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LUISS

Embracing Digitalization to Foster Person-Centered Care

A Comprehensive Case Study of Capio

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Gothenburg and Rome, Academic Year 2023/2024

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ABSTRACT

There is an ongoing restructuring of the Swedish healthcare system towards primary care. Moreover, this level of care should be person-centered, and by 2025, Sweden should be the world leader in leveraging the opportunities of digitalization and eHealth. However, there is insufficient research on how digitalization is being utilized to foster person-centered primary care. Consequently, this study aims to fill that gap.

The theoretical framework provided a comprehensive basis for interpreting how the digitalization initiatives in Swedish primary care have fostered person-centered care. Key terms were defined and the literature on digitalization in healthcare was presented. Moreover, three conceptual models were introduced, offering a robust foundation to understand and analyze the diffusion, acceptance, and sustainability of new healthcare technologies.

Through an abductive approach, a qualitative single case study was conducted of Capio, an actor with a notable market share within Swedish primary care. Using purposive sampling, semi-structured interviews were conducted with its managers and senior managers actively involved in formulating or implementing digitalization initiatives. These initiatives were then compared with the theory of person-centered care to assess whether they have aided in fostering the approach. Moreover, the conceptual models provided insights into their diffusion across Capio's decentralized organization.

Managers and senior managers within Swedish primary care have, in various ways, leveraged digitalization to foster person-centered care. Most notably, the asynchronous digital communication platform Flow, with its all-digital healthcare center Capio Go, has enabled the organization to transition towards digi-physical healthcare. Flow's Network feature is

especially emphasized as it facilitates seamless patient transitions between and within Capio's units of care. Moreover, Robotic Process Automations have been utilized to streamline administrative tasks, freeing up time for patient interactions, and synchronizing platforms, which enable new digital working methods. These new methods include proactively contacting patients regarding annual appointments and medical prescriptions. When a new digital initiative has been identified by the company, a pilot project is initiated. If deemed successful by the managers and senior managers, they leverage internal opinion leaders to facilitate the diffusion across the decentralized organization. This involves the opinion leaders emphasizing the 'why' behind the digital initiatives to enhance the autonomous healthcare centers' perceived usefulness. Simplicity is also advocated to increase perceived ease of use. These perceptions affect the autonomous healthcare centers' actual usage of the same digitalization. Additionally, varying levels of complexities have been involved in the implementation of the digitalization, which is likely to have affected its adoption, scaling, and sustained usage.

The research shows how digitalization has been leveraged to foster person-centered care, while validating, reinforcing, and extending the theory in a healthcare context. This provides practical applicability and contributes to a broader theoretical understanding for practitioners and researchers, respectively. Future research could enhance the understanding through additional perspectives and by measuring the long-term effects of the implemented digitalization.

Keywords: Decentralized Organization, Digi-Physical Healthcare, Digital Strategy, Digitalization, Person-Centered Care, Primary Care

ACKNOWLEDGEMENTS

"*If I have seen further, it is by standing on the shoulders of giants.*" Although this quotation is from Isaac Newton's February 1675 letter, I would argue for its relevance 350 years later. As evident by the thesis itself and its accumulated materials, this study could not have been accomplished without prior research and the support from many.

Firstly, I would like to express my gratitude to my supervisors. As the thesis involves two master's degrees at separate universities, I have been fortunate to have had the backing of multiple academic professors.

Secondly, I am profoundly grateful to everyone involved at Capio for allowing me to conduct this case study. As all interviewees hold managerial positions at the company, I am deeply aware of the valuable time that has been allocated towards this research. I would also like to extend an additional 'thank you' to Capio Proximity Care's Vice President and Chief Digital Officer, Ali Rezai, for being my mentor and ensuring I had access to all necessary resources to proceed.

Lastly, I offer my sincerest gratitude to my friends and family for their continuous encouragement and support.

Each and every one of you is a *giant*.

Stockholm, 2024-06-01

David Törnered

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LIST OF ABBREVIATIONS

Abbreviation	**Definition**
BEM	Beliefs Elicitation Method
BI	Behavioral Intention to Use
CEO	Chief Executive Officer
DI	Diffusion of Innovations
IT	Information Technology
NAM	National Academy of Medicine
NASSS	Nonadoption, Abandonment, Scale-Up, Spread, and Sustainability
PEU	Perceived Ease of Use
PU	Perceived Usefulness
RPA	Robotic Process Automation
SALAR	Swedish Association of Local Authorities and Regions
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action

1. INTRODUCTION

This chapter introduces the research context and objectives, focusing on the restructuring of Swedish healthcare towards primary care, aided by digitalization and guided by the concept of person-centered care. It presents Sweden's healthcare system, emphasizing primary care and the case company. The chapter concludes by identifying the research gap and outlining the study's delimitations and structure.

1.1 Background

The Swedish healthcare system is experiencing fundamental change, driven by structural adaptations to new directives emphasizing *digitalization* and *person-centered care*. For instance, restructuring must be undertaken of pre-hospital care, highly specialized care, and primary care, in a way that primary care functions as the new hub (Government Offices of Sweden, 2023a; National Board of Health and Welfare, 2023). Furthermore, a formal agreement has been established in 2024 between the Swedish government and the Swedish Association of Local Authorities and Regions (SALAR), i.e., the employer organization in which every Swedish municipality and region is a member (SALAR, 2023b). The accord underlines that this restructured primary care should be person-centered (Government Offices of Sweden, 2023b). Person-centered care will be extensively defined in 2.1.1 Person-Centered Care.

As outlined in Government Offices of Sweden (2023ab), Swedish primary care is estimated to change towards *close care*, i.e., care delivered in close collaboration between the different units of care, with an emphasis on primary care. Moreover, with more digital initiatives being introduced, this care is also becoming more *digi-physical*, i.e., delivered using both physical

and digital channels (Region Stockholm, 2022). This definition aligns well with the approach of many Swedish healthcare providers today, as they conduct care based on the approach of "*digital when possible, physical if necessary*"[1] (Eriksson, 2023, p. 58). Outpatient visits and home care are also expected to rise, as inpatient care aligns with the new national goals of close care (Region Stockholm, 2022).

There are many reasons for this restructuring of Swedish healthcare. For instance, primary care has had difficulties in fulfilling its mission, e.g., in meeting the current demographic challenges caused by an increased level of multimorbidity and an aging population (SOU 2016:2). As shown over the past decades, Sweden has experienced a significant increase in both population size and longevity (Statistics Sweden, 2021b; Statistics Sweden, n.d.-a). However, projections also show that the demographic profile in the country is set to change drastically in the future, with an increase in the population aged 65 and older, particularly among those 80 years old or more. By 2040, it is estimated that eight percent of Sweden's total population will be in the 80-plus age bracket, indicating a surge of approximately 60 percent from 2021's levels (Statistics Sweden, 2021a). Swedish Agency for Health and Care Analysis (2022) states that this will lead to increased demand for the healthcare sector, particularly primary care. Parallel to the increased need for care due to demographics, it has also become increasingly difficult to attract and retain applicable personnel (Swedish Agency for Health and Care Analysis, 2022). Similarly, Statistics Sweden (2021b) states that the current levels of personnel trained in healthcare are insufficient, which is projected to continue or increase by 2035. Because of these current and upcoming difficulties, healthcare providers must streamline their working methods to meet the patients' needs. Moreover, there

[1] Original citation, in Swedish: "*Digitalt när det går, fysiskt när det behövs.*" (translated by the author)

are indications that the increased demand for digital care can be attributed to the emergence of new healthcare needs (Government Offices of Sweden, 2023b; Swedish Agency for Health and Care Analysis, 2022).

1.2 Problem Discussion

In the wake of structural change towards primary care, the national goal of being person-centered, and amidst a backdrop of both changing patient demands and the prerequisites to deliver care, Swedish healthcare is likely to continue undergoing radical change. Practitioners and policymakers must evaluate all options, and digital initiatives could have the potential to aid the healthcare sector in this transformation (Kraus et al., 2021).

The degree of, and prerequisites for, digitalization vary across different countries, reflecting diverse technological infrastructures and policy environments. While Majcherek et al. (2024) examine the heterogeneous digitalization landscape within European Union's healthcare systems, Statista (n.d.-a) identifies China as being the global leader in digital health spending. In contrast, Walsh and Rumsfeld (2017) argue that United States' healthcare sector is a unique outlier in failing to capitalize on digital advancements, in stark contrast to other major sectors in the economy. Despite their analysis dating back seven years, the sector's hesitance towards digital healthcare investments seems to persist (Glaser et al., 2024). However, other aspects of the country's digitalization efforts seem to have been boosted by the COVID-19 pandemic, i.e., the pandemic caused by the coronavirus disease 2019 (Baudier et al., 2023). Evidently, the term itself is broad and widely used, but within this global landscape and around the time of the 2017 article, Sweden seems to have positioned itself ambitiously. In a joint declaration with SALAR, the Swedish government stated that "*by 2025, Sweden should*

be the world leader in utilizing the opportunities of digitalization and eHealth […]"[2] (Government Offices of Sweden, 2016, p. 9). As the 2025 deadline looms, one might wonder about the progress of this goal, and which digitalization have been employed thus far.

In the same joint declaration, digitalization is defined as both converting analog information to digital format, and the broader integration of *information technology* (IT) support into societal functions (Government Offices of Sweden, 2016). *eHealth*, on the other hand, refers to the broad use of information and communication technology within the context of World Health Organization's definition of *health*, which is "*a state of complete physical, mental, and social well-being* […]" (Government Offices of Sweden, 2016, p. 9; World Health Organization, n.d.). This definition is in complete alignment with that of National Board of Health and Welfare (2018), stating that "*Health is physical, mental, and social well-being. eHealth is using digital tools and the exchange of information digitally to achieve and maintain health.*"[3] As there are many ways to define eHealth, and governmental agencies such as Swedish eHealth Agency have therefore adopted the latter (Swedish eHealth Agency, 2023c). With this definition of eHealth, many similar terms such as *telemedicine* and *mHealth*, can be argued to be included within the former. The reasoning behind this is because Haleem et al. (2021) defines telemedicine as health-related services aided by telecommunicating and electronic information technologies, and World Health Organization (2018) stating that mHealth refers to using the appropriate digital technologies for public health, such as mobile wireless technologies. To achieve this eHealth, either by itself or

[2] Original citation, in Swedish: "*År 2025 ska Sverige vara bäst i världen på att använda digitaliseringens och e-hälsans möjligheter [...]*" (translated by the author)

[3] Original citation, in Swedish: "*Hälsa är fysiskt, psykiskt och socialt välbefinnande. E-hälsa är att använda digitala verktyg och utbyta information digitalt för att uppnå och bibehålla hälsa.*" (translated by the author)

combined with physical care, it is necessary for academia, authorities, the business sector, municipalities, regions, and non-profit organizations to combine their efforts (Swedish eHealth Agency, 2023b).

Sweden could be in a unique position to achieve the desired digitalization in healthcare. European Commission (2022) states that Sweden is one of the most digitalized countries in the European Union, most notably due to its high digital competencies amongst both citizens and corporations, backed by a high proportion of digital public services and good access to fast broadband. McKinsey & Company (2016) shares this view of an exceptional digital infrastructure in Sweden and the competencies amongst its citizens, emphasizing the possibilities within the healthcare sector. However, to reach Vision for eHealth 2025, i.e., the declaration relating to digitalization, technological advancements and competencies are not enough by themselves, as its citizens must also have a desire to use the digital services (Swedish eHealth Agency, 2023a). This desire might exist, as 81 percent of Swedish adults have used a digital eHealth service during the last 12-month period (The Swedish Internet Foundation, 2023). Examples of eHealth services include receiving information about a certain condition online, a person's accessing their medical information digitally, and digital consultations. Additionally, 78 percent are also positive towards using specifically 1177's digital services, with 1177 being a national infrastructure platform for patients' online health, e.g., to access medical advice, book healthcare appointments, and access electronic health records (Swedish eHealth Agency, 2023a). While eHealth integration marks progress in some areas of healthcare, the transformation is ongoing as the sector must adapt to evolving challenges and ensure that new digital solutions meet the diverse needs of all its patients (Swedish Agency for Health and Care Analysis, 2022; United States Department of Commerce, 2022).

Furthermore, Government Offices of Sweden (2023b) highlights that person-centered care is a prerequisite for being in line with both national and supranational guidelines, specifically emphasizing the term in its revised annual guidance. As of 2024, primary care should not only be transformed into the hub in Swedish healthcare, but also be person-centered, coordinated, and collaborative, to strengthen the patients' health (Government Offices of Sweden, 2023b; SALAR, 2024b). There is also a significant need for more effective person-centered methodologies and better coordination across healthcare services (Swedish Agency for Health and Care Analysis, 2022).

Nevertheless, achieving true person-centeredness requires more than favorable attitudes and policies – it demands tangible actions and measurable outcomes. As the deadline for Sweden to become a world leader in eHealth approaches, the healthcare sector is under scrutiny. How well have digital initiatives been integrated into the Swedish healthcare? And considering the revised national guidance, how have these digitalization efforts enhanced person-centered care? Thus, a critical examination is necessary to determine whether these digital initiatives are meeting the formulated goals. This research seeks to understand the digitalization strategies employed by primary care leaders where person-centered care is vital in their digital strategy, offering insights into the effectiveness of such efforts and paving the way for future advancements.

1.3 Purpose and Research Question

Amidst structural changes of the Swedish healthcare system and the imminent national goal of being the best at utilizing the opportunities of digitalization and eHealth, combined with the government's clearly stated goal that primary care should be person-centered, this

research aims to present specific examples of recent digital initiatives and how these have enhanced person-centered care.

While governmental reports such as Swedish eHealth Agency (2023a) may offer a national perspective and aggregated data, the successes and learnings of individual organizations could provide additional insights. This research is therefore conducted as a single case study of *Capio*, with insights into their recent digitalization initiatives followed by an analysis of whether these have furthered their goal of delivering person-centered care (Capio, n.d.-b). Swedish eHealth Agency (2023b) states that all organizations must contribute to achieve the national goal of being the best at utilizing digitalization for eHealth by 2025. This includes Capio, one of Sweden's largest primary care providers under private management, whose role within Swedish healthcare will be further elaborated upon in 1.4.2 Capio. In the context of the goals of digitalization, eHealth, and person-centered care, and through the lens of the case-company's non-hierarchical organizational structure, the research question is:

- *How have managers and senior managers within Swedish primary care leveraged digitalization to foster person-centered care?*

1.4 Healthcare in Sweden

The Swedish healthcare system should provide the entire population with appropriate healthcare. Predominately tax-based and mostly provided through public provision, its comprehensive social protection scheme extends to all individuals residing or working in Sweden (Janlöv et al., 2023). Moreover, it is decentralized and organized into three levels: national, regional, and municipal, with the main responsibility being delegated to the country's 21 regions and 290 municipalities (Janlöv et al., 2023; SALAR, 2023a). The state

establishes the prerequisites for healthcare through laws and regulations, and various national authorities have different responsibilities to oversee and support it, but the primary responsibility resides with those lower levels of government (SALAR, 2023a).

