browser. Use the Chrome browser for best functionality.

The next step is to join the meeting, to join the meeting you need to click on the following link:

[REDACTED]

#### **Instructions with application:**

Agree to join the meeting by clicking on the dialog box that appears "Open Zoom"

Alternatively, click Launch Meeting.

Enter your name and click on "join with computer audio"

#### **Instructions without application:**

Click on "join from your browser" (see attached image)

Enter your name

Fill in the passcode and meeting ID:

Meeting ID: [REDACTED]

Passcode: [REDACTED]

Click on "join with computer audio" and allow the browser to use your microphone and webcam.

Click **Open Zoom Meetings** on the dialog shown by your browser

If you don't see a dialog, click **Launch Meeting** below

Launch Meeting

Don't have Zoom Client installed? [Download Now](#)

Having issues with Zoom Client? [Join from Your Browser](#)

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Privacy & Legal Policies

Please check picture and microphone settings before the interview begins.

If you have any questions or problems, do not hesitate to contact us!

Josefine Rebinder-Lindström

Phonenumber: [REDACTED]

Email: [REDACTED]

David Nilsson

Phonenumber: [REDACTED]

Email: [REDACTED]

Best regards,

Josefine Rebinder-Lindström & David Nilsson

## **Appendix 4 - Interview guide**

### **Background questions:**

- How old are you?
- How many years have you worked as a dentist?
- Why did you decide to become a dentist?
- How would you describe your overall experiences of your journey in this job/organization?

### **Background digital consultations**

- Tell us about this project, what is a digital consultation?
- How are they performed?
- What is your role during a DC?

### **Experience of digital consultations**

- How has the introduction of digital consultations affected your work? Are there any positive or negative aspects?
- What was your reaction when you were first informed of this project?
- What is your attitude today regarding DC?
- Do you feel that the implementation of digital consultations influences your competence?
- Have there been any equivalent technical changes in your workplace in the past?
- What do you need to succeed? What do you need to make DC a natural way of working as an integral part of your everyday work life?
- Do you feel that there is time and resources to learn DC in your current work situation? (if not, can anyone assist you in this?)

### **Co-workers' experiences**

- How do you think your colleagues experience the introduction of DC? Has their attitude changed?
- How has the work of your colleagues changed since the introduction of DC?
- How has the change affected your collaboration with colleagues? How has it affected the collaboration between specialist clinics?
- How does DC affect forums for learning and knowledge exchange between you and your colleagues?

### **Management and change work**

- What has the communication from the management looked like regarding the introduction of DC?

- Do you feel that your immediate boss is involved in the introduction of DC?
- Who do you think is responsible for ensuring that DC is used and fully implemented?
- Do you feel that there is support from the organization regarding the introduction of the new way of working?
- In what way have you been involved in the change work and planning in the implementation of digital consultations?
- What opportunities are there to influence if you do not agree with the changes that are being implemented?
- What do you think is the organization's goal and purpose with the implementation of the new way of working, digital consultations?

### **DC training opportunity**

- When did you have your training opportunity?
- Regarding the training opportunity, what is your general opinion about the training opportunity?
- Do you feel that the training opportunity was enough for you to feel confident in the working method before meeting with the patient and specialist dentist/dentist?
- Would you have liked more training, in which case what is missing or needs to be developed?

### **Patient relations**

- How do you think patients will experience a digital consultation?
- Do you think it will be valuable for the patients?
- Are there any potential challenges for your relationship with the patient in a digital consultation?
- What do you think patients' value and want in their dental treatment?

### **Closing questions**

- In your opinion, what challenges is the organization and/or dentistry facing regarding future digitalization?
- Is there anything else I should have asked you but have not asked you about the implementation of digital consultations?