Additionally, Swedish healthcare may be provided by both the public and private sector (European Commission, n.d.). Regardless of the provider, there is a government agency under Ministry of Health and Social Affairs that ensures all care complies with the relevant laws, regulations, and standards of quality (Health and Social Care Inspectorate, n.d.). Any incurred costs for the patient, i.e., those costs not subsidized through taxes, are consistent when seeking healthcare, regardless of the organization being under public or private management, given that the private institution has an agreement with the applicable governmental organization. In the absence of such agreements, such as an agreement between a healthcare center and the region where it is located, the patient must bear the full cost of those services (National Board of Health and Welfare, 2019). In practice, even though there are many organizations under private management, this results in most healthcare expenses being covered through public financing (Janlöv et al., 2023).

As each region manages its own healthcare resources, patient fees and healthcare services may vary slightly (National Board of Health and Welfare, 2019). However, most of the costs remain subsidized in all regions, and there is also a system in place to protect patients from high medical expenses in the publicly funded care. Combined with the cost of prescription medicines, the direct cost of healthcare services for the individual gradually decreases and eventually caps at a certain amount. In 2024, this ceiling is 2850 SEK (approximately EUR 250), and all subsequent medical expenses exceeding this limit will be covered by the government (Swedish eHealth Agency, n.d.)

Lastly, Swedish healthcare is organized into various levels of care, e.g., primary care, specialized care, and dental care (National Board of Health and Welfare, 2019). As stated by the research question and further expanded upon in 1.6 Delimitations, the focus of this research will be on primary care due to its central role in the healthcare system's restructuring and its relevance to both digitalization and person-centered care. This level of level of care will therefore be further explained in the following subchapter.

1.4.1 Swedish Primary Care

As stated in chapter two, section six of The Healthcare Act (SFS 2017:30), primary care must meet the need of medical assessment and treatment, nursing care, preventive work, and rehabilitation, if it does not require specialized medical or technical resources, or other special skills. In practice, this means that primary care services are offered by general medical practitioners, who provide medical examinations and subsequent treatment and care to the most common health conditions and illnesses. If deemed necessary, the same healthcare provider will refer the patient elsewhere within the Swedish healthcare system (National Board of Health and Welfare, 2019).

Primary care is managed by the principals of both municipalities and regions. Although being separate entities and working in different operating areas of primary care, they have the same objective (SALAR, 2024c). Most of the Swedish primary care is conducted through its 1200 healthcare centers, 46 percent of which were publicly funded under private management in 2022 (Confederation of Swedish Enterprise, n.d.). However, the proportion of privately managed healthcare centers varies significantly across Sweden's different regions. In 2022, it ranged from 13.2 percent in Region Västerbotten to 70.7 percent in Region Stockholm (Confederation of Swedish Enterprise, n.d.). According to Swedish law, patients have the

option to choose their preferred healthcare center, and publicly funded providers will receive their funding accordingly (SALAR, 2024a). A patient may choose a new healthcare center semiannually anywhere in the country, thereby "listing" themselves at that new healthcare center (Janlöv et al., 2023). A patient may only be listed at one healthcare center at a time. Highlighting the distribution of healthcare centers under private and public management is relevant to this study because it demonstrates the significant role of both in the Swedish healthcare system.

1.4.2 Capio

Capio is a major actor within Swedish primary care. Out of all 1200 healthcare centers nationwide, Capio operates 136, or circa 11 percent (Confederation of Swedish Enterprise, n.d.; see Figure 1). Its business area of *Proximity Care*, conducting primary care in 13 out of Sweden's 21 regions, had 950 000 listed patients in 2022. For perspective, Sweden's total population was 10.55 million in January 2024 (Statistics Sweden, n.d.-b). Additionally, considering that 46 percent of healthcare centers are publicly funded under private management, and Capio operates nearly a quarter of these, their market position could be argued to be notably significant.

Although having a wide range of operations spanning multiple Nordic countries, Capio's main operations are in Sweden (Capio, n.d.-a). The company follows the same "*digital when possible, physical if necessary*"-approach stated by Eriksson (2023), as Capio often emphasizes its digi-physical care (Capio, n.d.-c). As illustrated by Figure 1, the company claims it is a decentralized organization, which may affect how it adopts and implements digitalization initiatives. Since 2018, the company has acted as a subsidiary under the French

healthcare conglomerate *Ramsey Santé* (Capio, n.d.-b). However, *Capio Sweden* will be focused upon henceforward, with an emphasis on its primary care operations.

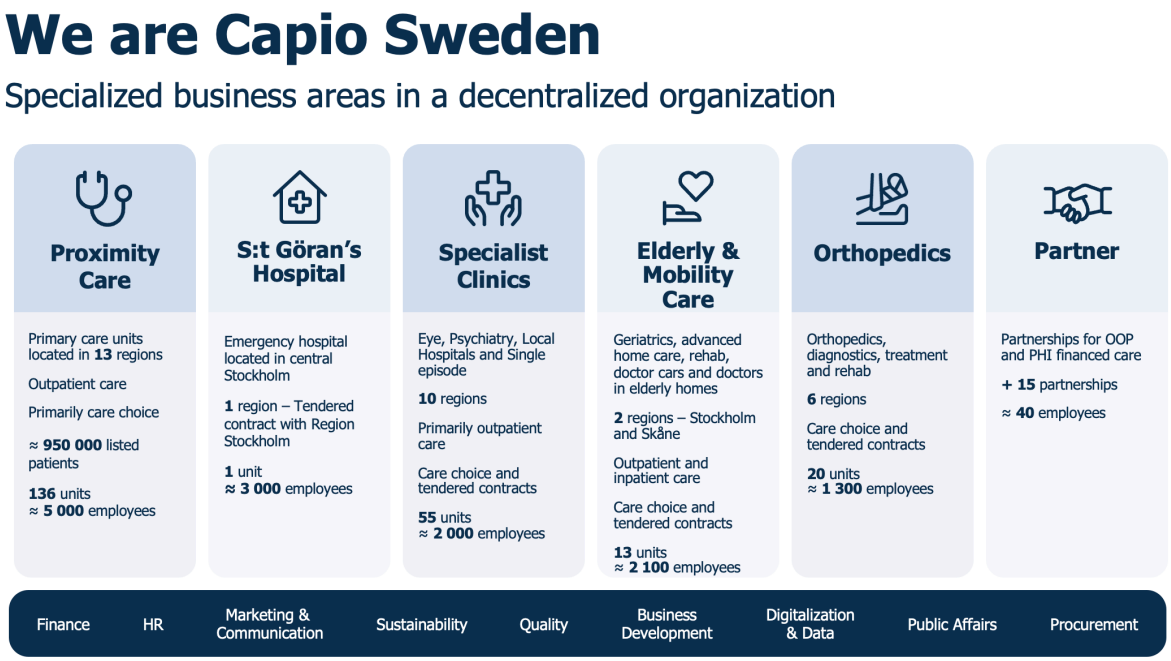

Figure 1: The Six Business Areas of Capio Sweden (A. Rezai, personal communication, December 22, 2023).

As presented in Figure 1 above, Capio Sweden is divided into six business areas. These include the proximity care business area which mostly consists of its 136 healthcare centers and their platform *Capio Go*, providing online primary care every day of the year. In 2022, the patient's digital visits to Capio Sweden amounted to 850 000 (Capio, n.d.-b). As illustrated in Figure 1, the other business areas include *S:t Göran's Hospital*, an emergency hospital in Stockholm, and its *specialist clinics* delivering outpatient specialist care, alongside Capio's local hospitals. Outpatient care is defined as healthcare received at healthcare centers or specialist clinics, whereas inpatient care requires admission to a hospital (European Commission, n.d.). Moreover, *Elderly & Mobility Care* involves both inpatient and outpatient care and includes, for example, geriatrics. Furthermore, *Orthopedics* primarily regards

rheumatology and rehabilitation, whereas *Capio Partner* focuses on partnerships within private and insurance-financed care (Capio, n.d.-a).

Capio's Operating Model is shown in Figure 2 below. Based upon the medical needs and individual circumstances of the patient, Capio conducts modern medicine and modern management. Figure 2 further illustrates that Capio seeks continuous improvement of Key Performance Indicators and Quality Performance Indicators, and as a result, their financial results are determined. Moreover, the whole process, from patient needs to financial results, is driven by Capio's corporate values of *quality*, *social responsibility*, *innovation*, and *empowerment.*

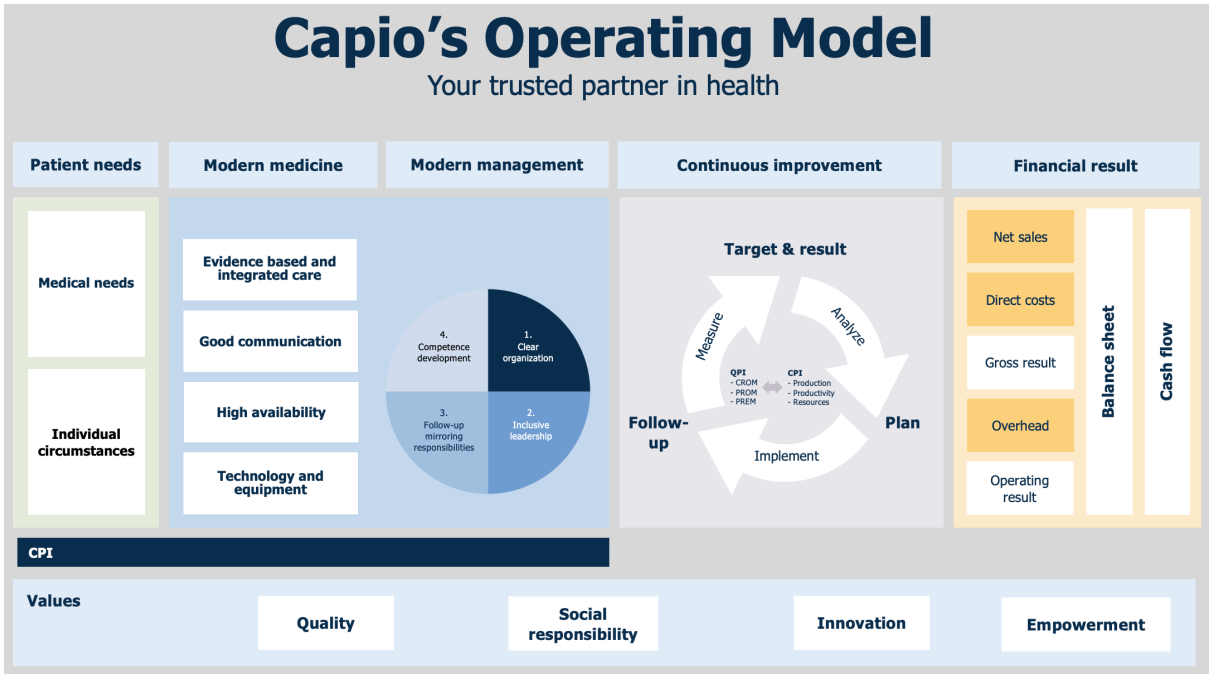

Figure 2: Capio's Operating Model (A. Rezai, personal communication, December 22, 2023).

As shown in Figure 3 below, there are many ways to initiate contact with, and from, Capio's primary care. These include a patient receiving an invitation by mail, phone, or text. Conversely, the patient, may initiate contact by initiating a phone call with any Capio

healthcare center, chatting with Capio Go, or by physically visiting a healthcare center (A. Rezai, personal communication, December 22, 2023).

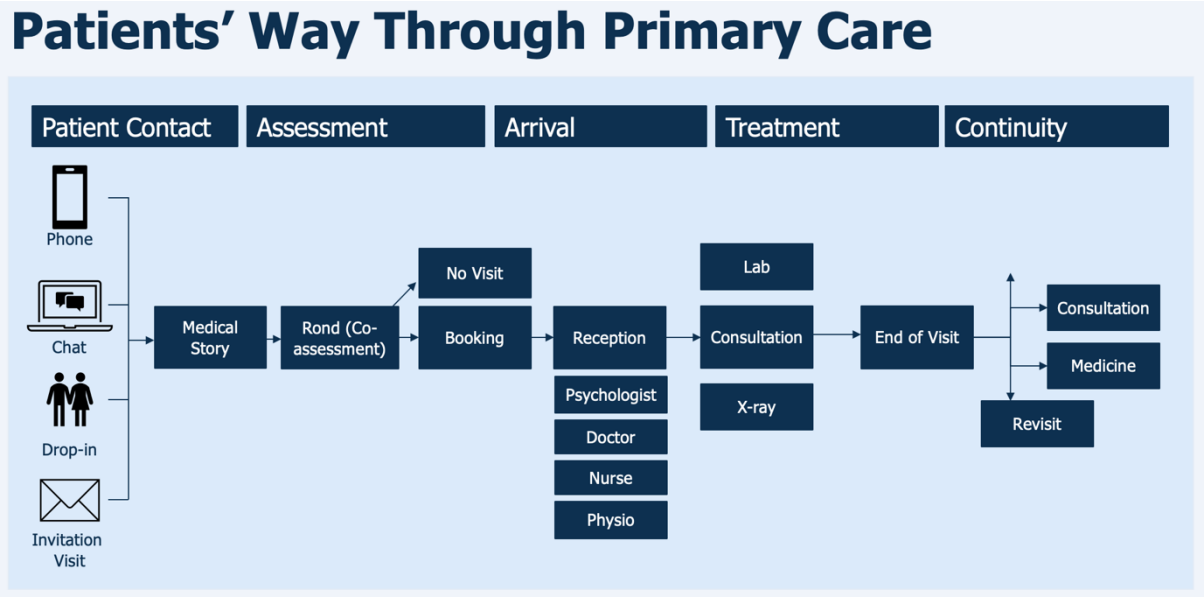

Figure 3: The Digi-Physical Patient Journey Through Primary Care (A. Rezai, personal communication, December 22, 2023).

As further illustrated in Figure 3, depending on the medical story of the patient, an initial digital consultation may be established, resulting in "No Visit". The patient may also be recommended to book to a physical appointment, either without any prior digital appointment or following a medical assessment during a digital appointment. These digital and physical methods of initiating contact, provides some support to the digi-physical approach claimed by Capio (n.d.-c).

The external yet co-developed platform *Flow* provides some digital infrastructure to Capio, including the chat function illustrated in Figure 3 (A. Rezai, personal communication, December 22, 2023). Erlingsdóttir (2023) argues that Flow is widely used in the industry, with 70 percent of Swedish primary care under private management utilizing it. The author

also notes that the platform name Flow is often used interchangeably with the company behind it, *Doctrin*. Additionally, by the end of the fiscal year 2022, Capio had an 18 percent ownership in the company (Doctrin AB, 2023). This investment further highlighting their linkage and provides some initial indication of the platform's integration and usage within Capio.

1.5 Research Gap

There is an ongoing restructuring of the Swedish healthcare system towards primary care. This study aims to contribute to the current understanding of the implementation of digitalization in the Swedish primary care, with an emphasis on understanding digitalization's role in person-centered care. Specifically, it seeks to understand how managers and senior managers at Capio, a key healthcare provider, have utilized digitalization in their efforts to deliver person-centered care. Digitalization and eHealth in Swedish healthcare are extensively researched by both academics and practitioners, but aggregated empirical data on digitalization being used to deliver person-centered care appears underexplored. This study aims to fill that research gap. Considering the national agreement of digitalization and eHealth by 2025, and person-centered care agreement of 2024, this research is timely, with the potential to influence policy and practice moving forward, thus offering a broader societal benefit.

1.6 Delimitations

The scope of the study focuses on understanding the digitalization efforts being conducted within Swedish primary care. However, several delimitations are made to narrow down the scope, hence allowing for a more focused study.

Firstly, the primary focus is to interview managers and senior managers within Swedish primary care. The reasoning behind this lies in their unique positions to provide insights into the strategic planning and rationale behind certain digitalization initiatives. Senior managers are more likely to offer insights into the strategic rationale behind certain initiatives, while managers often have a higher involvement in the actual deployment of these efforts. Within certain organizations, managers could also provide senior managers with additional insights and present certain solutions based upon their day-to-day experience, which may be utilized throughout the organization. While patients, healthcare staff, and others do hold valuable perspectives, their exclusion arises from them not actively participating in the decision-making of implementing certain digital initiatives.

Secondly, the research employs a case study design within the Swedish primary care, with a singular focus on the organization Capio. This delimitation has been made due to limitations in time and resources available to the author, and therefore, no other managerial perspectives besides those at Capio will be considered. However, the chosen case design will ensure a thorough exploration of the digital initiatives being applied and how these may have enhanced person-centered care, where Capio was chosen specifically due to its notable market share within Swedish primary care, as discussed in 1.4.2 Capio. Additionally, a further delimitation is that operations managers of specific health centers at Capio have not been included as possible interviewees. Although these individuals are argued to be fundamental in executing certain digital initiatives at their respective health centers, the emphasis in this research regards the overarching strategic digital initiatives and their relation to person-centered care, rather than localized operational management. Nevertheless, to ensure a comprehensive view beyond senior management's perceptions, this study will also include managers who oversee digital strategies across Capio's primary care operations and

managers with broad medicinal expertise. This inclusion will address the delimitation and will be further discussed in 3.3.2 Primary Data Collection.

Thirdly, although the research will discuss the adoption and integration processes of digitalization within an organizational context which may involve elements of change management, it will not delve into change management or the broader organizational change processes it often encompasses.

Fourthly, due to the Vision for eHealth 2025 being announced in 2016 and with person-centered care not being widely adopted at that point, there has been a delimitation to digitalization initiatives from 2016 and onwards. This is enforced through the secondary data exclusion criteria presented in Table 2 and as the period was emphasized during the semi-structured interviews with the respondents.

Lastly, as there can be an overwhelming amount of digitalization being utilized in a primary care setting, the research has been delimited to digital initiatives that either directly or indirectly involve or assist the patients, given the focus on person-centered care. Due to this delimitation, other potential areas of digital impact, e.g., operational efficiencies and financial outcomes, will be excluded, unless they directly intersect with the person-centered care objectives or directly affects the care provided to the patient.

1.7 Disposition

This thesis is organized into six main chapters, as shown in Figure 4 below. It unfolds in a sequence starting with the introduction, followed by theory, methods, results, discussion, and

conclusion. Each chapter commences with a short overview of its contents, providing additional guidance to the reader.

Figure 4: The Sequence of the Thesis' Chapters.

2. THEORY

This chapter defines key terms and concepts, explores the literature of digitalization in healthcare, and presents three models for understanding and analyzing the diffusion, acceptance, and sustainability of new healthcare technologies. The chapter also discusses integrating digitalization with person-centered care and concludes by highlighting the key insights from the literature.

2.1 Definitions

There are many definitions of the key terms relevant to this thesis. Consequently, these will be outlined and discussed below.

2.1.1 Person-Centered Care

"Patient-centered care" and "person-centered care" are sometimes used interchangeably (Dickinson, 2021; Håkansson Eklund et al., 2019; Ekman et al., 2011; University of Gothenburg, n.d.). In Sweden, both terms are used in different governmental regions, however, National Board of Health and Welfare (2016) argues that person-centered care is a further development of patient-centered care, where it is emphasized that each patient is a person, spending most of their time outside of healthcare facilities. While most Swedish regions discuss the individual terms, some regions rely directly upon *Gothenburg Center for Person-Centred Care*'s definition, stating that person-centered care is an ethical standpoint which includes the three key concepts of *partnership*, *narrative*, and *documentation* (National Board of Health and Welfare, 2016; University of Gothenburg, n.d.).

Recently, there has been a move towards using person-centered care to ensure that all needs and preferences of a person are considered, not just their clinical or medical ones (The American Geriatrics Society Expert Panel on Person-Centered Care, 2015). University of Gothenburg (n.d.) elaborates on this, stating that there is no conflict in using the word "patient-centered care", but they argue that "person-centered care" is a broader and more ethical term, which at times includes being a patient, yet even then, the patient remains a person. This distinction also exists throughout the research community. For example, Ekman et al. (2011) state that a patient is a person who should not be reduced to their disease, and Håkansson Eklund et al. (2019) discuss the many similarities of the two terms. However, they distinctly differentiate that patient-centered care focuses on ensuring a functional life for the patient, whereas person-centeredness aims to provide a meaningful life for the patient. Despite the usage of both terms by academics and practitioners, there does not seem to be a consensus regarding their definitions, core elements, how to measure them, or their best practices (The American Geriatrics Society Expert Panel on Person-Centered Care, 2015).

Within a Swedish context, presented by University of Gothenburg (n.d.), the partnership is the most central aspect of person-centered care. This partnership acknowledges the mutual respect between the healthcare professional's expertise and the expertise of the individual patient and their relatives living with the condition. Through this partnership, the healthcare professional(s) should listen to the patient's narrative, and combined with the medical examinations and tests, any treatment or care should be planned together with the patient. Moreover, the agreed-upon treatment or care should be structurally and systematically documented to ensure both continuity and quality, and the documentation should always be made available to the patient.

Boström and Fischer Grönlund (n.d.) expands upon the outlined partnership and further defines the concept of person-centered care through the placement of the person being cared for at the center. Consequently, the care should be based upon the patient's own story and its prerequisites, resources, and possible difficulties. The authors' definition, presented in SALAR's "Handbook for Healthcare", seems to be the most exhaustive in a Swedish context. However, although many discuss the term's usage and core elements, as highlighted above, there does not appear to be an exhaustive definition of its components in Sweden. Thus, to be able to fully comprehend the term, the definition from National Academy of Medicine (NAM) will be applied. Although the term "patient-centered" is used by NAM, their definition is in direct alignment with Boström and Fischer Grönlund (n.d.) in a healthcare setting, but further elaborates on its components.

NAM endorses the definition given by Picker Institute in the 1990s, which started as six dimensions of patient-centered care. Later, these six dimensions were slightly altered, eventually becoming eight and being renamed "person-centered care" (Davis et al., 2005; Picker Institute, n.d.). Since then, NAM has not revised their endorsement, and these two new dimensions largely overlap with the previous ones (Tzelepis et al., 2015). Regardless, Picker Institute's dimensions are widely applied globally through various healthcare settings (Adjei et al., 2024; Davis et al., 2005; Delaney, 2018; Millis et al., 2014). Picker Institute (n.d.) states that person-centered care involves:

1. **Fast access to reliable healthcare advice**. Patient-centered care should ensure timely and easy access to healthcare services that meet the individual's needs.

2. **Effective treatment by trusted professionals**. This focuses on delivering clinically appropriate care through positive, trust-inspiring interactions with healthcare professionals that respect the patients' preferences.
3. **Continuity of care and smooth transitions**. Person-centered care should aim for seamless transitions between different care providers and stages of treatment, maintaining consistency in information, relationships, and care management.
4. **Involvement and support from family and other healthcare staff**. The care must acknowledge the significance of friends, family, and the wider support network in delivering person-centered care, and the care should therefore support their involvement.
5. **Clear information, communication, and support for self-care**. Person-centered care should provide patients with accessible, high-quality information that aids informed decision-making and promotes self-care.
6. **Involvement in decisions and respect for preferences**. The person must be allowed involvement in the decision-making regarding their own health and care, with decisions that respect the person's preferences.
7. **Emotional support, empathy, and respect**. Person-centered care emphasizes the need for empathy and respect through a holistic approach, addressing the emotional aspects and individuality of the patient.
8. **Attention to physical and environmental needs**. Lastly, person-centered care should provide the person with treatment and care in a comfortable environment that ensures dignity and privacy.

These eight dimensions of person-centered care, along with the term's definition within the Swedish context, will be applied in the upcoming analysis of the results. The following subchapter will define another key term of this thesis: digitalization.

2.1.2 Digitalization

Digitalization, although a broad concept, has a distinct definition in a Swedish healthcare setting. As presented in 1.2 Problem Discussion, Government Offices of Sweden (2016) defines it as:

1. converting analog information to digital format, and
2. the broader integration of IT support into societal functions.

The former directly aligns with conducting *digitization*, i.e., converting analog information to digital form, whereas the latter is an example of using digital technology, likely digitized information, to assist in creating value (Gobble, 2018; Parviainen et al., 2017).

However, as Government Offices of Sweden's broader definition of digitalization encapsulates both, yet conceptualizes it with regards to Swedish healthcare, their definition will be applied moving forward. The following subchapter will delve into the current landscape of digitalization in healthcare, illustrate the trade-offs involved with its implementation, and exemplify how digitalization can be implemented to deliver person-centered care.

2.2 Digitalization in the Healthcare Sector

In 1.2 Problem Discussion, the relevance and definitions of both health and eHealth were discussed. However, it is important to underline that health includes more than the complete mental, physical, and social well-being of an individual. That by itself is its definition, but the achievement of the highest possible standard of an individual's health should be further seen as a fundamental right, regardless of that person's political beliefs, race, religion, or socioeconomics. Public health is also fundamental to achieving global peace and security (World Health Organization, n.d.).

With regards to digitalization in healthcare, Garg et al. (2018) presents four main domains of digital health technologies:

1. **Connected Devices**. This includes both wearable and nonwearable devices. The former involves passive data collection, such as wrist-mounted activity trackers, whereas the latter includes active data collection, such as Internet-connected biometric devices. More in-depth, these devices are part of the larger ecosystem of *Internet of Things* in healthcare. Wearable devices have shown potential in providing information on a person's potential hospitalization risk and have correlated physical activity with quality of life. Additionally, nonwearable devices demonstrate high patient-reported acceptability and give indications of improving healthcare outcomes through remote data collection and subsequent analysis.
2. **Digital Patient Information Collection**. This includes the usage of web portals, smartphone applications, and electronic surveys to collect patient data. Additionally, a seamless integration into electronic health records is required to maximize the potential benefits of the information collection. By integrating data from various

healthcare sources, the management of patient information can be streamlined, supporting better and more well-informed healthcare decisions.

3. **Telemedicine**. The use of electronic information and telecommunications technologies to, e.g., aid in clinical healthcare and to support both patients and healthcare professionals with health-related education. Garg et al. (2018) also demonstrate that disease and treatment can be addressed effectively using telemedicine, compared to physical visits.
4. **Chatbots and Intelligent Assistants**. Exemplified by artificial intelligence, this is software that is designed to interact with its users through conversation, such as in healthcare. This software may also assist in the decision-making of the healthcare provider, by analyzing vast amounts of data and then providing the results as a decision basis.

With almost everyone being in contact with the healthcare sector at some point in their lives, the sector is recognized as a supporting function for the well-being of a society (Danaher & Gallan, 2016). Thus, a well-functioning healthcare system can have a tremendous impact on both society and its individuals. In line with this, Esmaeilzadeh (2024) argues that with relevant guidance and clear regulations, healthcare is in a unique position to balance innovation with ethics. By using applicable approaches, such as person-centered care, innovation, and particularly technical advancements, can be employed to improve patient care and health outcomes (Esmaeilzadeh, 2024). Therefore, the utilization of digitalization in the healthcare sector will be further discussed in the following subchapters.

2.2.1 Market Potential of Digital Health

During the COVID-19 pandemic, digital transformation was overwhelmingly accelerated. This can be seen to various degrees throughout industries, but especially in the increased usage of online services after a large breadth of citizens adopted them. For instance, since the pandemic reached the European Union, more than more than half of its nation's respective national health systems have adopted telemedicine as an alternative to in-person medical consultations (Eurofound, n.d.). To comprehend the meaning of this, it is important to remember the definition given by Haleem et al. (2021), stating that telemedicine is health-related services facilitated by telecommunications and electronic information technologies. This broad definition includes consultation over the phone and online appointments, digital health platforms more broadly, and health data analysis. Furthermore, telemedicine using digital solutions such as mobile applications, e-prescriptions, chatbots and websites have been an enabler of continued care throughout the pandemic (Eurofound, n.d.).

In a Swedish context, the COVID-19 pandemic simultaneously accelerated and hindered different progress within eHealth. Swedish eHealth Agency (2022) states that there was a notable increase in the usage of digital communication channels during the pandemic, in line with the above. This included, e.g., a rise in the proportion of municipalities offering remote supervision through digital technology, if the technology was already available or easy to implement (Swedish Agency for Health and Care Services Analysis, 2022). Private digital healthcare services under private management also saw an increase, and all 21 regions developed solutions for digital primary care appointments. However, many larger digital initiatives, such as the change of IT support systems or the introduction of new eHealth services, were either hindered or postponed, as healthcare resources were strained, as the

resources were needed in other areas of the sector (Swedish Agency for Health and Care Services Analysis, 2022).

Without further analysis, some might argue that the extraordinary circumstances of the global crisis caused by the COVID-19 pandemic would lead to a temporary impact on the healthcare services and how these are utilized by the patients. This reasoning could suggest that the shift towards, e.g., digital platforms might diminish or stabilize as the immediate threats lessen. However, the data in Figure 5 below indicates otherwise.

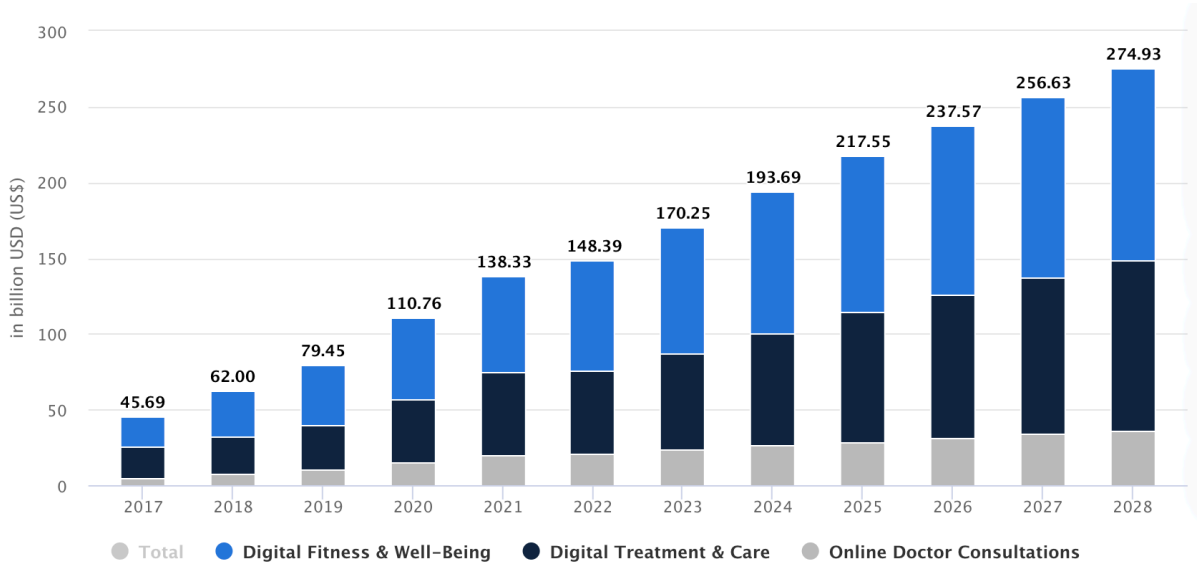

Figure 5: Global Revenue of Digital Health between 2017 and 2028. 2024 and onwards are projections. (Statista, n.d.-b).

As illustrated in Figure 5, the digital health market experienced significant revenue growth even prior to the start of the COVID-19 pandemic. Statista (n.d.-b) states that three different categories of the digital health market are *digital fitness & well-being* (digital tools and coaching that help individuals improve their health and well-being), *digital treatment & care* (digital tools used for diagnostics, treatment, and the management of medical conditions), and

online doctor consultations (telemedicine and other digital tools that allow for remote consultation). The market growth can be exemplified with the online doctor consultation segment more than doubling between 2017 and 2019, prior to the pandemic. In total, the worldwide market is expected to grow from 45.69 billion USD in 2017 to 274.93 billion USD in 2028, indicating a six-fold increase with much potential. With this significant growth in the digital health market and with its projections moving forward, the advantages and disadvantages of digitalization in healthcare will be discussed in the following subchapter.

2.2.2 Advantages and Challenges of Digitalization

With a term as broad as "digitalization", even if limited to a specific sector such as healthcare, there are many advantages that can be presented. However, it is important to keep in mind the national goal of the Swedish healthcare system, i.e., to provide the entire population with good health and care (Janlöv et al., 2023). Any digital technology that supports this goal could therefore be argued to be an advantage, if not at the expense of a more effective digital initiative. However, Ziadlou (2021) highlights that healthcare organizations are increasingly utilizing digitalization to further develop their operations, by increasing quality, reducing costs, and enhancing accessibility to care.

Although certain technology comes with its respective advantages, Eurofound (n.d.) concludes that there is more to digitalization than the usage of a certain technology, as digitalization is rather about the organization allowing for the implementation of the same. This perspective is consistent with Björkdahl et al. (2018), who explore the potential for digitalization across various Swedish industries.

Conversely, the benefits of digitalization, such as increased quality of care, reduced costs, and enhanced accessibility, also introduce potential risks if not carefully managed. This is exemplified by Eurofound (n.d.), which highlights that telemedicine may not provide the same standards of quality as traditional healthcare systems. Furthermore, the increasing amount of digital care is argued to be a risk due to a digital divide between those who stand to benefit the most, and the remaining population. The level of digital literacy, or lack thereof, could influence the possibility to access and make use of telemedicine (Eurofound, n.d.). Moreover, although the push for efficiency is regarded as one of the most important driving forces behind healthcare digitalization with the aim to reduce costs, the opposite might occur. Eidenskog et al. (2023) state that the development of digital systems for healthcare frequently leads to overextended budgets, delays, and IT systems that are inaccessible for both patients and healthcare professionals.

While the reasoning above should not be seen as an exhaustive list of either advantages or disadvantages of utilizing digitalization in healthcare, it does highlight that while significant opportunities arise, the implementation must be carefully considered to mitigate associated risks. Now, we will discuss the connection between digitalization and person-centered care.

2.2.3 Integrating Digitalization and Person-Centered Care

Given the definition presented in 2.1.2 Digitalization, digitalization involves converting analog information to a digital format, and the broad integration of IT support into societal functions. Furthermore, person-centered care, as discussed in 2.1.1 Person-Centered Care, is an approach to delivering healthcare based on certain principles. Therefore, although broad by their respective definition, digitalization may be used to deliver this healthcare.

Various studies have demonstrated significant possibilities when utilizing digitalization to enhance person-centered care. For instance, Dyb and Kvam (2022, p. 7) state that digital support, in combination with the principles of person-centered, integrated, and proactive care, is "*the future of modern healthcare*", argued to be beneficial for healthcare professionals, patients, and society. Similarly, Vikkelsø (2010) states that digitalization is an enabler of person-centered care, as it improves patient engagement, and enables improved mutual feedback and sufficient information. This is argued to lead to an improved relationship between patients and healthcare professionals. However, the needs of patients must first be identified and then incorporated into the design of the digital services, rather than the reverse (Dyb & Kvam, 2022). To successfully implement person-centered digital initiatives, the healthcare professionals must also be trained and supported in utilizing the new technology (Olesen et al., 2023). Moreover, to ensure that effective digitalization within healthcare can be achieved, extensive knowledge of the new technology's costs and functionalities is required to successfully integrate the technology into the health professionals' working processes (Lapão, 2018). Furthermore, Tebeje and Klein (2021) state that utilizing eHealth improved person-centered healthcare during the COVID-19 pandemic, although they note that the concept by itself is broad and that the circumstances of the pandemic were extraordinary. Other examples of utilizing digitalization include eHealth and more specifically telemedicine, e.g., Kruse et al. (2017) found that improved patient outcomes are the most common factor related to effectiveness and efficiency in the research community, and patients' expectations are met when utilizing telemedicine.

In conclusion, while digitalization offers considerable potential to enhance person-centered care, its success requires a deliberate understanding, thoughtful design, and guidance to help both healthcare professionals and patients fully utilize the technologies. Therefore, many

conceptual models will be presented in the following subchapters to help understand how to implement and integrate certain digitalization initiatives.

2.3 Conceptual Models and Theories

This subchapter will present and discuss key conceptual models and theories to help understand and analyze the diffusion, acceptance, and sustainability of new healthcare technologies.

2.3.1 Diffusion of Innovations

The theory *Diffusion of Innovations* (DI) explains how new ideas, such as digitalization, spread via communication channels over time, among both individuals and organizations (Rogers, 1962). In essence, it provides a framework for understanding the challenges and strategies for how and why a certain innovation spreads, and at what rate. Although originally only a proposed theory, it has been extensively validated and refined both by the author and others, including studies in the healthcare sector (Barker, 2004; Dearing & Cox, 2018; Rogers, 2003; Valente & Davis, 1999). Rogers (2003), i.e., the fifth edition of the original book by Rogers (1962), states that there are four main elements that affect how an innovation spreads: the innovation itself, communication channels, time, and the social system.

Firstly, an *innovation* must, by definition, be perceived as new, whether that specific idea is objectively new or not (Rogers, 1983). For the innovation to receive interest and subsequent adoption, it must also be advantageous compared to current offerings. The greater the perceived advantage of the innovation, the more rapid its adoption will be (Rogers, 2003). There are five characteristics of innovations:

1. **Relative advantage** is "*the degree to which an innovation is perceived as better than the idea it supersedes*" (Rogers, 1983, p. 15). In a healthcare setting, this means the degree to which a certain innovation is perceived to be superior, compared to current practice (Dearing & Cox, 2018).
2. **Compatibility** is "*the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters*" (Rogers, 1983, p. 15). This characteristic concerns how the innovation is perceived to be consistent with the established way when trying to accomplish the same goal (Dearing & Cox, 2018).
3. **Complexity** is defined as "*the degree to which an innovation is perceived as difficult to understand and use*" (Rogers, 1983, p. 15). In healthcare, this means "*how easy the innovation is to understand and use*" (Dearing & Cox, 2018, p. 185).
4. **Trialability** is "*the degree to which an innovation may be experimented with on a limited basis*" (Rogers, 1983, p. 15). This means the ways a certain adoption decision can be reverted and managed in multiple stages (Dearing & Cox, 2018).
5. Lastly, **observability** is "*the degree to which the results of an innovation are visible to others*" (Rogers, 1983, p. 16). As defined by Dearing and Cox (2018, p. 185) this means "*the extent to which outcomes can be seen*".

For the second element of DI, the *communication channels* must, by Rogers' definition of *diffusion*, take place amongst the members of the *social system*, i.e., individuals or organizations (Rogers, 1983). Different channels provide different rates and degrees of diffusion when discussing a certain innovation, and two major channels described by Rogers (2003) are *mass media communication,* and *interpersonal communication*. The former involves those methods with one or few individuals transmitting messages through a mass

medium, e.g., newspapers, radio, and television. This channel is often the most rapid and efficient way to inform potential adopters of a certain innovation (Rogers, 2003). Mass media communication also involves social media (Sundstrom, 2016). However, Rogers (2003) argues that interpersonal communication is more effective when persuading individuals or organizations to adopt a certain idea, and it involves face-to-face exchange between individuals. This is especially effective when delivered by a person of authority (Lovejoy et al., 2009). However, there does not appear to be any research on the effectiveness of persuasion through digital channels, such as using video calls.

Time is the third element of DI, which incorporates three distinct dimensions (Rogers, 1983):

1. **The Innovation-Decision Process** is a mental process undertaken by an individual or decision-making entity regarding a certain innovation. This ranges from *knowledge* of the innovation, to being *persuaded* to adopt it, to a *decision to* implement or reject it, followed by *implementation* of the innovation, and *confirmation*, which means the individual or entity seeking reinforcement for their eventual decision to implement.
2. **Innovativeness and Adopter Categories** measure the relative speed to which an individual or entity adopts new ideas, compared to others in the same social system. These are divided into five categories, following a normal distribution, and are shown in Figure 6 below.

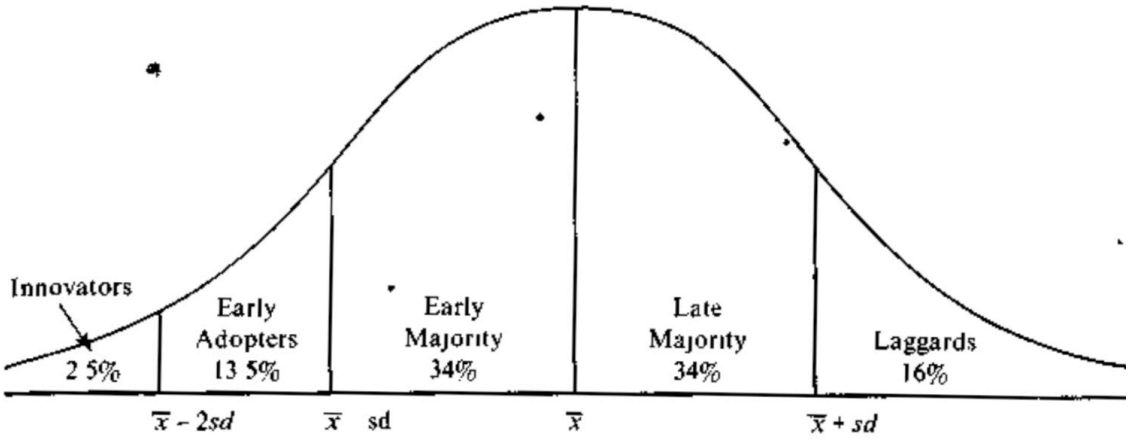

Figure 6: The Five Adopter Categories Shown Through Different Sections, Presented in Rogers (1983, p. 247).

As seen in Figure 6, the first half of a social system's adopter categories includes *innovators*, *early adopters*, and *early majority*, with 2.5, 13.5 and 34 percent of the distribution, respectively. In other words, the mean of the population, 50 percent, is between the early majority and the following *late majority*'s 34 percent and *laggards*' 16 percent. As visualized by both the percentages and Figure 6, the early majority and late majority are both within one standard deviation of the population mean, early adopters are within two standard deviations, and innovators, the smallest adopter category with 2.5 percent, are below two standard deviations of the mean. In contrast, laggards, who make up 16 percent of the population, are everyone above the late majority category. The statistical distribution shows the range of adoption throughout the social system, from the innovators, i.e., those actively seeking new ideas and with a high degree of mass media exposure and many interpersonal network connections, to laggards, i.e., those last to adopt (Rogers, 1983). However, most innovations do not reach the "early majority" phase as they fail to diffuse. This occurs because opinion leaders will have failed to adopt the innovation (Dearing & Cox, 2018; Rogers, 1983). Exemplified in a healthcare setting:

"*When opinion-leading individuals and organizations adopt an innovation, social systems convert from one normative state (such as smoking in public being acceptable) to another (smoking being unacceptable). When opinion leaders do not adopt an innovation, systems do not change.*" (Dearing & Cox, 2018, p. 184)

Consequently, a normal distribution (curve showing the frequency of adopters) is only present for DI when the technology is successfully adopted by opinion-leading individuals. Otherwise, the S-curve, i.e., the cumulative adoption curve of a certain technology often presented graphically, will not prevail (Rogers, 1983).

3. **Rate of Adoption** measures the relative speed of the adoption compared to other social systems, and which of the adopter categories is currently present for a certain innovation.

The fourth and last element of DI is the social system. Although contextually mentioned above, it is broadly defined as "*a set of interrelated units that are engaged in joint problem solving to accomplish a common goal. The members or units of a social systems may be individuals, informal groups, organizations, and/or subsystems*" (Rogers, 1983, p. 25). With this broad definition, it therefore includes social structures and norms which may affect the diffusion process of a certain technology (Rogers, 2003).

Expanding upon DI, which outlines how new ideas spread through communication channels over time between individuals and organizations, another model will now be presented which highlights the perceptions influencing the actual usage of a certain technology, such as a healthcare technology.

2.3.2 Technology Acceptance Model

Originally, the Technology Acceptance Model (TAM) was developed as an extension of both the Theory of Reasoned Action (TRA) and the Theory of Planned Behavior (TPB). The TRA explains how an individual's behavioral intention, across various contexts and upon their attitudes and subjective norms, will influence their action (Davis et al., 1989). TPB expanded upon this reasoning by stating that perceived behavioral control, which accounts for factors outside the individual's control, will affect their ability to perform said behavior. Eventually, Davis (1989) argued that these two theories had to be adapted to predict and explain the user acceptance of a certain information system, which evolved into TAM.

Although the model has been extensively validated and refined through subsequent studies, it is important to understand the key components of the original model. These components are seen as fundamental in shaping a user's favorable or unfavorable behavioral intentions towards a specific technology, i.e., they are determinants of its user acceptance (Davis, 1989; Marangunić & Granić, 2015). The two original components with their respective definition:

1. **Perceived usefulness** (PU): "*the degree to which a person believes that using a particular system would enhance his or her job performance*" (Davis, 1989, p. 320).
2. **Perceived ease of use** (PEU): "*the degree to which a person believes that using a particular system would be free of effort*" (Davis, 1989, p. 320).

Further, Davis (1989) elaborates that the relationship between PU and PEU is bidirectional. This is because PU is often affected by the degree to which a user finds the system easy to use, while the easier a system is to use, the more useful it may be perceived to be. This interrelationship highlights the importance of both to shape a user's acceptance, and

subsequent use, of a technology. To quantitatively measure these impacts, Davis et al. (1989) introduced multiple additional key constructs, as shown in Figure 7.

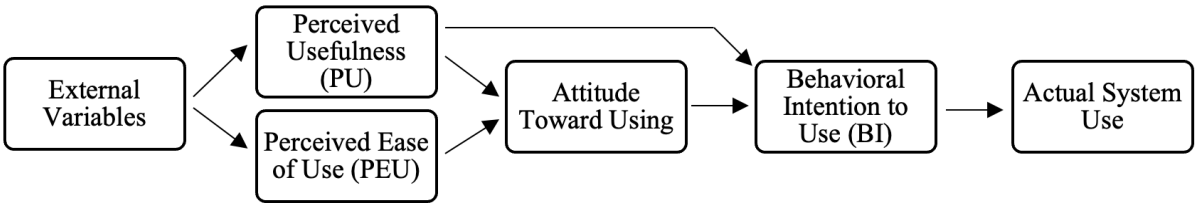

Figure 7: Technology Acceptance Model. Adapted from Davis et al. (1989, p. 985).

As seen in Figure 7, *external variables* influence PU and PEU, through their direct impact on these two variables. The external variables include system characteristics, user characteristics, and other contextual elements (e.g., culture, economics, policy, and political influences) that directly influence both PU and PEU, thereby indirectly affecting the user's actual use of a certain technology (Davis et al., 1989).

As previously defined by Davis (1989), PU is associated with whether a person believes that specific technology would increase its job performance. This belief arises from that person's tendency to use that specific technology to increase their job productivity. Conversely, a person's PEU, the notion of that technology being easy for the person to use, might be low, although the application itself could be useful. If the notion is that the system is difficult to use, then any performance benefits might be outweighed by the effort of using that specific technology. This also means that, all other things being equal, a certain technology will be less likely to be accepted by its user when compared to another technology, even though the technology may be superior in other aspects (Davis et al., 1989).

Both PU and PEU influence the *Attitude Toward Using* a certain technology, meaning the individual's overall affective reaction to using a technology. The relative weights of these two factors are estimated by linear regression (Davis et al., 1989). Further, the aggregated attitude toward using the certain technology will affect the *Behavioral Intention to Use (BI)*, as shown in Figure 7. However, BI is also directly, not only indirectly, affected by PU. This is because individuals are more likely to use a system if they believe it will enhance their job performance, aligning with theories that state performance improvements are linked to extrinsic rewards, such as promotions and salary increases (Davis, 1989). This means that BI will be affected both by the aggregated attitude towards using the certain technology, and the perceived usefulness of the technology for increasing that person's job performance (Davis et al., 1989). Lastly, the *Actual System Use* refers to the observable results of both behavioral intentions and the actual interaction with the technology, directly influenced by BI.

As previously mentioned, TAM has been extensively validated and refined through subsequent studies. These include both *TAM2* and the *Unified Theory of Acceptance and Use of Technology*, which introduce additional predictive factors like social influence and facilitating conditions. These adaptations serve to enhance the model's robustness by incorporating other variables that reflect newer technologies and user demographics, reflecting the dynamic and evolving nature of user acceptance models (Venkatesh & Davis, 2000; Venkatesh et al., 2003).

Specifically in the context of healthcare, these adaptations are crucial as the sector utilizes a wide range of complex technologies (Garg et al., 2018). Also, because of the specific risks associated with digitalization in healthcare, as highlighted by Eiedenskog et al. (2023) and Eurofound (n.d.), there is a need for systems that improve clinical workflows. This means

that there could be a necessity for adaptations in the TAM framework to align with the technologies involved in healthcare, to address the unique dynamics of health IT systems, and thereby focus on the acceptance and utilization of clinical professionals. "*TAM predicts a substantial proportion of the use or acceptance of health IT*" but the model may benefit from some specific modifications, mainly using the methods of beliefs elicitation (Holden & Karsh, 2010, p. 159). Thereby, the adapted model can incorporate specific healthcare-related factors.

The beliefs elicitation method (BEM) is a systematic approach to tailor TAM for the healthcare setting. Holden and Karsh (2010, p. 168) state that BEM: "*is the preferred method for contextualizing theories of behavior to a specific setting (health care), with a new population (clinicians), and a new behavior of interest (health IT use)*". To use it, a researcher should collect qualitative data from potential users through open-ended questions, which helps identify the specific and actionable beliefs that influence their intentions and behaviors regarding using a specific health technology. By understanding these contextual beliefs, the same researcher can refine TAM variables, such as PU and PEU, to better align with the specific needs and challenges of healthcare professionals. Holden and Karsh (2010) state that PU concerning personnel productivity should instead be refined to patient outcomes. BEM should also aid the researcher in understanding the belief held by clinicians themselves, and the reason behind that certain belief, which could help policymakers and those designing the technology. Thus, the revised model's predictive power and practical applicability in clinical environments should be enhanced (Holden & Karsh, 2010). However, it is also important to highlight that although using BEM slightly outperformed the generic TAM presented by Davis et al. (1989) in a healthcare setting, little is known regarding the specific modifications made to TAM. The method could also potentially lead to subjective

perceptions of individuals, which may include biases that affect both reliability and generalizability of those findings, potentially leading to less effective health technologies (Holden & Karsh, 2010).

In the healthcare sector, PU should not regard beliefs concerning job productivity. Instead, it should reflect the beliefs about patient outcomes, focusing on reducing medical errors, streamlines operations, maintain patient safety, and ensuring efficient practice management, all contributing to better patient care. This means that beyond improving the general usability for the user, the technology should also enhance the quality of care and the efficiency of healthcare services (Holden & Karsh, 2010).

Similarly, the concept of PEU should be adapted to the healthcare context (Holden & Karsh, 2010). Given the high-pressure work and patient environment, technologies that are perceived to be easy to use and seamlessly integrate into existing workflows are more likely to be adopted. Venkatesh et al. (2012) state this includes interfaces that are both user-friendly and require minimal training, which should enhance user satisfaction and reduce the cognitive load.

The continual evolution and application of TAM is vital, as it could aid healthcare professionals in their decisions of both designing and implementing certain healthcare technologies, creating the possibility of delivering superior patient care (Holden & Karsh, 2010). While certain aspects of TAM's components have been adjusted to align with healthcare settings, and the methods for deriving PU and PEU have shifted from quantitative regression analysis to qualitative semi-structured interviews, the core components remain as originally outlined by Davis et al. (1989). Furthermore, it is worth emphasizing that the

original TAM is centered around the perceptions of a certain technology, rather than its objective features or quality. This means that the acceptance of a certain technology, although inferior to another technology based upon non-subjective elements, could still be higher (Davis et al., 1989). Yet BEM, as advocated by Holden and Karsh (2010) holds practical significance for managers and other decision-makers in the healthcare context, as it emphasizes the importance for them of understanding the specific beliefs that drive clinicians' use and acceptance of a healthcare technology.

Through the exploration of TAM, it has been shown that perceptions influence both the acceptance and usage of healthcare technologies. In the next subchapter, another model will be presented which examines the complexities in the long-term adoption and sustainability of those healthcare technologies.

2.3.3 The NASSS Framework

The nonadoption, abandonment, scale-up, spread, and sustainability (NASSS) framework is widely used to systematically analyze and navigate the complexities involved in understanding and evaluating the NASSS of technology-supported healthcare in various medical fields (Catapan et al., 2022; Kadesjö Banck & Bernhardsson, 2020; Ling Kuo et al., 2024; Seibert et al., 2020; van Calis et al., 2023). The framework, originally introduced by Greenhalgh et al. (2017) and presented through its seven domains, can help explain the complexities and diffusion of healthcare innovations. As further defined by Greenhalgh and Abimbola (2019), the seven domains are:

1. The illness or **condition** being targeted by the technology, including any relevant sociocultural factors and comorbidities.

2. The healthcare **technology** itself, with its features, generated data and the usage of the same data, and any knowledge or support required for using the technology. The sustainability of the supply model is also addressed, i.e., the procurement of the technology.
3. The **value proposition** ensures a comprehensive assessment of a technology's impact and feasibility in healthcare. It evaluates the worthiness of developing a new technology by considering its potential value for both the upstream (supply-side value) and downstream (demand-side value). Many characteristics of the technology should be considered, e.g., desirability, efficacy, cost effectiveness and safety.
4. The **adopter system** includes healthcare professionals, patients, and their extended network of caregivers. The domain explores how staff acceptance can be influenced by concerns over practice changes and their job security, while patient adoption considers both the ability and willingness to use the technology. There may also be assumptions about the availability of lay caregivers or prior technical knowledge built into the technology, which can significantly impact the effective use, or non-use, of it.
5. The health/care organization(s), or **the organization**, focuses on evaluating the readiness and capacity of organizations to innovate and implement the technology-supported change. The organizations' capabilities to adapt and adopt the technology are critical, which might include possible changes in culture, routines, and team interactions.
6. The wider system, or **wider context**, explores the setting in which the healthcare organization operates within, such as the economic, political, professional (e.g., medicolegal), and regulatory environment, alongside sociocultural factors. By grasping the full scope of this context failures may be avoided, enabling

demonstration projects to effectively scale up, achieve widespread adoption, and secure long-term sustainability.

7. The **continuous embedding and adaptation over time** examines the feasibility for mutual evolution and continued adaptation of both the technology and associated services, as well as the capabilities of the organization(s), e.g., its resilience, to handle critical events when managing emergent situations and unforeseen eventualities.

Although not intended to offer a predictive outcome nor a solution to being successful in the adoption of a certain technology, the framework may, e.g., be used in when designing a new healthcare technology and when planning its implementation (Greenhalgh et al., 2017; Greenhalgh & Abimbola, 2019). The seven domains are illustrated in Figure 8 below.

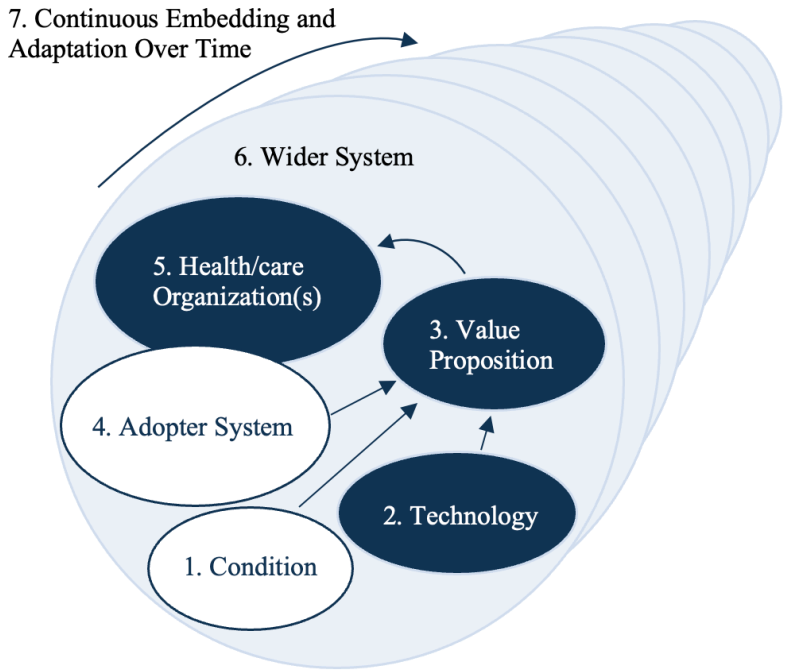

Figure 8: The Seven Domains of the NASSS framework. Adapted from Greenhalgh and Abimbola (2019, p. 194).

Moreover, each of the seven domains shown in Figure 8 above can be classified as *simple*, *complicated,* or *complex*. This means being predictable with few components, having many components but still being largely predictable, and having many components which interact in a dynamic and unpredictable way, respectively (Abimbola et al., 2019; Greenhalgh et al., 2017; Greenhalgh & Abimbola, 2019). The more complexity in each of the respective domains, ranging from simple to complex, the less likely the healthcare technology will achieve a sustained adoption (Greenhalgh & Abimbola, 2019). Consequently, more complexity results in a higher likelihood of the technology being abandoned. Greenhalgh et al. (2017, p. 10) similarly state that those healthcare technologies "*characterized by complexity in multiple NASSS domains rarely, if ever, became mainstreamed*".

As also illustrated in Figure 8, the domains are color-coded. Both the condition and the adopter system share a key conceptual linkage, i.e., the two domains directly influence the perceived value and effectiveness of a health technology. Similarly, technology, value proposition, and the organization are interconnected in the development and implementation of the health technology, as these domains collectively contribute to the operational and strategic complexity of integrating new technologies into healthcare systems. The sixth domain, wider context, contextualizes the interdependence of these domains, indicating that they do not function in isolation, but are affected by interconnectedness, alongside the broader socio-political, political, and economic environment. Lastly, the seventh domain, continuous embedding and adaptation over time, demonstrates that the ongoing evolution and adaptability within this given wider context are essential for the sustained integration and efficacy of the health technology (Greenhalgh et al., 2017; Kadesjö Banck & Bernhardsson, 2020).

Through DI, TAM, and the NASSS framework, the spread of new ideas, individual's actual use of new technologies, and complexities involved in a healthcare technology's usage have been highlighted. Now, all theory will be synthesized to aid in analyzing the upcoming empirical data.

2.4 Synthesis of Theory

Many key findings have been identified when critically assessing various applicable models, to understand their implications for integrating digitalization within Swedish primary care and how this may foster person-centered care. The selected conceptual models: DI, TAM, and the NASSS framework, provide a comprehensive understanding for analyzing how digital initiatives are diffused to support healthcare practices that prioritize patients' unique perspectives and needs.

However, to fully utilize these conceptual models, the remaining theory has been included. Table 1 below summarizes each subchapter included in the theory, highlighting the purpose of their inclusion, the key insights gained, and its relevance to the research question. This synthesis aims to demonstrate how the theory will aid in analyzing how managers and senior managers within Swedish primary care have leveraged digitalization to foster person-centered care.

Subchapter	Purpose in Thesis	Key Insights	Relation to Research Question
2.1.1 Person-Centered Care	To define person-centered care within a Swedish context and explore its main components.	Person-centered care in Sweden emphasizes partnership, mutual respect, the patient's narrative, and documentation. This approach views the patient as a person who is integral to the decision-making process regarding their care (Boström & Fischer Grönlund, n.d.; University of Gothenburg, n.d.). Further, an international definition is given through Picker Institute's eight dimensions.	This definition is central to comprehend how the different digitalization initiatives have enhanced person-centered care in Swedish primary care.
2.1.2 Digitalization	To define digitalization and its application, specifically in Swedish healthcare.	Digitalization in healthcare involves converting analog information to digital format, and integrating IT to improve societal functions, including healthcare (Government Offices of Sweden, 2016).	Understanding the term digitalization is crucial to explore how its implementation in a Swedish primary care setting can foster person-centered care.
2.2.1 Market Potential of Digital Health	To provide a current, post COVID-19, understanding of eHealth used in healthcare.	There has been an acceleration in the adoption of eHealth due to the COVID-19 pandemic, yet other digitalization efforts have been hindered or postponed, indicating many new digitalization initiatives are projected to be initiated (Eurofound, n.d.; Swedish Agency for Health and Care Services Analysis, 2022).	Exemplifies current digitalization in Swedish healthcare.

Subchapter	Purpose in Thesis	Key Insights	Relation to Research Question
2.2.2 Advantages and Challenges of Digitalization	To discuss the benefits and potential disadvantages of healthcare digitalization.	Digitalization can improve healthcare quality, reduce costs, and improve access, but also presents risks, e.g., potential inequities in access to the same technology (Eurofound, n.d.; Ziadlou, 2021).	Illustrates trade-offs involved when implementing digitalization in healthcare.
2.2.3 Integrating Digitalization and Person-Centered Care	To explore how digitalization may be utilized to enhance person-centered care practices.	Digitalization is an enabler of person-centered care, if implemented correctly (Dyb & Kvam, 2022; Olesen et al., 2023; Vikkelsø, 2010).	Exemplifies how digitalization can be utilized to deliver person-centered care and provides key insights into its effective implementation.
2.3.1 Diffusion of Innovations	To explain how new ideas and technologies spread in healthcare, and understanding the factors that influence their adoption.	Innovations spread through communication over a certain period and must be perceived as advantageous to be adopted widely. Opinion leaders play a crucial role in this process. The characteristics of innovations can be utilized to accelerate the rate of adoption and the reach of healthcare innovations (Dearing & Cox, 2018; Rogers, 1983; Rogers, 2003).	Helps analyze how digitalization initiatives are communicated and adopted in a healthcare setting.

Subchapter	Purpose in Thesis	Key Insights	Relation to Research Question
2.3.2 Technology Acceptance Model	To examine how healthcare professionals' perceptions influence their acceptance and usage of digital technologies.	The model shows that perceptions influence the attitude of individuals and organizations towards a certain technology, which affects its subsequent usage (Davis et al., 1989). Applied in a healthcare context, PU relates to perceived improved patient outcomes, whereas PEU is influenced by technologies that are perceived to be easy to use and seamlessly integrate into existing workflows (Holden & Karsh, 2010).	Provides a framework to understand whether proposed digitalization initiatives will lead to widescale adoption.
2.3.3 The NASSS Framework	To further assess the complexities involved in the diffusion of healthcare innovations, and how and why these innovations may be adapted over time.	When planning for the implementation of healthcare innovation, the seven domains of NASSS assist in understanding the complexities and could also be used to explain the diffusion of the innovation (Greenhalgh et al., 2017; Greenhalgh & Abimbola, 2019).	NASSS provides a framework for understanding the comprehensive healthcare environment and its different components, and how both the digitalization initiative and the organization could adapt over time.

Table 1: An Overview of Each Theory Subchapter and Their Respective Purpose for Inclusion in the Thesis, the Key Insights Gained, and the Respective Relevance to the Research Question.

The synthesis presented in Table 1 provides a comprehensive basis for interpreting primary data gathered from managers and senior managers within Swedish primary care. This data should describe the digital initiatives that have been implemented, and the reasoning behind

them. The digitalization highlighted in the same data will then be assessed to see how it embraces the eight dimensions of person-centered care described by Picker Institute (n.d.), and the Swedish definition given by Boström and Fischer Grönlund (n.d.) and University of Gothenburg (n.d.). Furthermore, the primary data will be analyzed using the conceptual models outlined above, to see the various ways managers and senior managers have innovated and implemented the same digitalization.

3. METHODS

This chapter outlines the research methodology employed in the study. It begins with the research strategy, discussing the methods of aligning empirical findings with theoretical frameworks. Subsequently, the research design and research method are presented. The chapter then details the data analysis method and highlights the importance of research quality and ethical considerations. It concludes with a discussion of the study's limitations.

3.1 Research Strategy

This research aims to understand how managers and senior managers within Swedish primary care have leveraged digitalization to foster person-centered care. However, before defining a specific research strategy, it is essential to understand the relationship between theory and research.

Two main approaches used to align empirical findings with theoretical frameworks are the deductive and inductive methods. These two approaches differ significantly in how they are implemented, and their suitability depends on whether the research begins with theoretical frameworks or empirical observations. Specifically, the deductive approach is suitable for research that starts with a generalization based on current theories and then tests these against the observations. Conversely, the inductive approach begins with specific observations and moves towards generalizations, potentially informing or refining existing theories. Naturally, the suitability of these two approaches differs depending on the type of research. In general, the deductive approach is useful for quantitative research, while the inductive method is more often used with qualitative research (Bell et al., 2019).

This study, which explores the impact of digitalization strategies on person-centered care, naturally aligns with this qualitative methodology as it focuses on complex and nuanced phenomena, i.e., organizational behaviors, strategic implementations of digitalization in healthcare, and the principles of person-centered care (Hennink et al., 2020). However, these theories and definitions already existed to some extent, and the aim of this research was not to create a new theory. Therefore, a strict inductive method was not applicable. Moreover, a purely deductive approach was also deemed inappropriate because of the research's exploratory stance, which aims to explore rather than merely observe. Employing a fully deductive method could potentially limit the discovery of new insights and understandings (Bell et al., 2019).

Thus, this study employs an abductive approach, which integrates both deductive and inductive reasoning to allow for a flexible and iterative interaction between theory and empirical data. This method is particularly suited for exploring complex phenomena where both new insights and existing theories inform the research process (Hennink et al., 2020). The choice of an abductive approach is justified by the continuous evolution of digitalization in healthcare, accelerated by the COVID-19 pandemic, combined with the relatively recent emphasis on person-centered care in the Swedish healthcare sector. This approach facilitates navigating through existing theories and new data, enriching the theoretical understanding of the research phenomena, and unveiling the strategic insights vital for understanding the digitalization initiatives and how they have fostered person-centered care (Bell et al., 2019).

3.2 Research Design

The research strategy affects the research design, whereas the latter refers to the structured framework within which data collection and the subsequent discussion will occur. For this

study, the *case study design* has been employed, with a singular focus on the organization Capio. This design, widely used in business research, entails that social phenomena can be understood by delving into the complexity and specific nature of the case, through a detailed and intensive analysis (Bell et al., 2019). In this research, multiple managerial roles are seen within the same organizational context, which seamlessly aligns with a qualitative research approach. The case study design is also particularly compatible with the abductive approach used in this research, which iteratively refines theoretical insights based on empirical data (Bell et al., 2019).

This study seeks to provide a nuanced understanding of how digitalization is utilized across Swedish primary care, by examining varying managerial perspectives within Capio, thereby highlighting both convergence and divergence in strategy and implementation. This approach ensures comprehensive data collection, offering unique insights into digitalization strategies and whether these enhance person-centered care, while simultaneously addressing the practical challenge of accessing a wide range of interviewees within multiple healthcare organizations, i.e., a multiple-case design. Moreover, Capio was specifically chosen due to its notable market share within Swedish primary care, as discussed in 1.4.2 Capio, and as the research assumes a desire to align with the Swedish national guidance of delivering person-centered care, a component of the organization's operating model (see Figure 2). Bell et al. (2019) suggest that this type of research design can allow the researcher to gain new insights for further investigations, where new ideas can be identified throughout the research process.

3.3 Research Method

In the data collection process used in this research, a combination of secondary and primary data was gathered. Both data collection methods, in the way they are utilized in this research,

are consistent with the chosen research strategy and research design. The secondary data was used in combination with primary data to better understand the subject, in line with the abductive approach, and the primary data was collected through qualitative semi-structured interviews, which provided a thorough understanding of the researched phenomena (Bell et al., 2019). More in-depth reasoning regarding these two is detailed below.

3.3.1 Secondary Data Collection

Initially, the secondary data collection began by conducting a systematic literature review. This is preferable as the actions taken by the researcher, e.g., decisions and conclusions, can be traced, while biases are limited (Bell et al., 2019). The secondary data comprised of a variety of sources, most notably peer-reviewed academic articles, and governmental sources of relevant Swedish healthcare bodies and authorities, to aid in understanding digitalization in the context of Swedish healthcare. This initial phase provided a broader theoretical foundation for the scope of this thesis, while ensuring the research question could be answered at the current state of the research. It also aided in writing 1. INTRODUCTION.

Subsequently, an additional phase of secondary data was collected, which expanded upon the previously gathered data and aided in writing 2. THEORY. To comply with this research's quality standards highlighted in 3.5 Research Quality, databases such as *Google Scholar*, *Gothenburg University Library*, *Scopus,* and *Web of Science* were used, employing identified keywords relevant to this research. These included, e.g., "digitalization", "digi-physical healthcare", "eHealth", "healthcare" "patient-centered care", "person-centered care", "primary care", and "Swedish healthcare", in both English and the equivalent Swedish terminologies, through many combinations and variations. The usage of numerous keywords spanning multiple databases was decided to ensure as much relevant research as possible

could be gathered for this study, and for the secondary data analysis. If limiting oneself to only one database, a researcher might not ensure comprehensive coverage of the current literature (Bell et al., 2019). Thereafter, the secondary data of the second phase was evaluated using the inclusion and exclusion criteria highlighted in Table 2, to reflect the scope and limitations of this research. Moreover, snowball sampling occurred, in line with other qualitative studies (Bell et al., 2019). This snowball sampling was based upon looking at referenced materials used for the secondary data deemed applicable by the inclusion and exclusion criteria, and the new sources found were evaluated using the same criteria.

Inclusion Criteria	**Exclusion Criteria**
• Peer-reviewed journal articles, articles published in renowned academic journals, and relevant official data. • Published seminal books. • Must be available for the author in full text. • The sources must include any of the keywords highlighted in the previous paragraph.	• Secondary data published in languages other than English or Swedish. • Publications older than 10 years, unless it involves a seminal work or is a publication that discusses seminal work or the thesis' key definitions. • Publications that do not contribute to understanding or answering the research question of this thesis. • Non-peer-reviewed sources, such as opinion pieces.

Table 2: Inclusion and Exclusion Criteria for Secondary Data.

As presented in Table 2 above, the secondary data must derive from peer-reviewed journal articles, articles published in renowned academic journals, and data from official sources, such as statistics published by a governmental body, to be included in the theory. In addition, published books that are considered seminal in the field, such as Rogers (1962), will be included to provide foundational knowledge and applicable context for the subsequent data presented. Additionally, to allow for comprehensive analysis by the researcher, the source must be available to the researcher in full text, and the text must include any of the keywords previously highlighted in this subchapter. Moreover, Table 2 shows that the research will intentionally omit secondary data published in languages other than English or Swedish, aligning with full fluency language competencies of the researcher, to limit possible misinterpretations. Furthermore, to allow for the contemporary relevance of this research, publications that are older than 10 years will generally be excluded, unless deemed seminal works or sources discussing such works, or discussing the research's key definitions of digitalization or person-centered care. Lastly, publications that do not help contribute to advancements in answering the research question will also be excluded.

Following the inclusion and exclusion criteria presented in Table 2, the titles, abstracts, and conclusions were screened, to assess the relevance to this research. For the publications that passed this initial screening, a full-text review was conducted. This data gathering process was essential to ensure the primary data could be fully comprehended and then analyzed. Lastly, this process of reviewing relevant secondary data was completed using several iterations. The secondary data was initially collected before conducting the interviews. However, based upon the continuous findings from the primary data, in adherence to an abductive approach, the theory was iteratively revised.

3.3.2 Primary Data Collection

The primary data for this research was collected through qualitative semi-structured interviews, which align with the research strategy and even more notably the case study design presented in 3.2 Research Design. Bell et al. (2019) state that interviews are the most common way to collect primary data in qualitative research, which, in the context of management research, is confirmed by Nair (2023). Moreover, unstructured and semi-structured interviews are the two commonly employed methods by qualitative researchers (Bell et al., 2019). In the choice between the two, semi-structured interviews were chosen to capture the varied managerial perspectives of the case study. This means the interviewer follows an interview guide for collecting applicable data, but also asks the respective interviewee additional questions not necessarily outlined in the interview guide, depending on the progression of the interview. Furthermore, Bell et al. (2019) state that by having at least some questions prepared through an interview guide, it ensures that the specific topics will be addressed, i.e., digitalization in Swedish primary care. With the researcher's relatively clear research focus prior to the primary data collection phase, semi-structured interviews were chosen. The interview guide, revised only prior to the second interview after being shortened, can be found in Appendix A.

As seen in Appendix A, the interview guide starts with some introductory questions. Thereafter, the key terms "person-centered care" and "digitalization" were discussed with the respective interviewee. Definitions stated in 2.1 Definitions were presented, i.e., Boström and Fischer Grönlund (n.d.) and Government Offices of Sweden (2016). Then, interview questions advance to investigate the development and integration of digital initiatives within Capio's primary care operations. This includes, e.g., how ideas are originated and implemented throughout the organization (depending on whether the interviewee is a

manager or senior manager). Moreover, the respective interviewee was asked to evaluate digital initiatives with regards to person-centered care. This included specific questions regarding its definitions and components, and their explicit subjective evaluation of the style of care. Lastly, the interview guide concludes with the interviewee being asked to share any additional insights that they believe might be worth highlighting to better understand Capio's digitalization strategies and how these have fostered person-centered care.

Most interview questions in the interview guide are open-ended, to allow for the exploratory nature of the research itself, and these incorporates the different perspectives that might be given, depending on the professional roles of the interviewees. Furthermore, all selected questions were formulated through the lens of the research question, the research design, and previously collected secondary data, to ensure suitable research questions (Bell et al., 2019).

In Table 3 below, the respondents for this research are presented. These were meticulously selected to provide a comprehensive understanding of Capio's digitalization strategies from various management levels at the company, using purposive sampling. Bell et al. (2019) describes this process as a non-random technique to select respondents who are expected to provide the most relevant and insightful information to the research. The respondents were initially found by looking at the internal organizational chart presented in Capio's internal Microsoft Teams, combined with the consultation of appropriate interviewees from the Vice President and Chief Digital Officer at Capio, Ali Rezai. Thereafter, Rezai endorsed the researcher to all potential respondents, asking them to participate in the case study. This endorsement was made through an email, as was the subsequent booking of all respective interviewees, in combination with Teams.

Respondent	Professional Title(s)	Interview Date and Duration
André Isaksson	IT Manager	2024-03-21, 90min
Victoria Bohlin	Chief Executive Officer	2024-03-22, 49min
Cecilia Meurling	Operations and Development Manager	2024-03-22, 64min
Daniel Olsson	Chief Information Officer	2024-03-25, 63min
Magnus Röjvall	Regional Medical Officer	2024-03-26, 68min
Katarina Wettin	Chief Medical Operations Officer	2024-03-28, 67min
Ali Rezai	Vice President *and* Chief Digital Officer	2024-04-02, 63min
Stefan Bremberg	Medical Director *and* Chief Medical Officer	2024-04-02, 65min

Table 3: Each Interviewee with Their Respective Professional Title(s) and the Date and Duration of the Interview. The Interviews are Sorted by Chronological Order.

As seen in Table 3, eight interviews were conducted with respondents in various professional roles, with interviews ranging from 49 to 90 minutes (rounded to the closest minute in length). All interviewees except Bohlin and Olsson are currently employed at Capio Proximity Care, Capio's primary care business area (as described in 1.4.2 Capio). However, Olsson is the Chief Information Officer at Capio Nordic, the overseeing and supporting organization of Capio Sweden, which in turn does the same for Capio Proximity Care. Through the consultation of Rezai, Olsson was deemed highly relevant due to his expertise and insights into Swedish primary care. Moreover, although Bohlin is the Chief Executive Officer (CEO) of Capio Specialist Clinics (also described in 1.4.2 Capio), she was deemed

highly relevant to the study due to her broad expertise and regular interactions with various business units throughout the organization. Previously she also held the current position of Olsson, i.e., Chief Information Officer at Capio Nordic. As the respondents have a wide range of positions which all relate to overseeing digital initiatives at the organization, or implementing them within Swedish primary care, they are deemed highly relevant as interviewees for the research's objective. Nevertheless, a distinction between the respondents has been made to allow for further analysis, while still aligning with the chosen research design, i.e., a case study design. Isaksson, Meurling and Röjvall were categorized as "managers", as their roles and expertise directly relates to digitalization at Capio, without them having executive titles. In contrast, the remaining five respondents: Bohlin, Bremberg, Olsson, Rezai, and Wettin, were classified as "senior managers" as they all have a professional title which includes "Chief", indicating a higher strategic decision-making authority within the same area of expertise. However, all eight respondents, as presented in Table 3 above, oversee digital strategies implemented across Capio's primary care operations, either by formulating the digitalization initiatives, or implementing them. Some of the respondents, both managers and senior managers, also have broad medicinal expertise.

However, what cannot be interpreted through Table 3 is the potential respondents who did not participate as interviewees. All but four people initially discussed with Rezai participated as respondents, offering broad insights into the digitalization within Capio's primary care operations. The remaining four were excluded for two separate reasons. The first two potential interviewees were no longer employed at Capio and although their expertise might have provided even further nuance, especially regarding the historical digitalization efforts at the case company, they were not contacted. Additionally, two current employees were also excluded due to their respective time constraints, these being the CEO of Capio Proximity

Care and the CEO of Capio Sweden, respectively. All four of these eventual exclusions are believed to have been able to add even further nuance to the research, however, the respondents seen in Table 3 provided a comprehensive understanding of the digitalization initiatives within Capio's primary care operations, given the research question and subsequent delimitations presented in 1.6 Delimitations.

Initially, the interviews were intended to last between 45-60 minutes, which was communicated to each potential respondent. However, most exceeded this timeframe, due to the in-depth final question, which depended on the interviewee's time constraints and the amount of information they could provide. Each interview, except the first one with Isaksson, stayed within the communicated timeframe until the final question. The elapsed time was then communicated out of respect to each of the interviewee's schedule, and a confirmation was sought before the interviewer proceeded. Isaksson's interview was an exception due to a similar yet more extensive background discussion of the current healthcare policies regarding digitalization in Swedish primary care, which directly mentioned and discussed the agreements outlined in 1.1 Background. Halfway through the interview, Isaksson agreed to continue the interview for however long it would eventually take. Subsequently, the interview guide was revised to better align with communicated timeframe. Bell et al. (2019) suggests that the chosen research method, i.e., semi-structured interviews, can allow researchers to gain new insights for further investigations, but also to tweak the included questions to better align with the research conducted. Furthermore, each interview was conducted in Swedish using Microsoft Teams, which was practical given the native language of the interviewees and the geographical dispersion of Capio's operations. Teams also provided cost savings and time efficiencies for the research process and was especially useful given Capio's widespread adoption of the platform. This provided a comfortable environment for the interviewees,

increasing the likelihood of openness and more detailed responses (Bell et al., 2019). Additionally, the familiarities with Teams likely led to both the interviewees and interviewer positioning themselves in quiet environment with a stable network connection, mitigating technical and flow problems (Bell et al., 2019). Although all data was collected during the respective interviews, each respondent stated that the researcher could contact them to schedule an additional meeting or answer follow-up questions via email. This option was not exercised, and therefore a discussion regarding the potential favorable or unfavorable outcomes of having multiple instances of data collection is superfluous. Lastly, the Delphi method was considered as it might have provided even more nuanced data, but it was eventually not used due to the incompatibility of aligning the working schedules of the interviewees. However, the data provided by the respondents are deemed to provide sufficient information to give a nuanced understanding of the research question.

3.4 Data Analysis

All conducted interviews were recorded and then transcribed, which aimed to include as much detail as possible. This practice is considered crucial as it preserves both details of the responses given, and the context of the interview (Bell et al., 2019). While recordings may limit the openness of respondents, each interviewee had consented to the use of this method, considering the importance of accuracy. This question was raised early on, with each respondent having the option to conduct a non-recorded interview. Moreover, to mitigate potential technological issues (which did not arise), notes were also taken during each interview. This is also considered to have made the transcribing process more time efficient. Furthermore, when qualitative research has been conducted, common practice dictates that at least one interview transcript should be included. Thus, this can be found in Appendix B.

The approach chosen for analyzing the collected qualitative data was thematic analysis. This decision was made as Bell et al. (2019, p. 12) state data analysis is "*fundamentally about data reduction* […]. *Unless reduced* […] *it is more or less impossible to interpret the material.*" As the recorded interviews amounted to almost nine hours in length, there was a substantial amount of data, necessitating a structured method to reduce it to conduct analysis. Clarke and Braun (2017) state that thematic analysis allows for virtually any data qualitative type to be analyzed and captures both explicit and underlying meaning of the same data. After transcribing all data, a process which Bell et al. (2019) estimate take roughly five to six hours for each hour of interview although aided by the notes taken, an initial read-through of the data was made. This is because it provides the researcher with a thorough understanding of the data before initiating the coding process of the thematic analysis (Bell et al., 2019). Furthermore, thematic analysis provides a high degree of flexibility when interpreting the data, which can introduce subjectivity and potentially lead to bias (Bell et al., 2019; Clarke & Braun, 2017). Bell et al. (2019) state that this risk can be mitigated by incorporating active listening and thus asking follow-up questions to validate the interviewees reasoning in real time. This was applied throughout the interviews to reduce ambiguity, strengthen the collected data, and reduce biases or misinterpretations.

The thematic analysis was conducted by identifying emerging *codes*, which are larger patterns of meaning that are underpinned by a shared core idea, and the codes themselves are "*building blocks*" for *themes*, patterns of meaning of the same data (Clarke & Braun, 2017, p. 297). In this research, coding began by identifying significant phrases or patterns within the transcripts. These initial codes were generated from both the researcher's interpretations of the data, or from actual language used by respondents. Thereafter, these were organized into potential themes. However, as themes are closely related to the chosen research strategy, and

keeping with the abductive research approach, these themes were informed by both theory and empirical data. The theory provided a framework for understanding the data, while remaining open to new insights that emerged from the empirical data. Therefore, both theory and empirical data could be used for the formulation of the codes and themes. Subsequently, the codes and themes were refined using an iterative process, which involved adjusting, discarding, and merging initial formulations, to ensure that they accurately represented the gathered data. Codes and themes were also meticulously named and renamed, to further ensure they encapsulated the essence of the interviews, even after reducing the data in the transcripts. By this continuous approach of revising the thematic framework as analysis progressed, the researcher aimed to provide credible findings that reflect the nuances, and simultaneously mitigate any biases or misinterpretations. The coding and themes for the conducted thematic analysis can be found in Appendix C.

3.5 Research Quality

To ensure the research quality by establishing trustworthiness in qualitative studies, four key aspects are involved: *credibility*, *transferability*, *dependability*, and *confirmability* (Bell et al., 2019).

Firstly, credibility corresponds to internal validity, i.e., the accuracy and believability of the findings (Bell et al., 2019). Throughout this study, credibility has been addressed by engaging with the many respondents from various managerial levels at Capio, allowing for a comprehensive understanding of digitalization strategies. Through the semi-structured interviews, essential insights into the studied phenomena could be gained. Moreover, throughout the same interviews, clarification questions were asked to ensure a correct understanding of the responses. The use of an interview guide, found in Appendix A, helped

maintain focus on the research question, while also allowing flexibility for the respondents to elaborate more broadly, thus enhancing the richness of the data. Moreover, quotes and other excerpts from the data are included to increase the credibility, as a common critique of qualitative research is a lack of transparency (Bell et al., 2019). Furthermore, *respondent validation* was also incorporated to ensure a good equivalence between the findings and the perspectives of the respondents (Bell et al., 2019). This was achieved by providing the data to the case company, with a request to highlight any misleading or false information.

Secondly, Bell et al. (2019, p. 48) argue that transferability corresponds to external validity, i.e., the generalizability of the findings and whether it could be applied in other contexts. While this study is specific to both Swedish primary and the case company, the detailed description of the digitalization initiatives with regards to person-centered care does provide a foundation for other academics and practitioners to consider the results for similar contexts. However, as recommended by Bell et al. (2019, p. 365), the data has been provided in extensive detail to the reader for them to make "*judgements about the possible transferability of findings to other milieux*". Given the detailed data, Bell et al. (2019) therefore argue it is the reader that should evaluate the transferability aspect of this research.

Thirdly, dependability concerns the reliability of the research and how likely it is to apply at other times. Bell et al. (2019) state the extent of the study's characteristics, e.g., its problem formulation, the reasoning behind the interview process, and the data analysis decisions, should be accessibly described. The research has aligned with this approach by systematically documenting the research process, highlighting unique methodologies, and allowing for the refinement of theory and the emergence of primary data. Additionally, to the extent allowed

by the abductive approach, the interview process was consistent across all respondents, contributing to the dependability of the data collection methods.

The last aspect of research quality is confirmability, which concerns the objectivity of the research. Although complete objectivity is often considered unattainable in business research, it is important that an auditor perceives the researcher as having not "*overtly or manifestly allowed personal values or theoretical inclinations to sway the conduct of the researcher and the findings deriving from it*" (Bell et al., 2019, p. 365). Although ultimately decided by the auditor, the researcher wants to emphasize the decisions of having a well-documented research process and the iterative process of data analysis where codes and themes were continuously refined. This approach should have ensured that the findings were shaped by respondents' input rather than the researcher's bias or interests. Additionally, tracing conclusions back to the original data should be possible, allowing for thorough auditing.

3.6 Research Ethics

Ethical considerations are paramount to ensure the integrity of the research and respect all involved participants. In business research, the four main areas of ethical principles are *avoiding harm*, *informed consent*, *privacy*, and *preventing deception* (Bell et al., 2019).

Firstly, to avoid harm, there was a discussion with each respondent regarding research ethics directly before the start of the respective interview, which included the option for complete anonymity. Although all respondents agreed to have their identities visible, the researcher explicitly stated that this consent could be withdrawn at any time before the research's publication, if anything discussed felt uncomfortable. No respondent exercised this possibility, but regardless it was intentionally stated to avoid harming any potential career

prospects or future employments. This aligns with Bell et al. (2019), and they also state that stress may be synonymous with harm, and all respondents were therefore assured that they would not need to prepare anything prior to the interview. Instead, the interview questions were intended to align with their current and historic everyday work.

Secondly, the respondents were fully informed about the purpose of the research, the nature of their involvement, and how their data would be used. Directly after the interviewer provided the anonymity assurances, the respondents gave their consent to participate. The respondents were also informed they could withdraw from the interview without repercussions. Additionally, when initially contacting the eventual research subjects and before the booking of any interview, both the purpose of the research and the reason for their involvement were explicitly communicated in writing. This, combined with later informed and verbally communicated consent, aligns with Bell et al. (2019, p. 118), who state that research participants should be "*given as much information as possible about a study in order to be able to make an informed decision about whether or not they wish to participate in it*".

The third main area of ethical considerations in business research regards privacy. Conveyed simultaneous to the possibility of anonymity and the respondents' informed consent, the interviewer communicated that all data collected would be treated with the utmost confidentiality and only be used in this specific academic purpose. The interviewer also explicitly assured that only the author would gather and analyze all collected data, and the possibility of anonymity before publication was repeated. Thereby, the privacy of research participants, as outlined by Bell et al. (2019), could be argued to be fulfilled.

The fourth main area regards preventing deception, which might occur if a researcher falsely represents their research (Bell et al., 2019). To mitigate this risk, honesty has been consistently upheld though all stages of the research process. Additionally, each respondent was assured that all their possible questions or concerns would be addressed immediately, and that the final version of the thesis would be made available to each of them.

Although the four key aspects are highlighted above, the author also considers it essential to briefly discuss data management and participant incentives, which are both discussed by Bell et al. (2019), although not categorized as the main areas of research ethics.

Regarding data management, which Bell et al. (2019) argue is somewhat intertwined with privacy, each respondent was informed about how the data collected from them would be handled. In addition to the data being stored on an encrypted device with access limited solely to the researcher, all unpublished data will be securely disposed of following the retention period required by the institutional guidelines of the University of Gothenburg, LUISS University, or as dictated by standard academic practice.

Lastly with regards to participant incentives, each participant received a scratch-off lottery ticket worth 30 SEK (approximately EUR 2.50), as a token of appreciation for their contribution to the research. This incentive was disclosed in the initial invitation email or initial contact over Teams, and given its modest amount, it is not expected to have influenced the research participation. As discussed in 3.3.2 Primary Data Collection, all initially contacted individuals agreed to participate, although knowing the amount, except for two having time constraints. The scratch-off tickets were sent by email within a week of each respective interview, however, several respondents expressed gratitude “for the gesture”,

indicating that it was unexpected and suggesting that many may have overlooked the initial mention of the incentive. Thus, the researcher believes that the incentive likely did not influence the decision to participate in the study, and it should therefore only be seen as a small gesture of appreciation for the respondents' allocated time towards this research.

3.7 Limitations

Before delving into the empirical data, it is important to highlight some limitations of this study. The case study design, while offering in-depth exploration and analysis within a single organization, imposes constraints on the generalizability of the findings (Bell et al., 2019). Within the narrow geographical and organizational context of the research question, this constraint might be exacerbated. Moreover, even if the findings are deemed applicable for generalization, the long-term outcomes and the sustainability of each digitalization initiative have not observed or measured, due to the limitations of time and resources of the researcher. Additionally, the rapid pace of technological advancements may lead to digitalization currently perceived to fostering person-centered care to lose its effectiveness over time.

Furthermore, a limitation of this study could be the lack of a comparative analysis. This might make it difficult to determine whether the respondents presented the utilization of digitalization in their company, and its impact, in a more favorable manner than is accurate, potentially skewing the study's results (Hunziker & Blankenagel, 2024). Similarly, a potential self-bias could be involved with the author, as the research question implies a leveraging of digitalization to deliver care, rather than delivering care through another forum. However, the chosen research question specifically regards how managers and senior managers, such as our respondents, have leveraged digitalization to deliver person-centered

care. Nonetheless, the author acknowledges the limitations incorporated within and the chosen research question and with the results deriving from the chosen research design.

Despite these limitations, this research is designed to offer valuable insights and enhance the understanding of digitalization's role in person-centered care, particularly through the diverse managerial perspective within a major healthcare organization of the Swedish primary care.

4. RESULTS

This chapter outlines and presents the results, structured around the four identified themes from the thematic analysis. Each theme is explored through its own subchapter with the same name, derived from the identified codes. All codes and themes can be found in Appendix C.

4.1 Strategic Implementation of Digitalization in Healthcare

Although Capio claims to be a decentralized organization, which all respondents either directly or indirectly stated, its digital strategy, i.e., six broad trends affecting Capio's operations, also seems to be well established throughout the organization. Isaksson stated that if the autonomous healthcare centers within Capio Proximity Care align with this strategy and the company vision, they are allowed to make their own decisions given their respective "*budget, time, money, and faith in the decision. Each decision does not pass through the Swedish management team, but it is rather up to each autonomous business area and their respective business unit.*" All respondents agreed on this way of organizational structuring with autonomous business units. Isaksson and Wettin both discussed a "*consensus*" often being formed throughout Capio, whereas the Swedish management team then "confirms" where the organization should transition to, in stark contrast to implementing a top-down approach. Moreover, Meurling stated that: "*Capio is a decentralized organization. It really is. And it is clearly stated that the decisions should be taken as close to the patients as possible*". Meurling also added that the strategy clarifies what the organization thinks about the strategy moving forward and "*sets general digital guidelines, but it may not always be clear what the business units should do to achieve the given guidelines*". As an example, she mentions a recent digital initiative called *Zero Vision Paper*, where upper management has decided that

paper usage and postage costs should be limited, but that "*it is entirely up to the respective business unit to decide how they should align with this*".

All eight respondents acknowledged the absence of a formal definition of "person-centered care" within Capio. However, each respondent was then asked about their personal interpretations of the term, which reflected a broad and possibly implicit understanding of it since each answer, though varied, emphasized adaptability and understanding the patient's needs and their prerequisites. For example, Olsson emphasized a holistic understanding of the patient's needs tailored differently across healthcare services; Bohlin defined it as adapting care to align with an individual's needs, whether the care is conducted digitally, physically, or digi-physically; Bremberg stated that the care should derive from the patient's perspective, and more specifically their individual perceptions, expectations, and fears. Furthermore, when discussing and defining person-centered care, four respondents indirectly referenced Capio's Operating Model, shown in Figure 2, and three respondents directly mentioned it:

"[…] *in our way of working – The Capio Model – we look at, and try to keep track of, what kind of patients are listed at our health center, what their medical needs are, what their conditions are. So that is where we start our journey, our work.*" – Bremberg

"*In that model [The Capio Model], person-centered care is incredibly central. That is, it is not the money and the [financial] outcome that is the center, but Capio says if we meet our patients well, if we maintain a high quality, then the result, i.e., the money, will come as a bonus.*" – Isaksson

"*The Capio Model starts with the patient's needs. Everything that we do starts from the patient's needs and the specific prerequisites that our patient has. All care starts from there. It cannot really be more person-centered.*" – Rezai

The quotations above indicate a unanimous agreement that the operating model of Capio clearly outlines that the core operations are initiated based upon person-centered care. The citations above also indicate a broad understanding of the term, where each respondent, throughout their interviews, presents different ways digital initiatives at Capio align with this definition, see 4.3 Delivering Person-Centered Care Through Digitalization.

There are many ways digitalization is implemented and utilized at Capio. Digital platforms and digital tools play a role here, and in each interview, Flow, Capio Go, and *Medrave* were mentioned. Meurling described Flow as Capio's digital communication platform between patients and their caregivers, where either the patients or the caregiver can initiate contact. She stated that patients can reach Capio through Flow, and digitally get in contact with a specific healthcare center, or reach Capio Go, Capio's digital caregiver. No respondent contradicted this, rather describing it similarly. Moreover, Meurling stated that Capio's healthcare personnel can use Flow to initiate a call, chat, or video call, or to send relevant information, rather than doing the same using physical mail. Flow was also described as central in delivering Capio's approach of digi-physical care. Although no respondent directly stated that Flow by itself is important to conduct this specific approach, all respondents discussed Flow as being a central platform in utilizing Capio's digital working methods, and, e.g., Isaksson also stated that Flow includes physical care, as it is a way to reach Capio to receive care, whether eventually digital or physical. This was further elaborated by both

Bohlin and Röjvall when they described Flow as a way of triaging patients in primary care. For example, Bohlin stated that:

"*Within primary care, Flow is used to triage, that is, the patient gets to answer a few questions, and then the healthcare professional evaluates if there is an urgency, and if the treatment should be conducted digitally or physically*" – Bohlin

Röjvall also emphasized that Flow does not involve auto-triaging, i.e., the platform does not by itself provide an initial recommendation to the patient without a healthcare professional present on whether the patient should "*take two painkillers and wait three days, go to the emergency room, and everything in-between*". He stated that some competing communication platforms in Swedish primary care use auto-triage, and questions whether this was an elaborate choice of Flow, or simply because the technology was not established when Flow was initially constructed. Seven respondents, Bohlin, Bremberg, Isaksson, Meurling, Olsson, Röjvall, and Wettin, all discussed digital forms being sent using Flow, to initiate or continue the contact with the patient, regardless of the care being delivered digitally or physically. Rezai did not directly state the digital forms are sent using Flow, however, he implicitly did when stating that Capio's predecessor to Flow was "*only*" used for this reason. Thus, all respondents, directly or indirectly, highlighted how embedded Flow is in Capio's approach to delivering care. All but two respondents also directly mentioned that a digitally initiated contact can be continued physically, or vice versa. This was stated although no interview question regarded this, as shown in Appendix A. However, the digi-physical approach by itself is central to Capio's operations, and three respondents – Bohlin, Bremberg, and Olsson – by themselves gave the exact same quotation of a non-respondent, Capio's *Margareta Danelius*, who they stated coined the term "*digital when possible, physical if needed*", which

has become widely used in Swedish healthcare. Additionally, Meurling, previously operating manager of Capio Go, emphasized that although digitalization is increasing through various forms, digital visits to Capio remain at only roughly 10 percent of total patient visits to Capio. Prior to Flow, where Capio Go is included, all visits required physically visiting a primary care health center. Isaksson and Olsson both elaborated on this, when comparing Capio's previous all-physical operations to previously all-digital competitors such as *Kry* and *Min Doktor*, where a convergence has started to happen towards digi-physical care:

"*If we take Kry as an example, it becomes very clear that we come from opposite directions. They arose from the digital world, and we from the physical one. However, we now approach each other*." – Isaksson

"[…] *we have different DNA in our organizations* […] *however, I want to emphasize our persistence and stability of our operations. Either way, our digi-physical approach, using digital tools and physical working methods, really benefits in achieving an overall view of the person being treated.*" – Olsson

Isaksson concludes that Capio has not stated that it should operate all-digital, but rather "*to meet the patient where it is best for them to meet*". Lastly, Rezai further elaborated that "*not all patients prefer a digital contact*" and Bohlin stated that the form of care depends on the patients' preferences, as the form of care depends on their chosen decision to initiate contact.

Transitioning to Medrave, Wettin stated that the separate platform had previously only been used for quality measurement and as a statistic reporting tool within Capio's primary care operations for 10-15 years, which was also confirmed by Bohlin, Isaksson, and Olsson.

However, most respondents discussed the newly established linkage between the communication platform Flow and data-gathering service Medrave, where Medrave has now started to play a large role in delivering care at certain Capio primary care healthcare centers. The platform allows extracting both aggregated and personalized information from individuals' electronic health records, provided by each of the Swedish region, and then present it to Capio through aggregated lists (Meurling; Röjvall; Wettin). For instance, both Röjvall and Wettin exemplified the usage of Medrave when discussing patients with chronic diseases, which amounts to half of Sweden's population, and where most receive care from Swedish primary care. As these patients should have regular contact with primary care, and where the traditional Swedish healthcare have had trouble maintaining contact with everyone, the care has sometimes been delivered when the patients reach out to primary care themselves, thus "*put all the responsibility on the patient*" (Wettin). Furthermore, Bremberg stated that Medrave is a substitute for the lack of direct access to the electronic health records, which is instead provided by receiving a slightly delayed, ranging from a few days to a month depending on the region, copy of the same, through Medrave. Either way, Medrave retrieves information from the electronic healthcare records, which can be used when monitoring which patients to contact (Meurling). In Capio Proximity Care, 12 out of 13 regions where Capio operates its primary care operations are integrated with Medrave, thus creating a common database, instead of the 10-11 different electronic health records systems provided by those 13 regions (Isaksson).

The platform *TeleQ* was only briefly discussed, and not asked specifically to any of the respondents, as it is not a recent initiative. However, Isaksson, Rezai, and Röjvall all briefly mentioned it and its recent success at some healthcare centers, stating it is a platform to

coordinate incoming phone calls. All three stated that the platform is not integrated with Flow but could rather be seen as one way for the patient to initiate a direct physical contact.

4.2 Digital Working Methods Supporting Operational Efficiency

Although platforms such as Flow and Medrave play a pivotal role in delivering digi-physical primary care at Capio, as highlighted in 4.1 Strategic Implementation of Digitalization in Healthcare, all respondents discussed the role of digital tools acting as facilitators to deliver the desired care, e.g., Wettin argued that "*care is care* […] *digitalization is just a tool to achieve it*.", and both Bohlin and Bremberg discussed that the platform itself does not matter. Some respondents directly stated that "digitalization equals digital working methods". For instance, Röjvall: "*digitalization is just a tool to achieve the desired goal, whether quality, operational or [person-centric].* […] *Digitalization should not change our goals, but it is just a tool to reach them.*" Further exemplified, Isaksson commented on Flow, digital working methods, and the importance of limiting platform dependency:

"*If Flow becomes exposed to further competition, or if we are forced to switch platform in regions where we have built all our digitalization around that specific tool, then we have a problem. Because then all our digitalization efforts get erased if that tool is removed. But if we provide ourselves, through our nurses and doctors, with digital working methods that involve us proactively contacting our patients, then we can implement those methods into the new tool as well.* […] *And that working method can we build in Flow, but likely just as well in Platform24, Visiba Care, and all these other Swedish competitors that exist.* […] *At the same time, the digital tool must work if one is to incorporate it into the everyday operations, and it thereby becomes the bearer of everything. But if you zoom out, the digital working method is the aspect [of digitalization]*" – Isaksson

Many respondents shared a similar reasoning as Isaksson regarding the digital working methods "*being*" a large component of digitalization, e.g., Olsson when stating that "*Changed working methods is an important aspect of digitalization.*". However, Bohlin, Bremberg, and Isaksson all emphasized a specific time advantage as a result of efficient digital working methods: "*If there is a visit that could have occurred in a shorter, better, and more efficient way digitally* [...] *then that time saved can be spent helping another patient*", "*the time saved can be devoted to another patient who has a greater need of it right now*", and "*our digital working methods allow us to free up time to meet the sick patients* […] *and this makes the sick patients healthier.*", respectively. Moreover, in contrast to Isaksson's reasoning about platform usage, Olsson and Wettin specifically emphasized the value of the close relationship built with Doctrin, the co-owned company behind Flow, for constructing and tailoring the desired working methods within that specific platform. Bremberg also stated that although Doctrin has multiple customers alongside Capio, they have mostly been open minded and responsive to requests for further development of Flow. Furthermore, Isaksson explains that whenever possible, Capio prefers to procure digital tools and services externally, rather than developing them in-house:

"*We do build some of our own solutions, but as much as possible, we try to bring in tools, services, and products from outside without needing to code and construct too much ourselves. This approach applies to both Proximity Care and Capio at large. Generally, we aim to find solutions and buy those. However, sometimes we create our own things [digitalization].*" – Isaksson

Regarding the latter, creating in-house, Isaksson refers to the practices of creating Robotic Process Automation (RPA), which all respondents but Bohlin discussed, without it being part

of the interview guide. However, Bohlin also indirectly mentioning it, discussing integration platforms among digital platforms. Exemplifying RPAs, Meurling stated that there is a lot of administration within Swedish healthcare, and that these RPA try to limit this:

"*There is a tremendous amount of administration in healthcare. We may receive information on paper, or in a system that must be transferred to another system, such as from electronic health records, so these RPAs help us transfer that information.* […] *there is less risk of accidentally writing incorrect information, and it is not as monotonous for our employees.*" – Meurling

Rezai continued by emphasizing that these RPAs "[…] *perform repetitive tasks that we prefer our healthcare personnel to not do, so that they can focus on patients. A lot of it is about fetching information from one system and putting it into another system. Often an electronic health records system.*" Isaksson compared the functionality of RPAs with Excel macros: "*One example is Excel macros, that is, you teach Excel to do a number of things. In the same way, you can teach a robot, a RPA, to do things, e.g., if a nurse does the same clicks in a journal for each of their patient, you can program a robot to make those clicks instead.*"

Furthermore, Bremberg stated that the RPAs transfers information:

"[…] *in an automated and very structured way. Instead of us having to do it by hand. And of course, in the end, this benefits the patients, but it is really more of a tool to make it easier for the employees to do these simple and repetitive tasks smoothly and well.* […] *And then we have the employee's perspective, which is that it should be as easy as possible to do the right thing when having contact with their patients.*" – Bremberg

There was no discrepancy between any of the seven respondents mentioning RPAs, nor Bohlin indirectly mentioning it, with each one highlighting its importance of integrating systems today and expressing a desire to continue using them within the organization and with national systems or other competing platforms to Flow. Many also highlighted its continued importance moving forward, e.g., Olsson and Wettin stated that:

"*If we are to discuss the future and speaking from a technological perspective, integrating these tools with each other is vital. There is far too much 'copy and paste' still happening today.* […] *there needs to be an opening from the electronic health record systems, and also in Flow which should make backend export/import easier, or otherwise there will always be additional work tasks, which we simply must eliminate.*" – Olsson

"[…] *instead of thinking that we should all implement the same platforms throughout Sweden, our systems must be able to 'talk' to each other*" – Wettin

Although Isaksson agreed with the functionality provided by the RPAs, he would have preferred if the systems by themselves had the "*right requirements [to begin with], instead of us having to build functionality ourselves*". However, Isaksson, just as most respondent, realized that a lot of these limitations exist due to the many different systems and platforms used throughout the different regions of Sweden. Bremberg also discussed system limitations, stating it would be "*a 'gamechanger' if one could directly interact with the electronic health records* […]". Most of the respondents also discussed 1177, the national infrastructure platform, which was briefly mentioned in 1.2 Problem Discussion, and described it as the aggregated health data for the individual patient to see their electronic health records across all instances of care and from all healthcare providers. Both Isaksson and Rezai directly

highlighted its importance in enhancing person-centered care in primary care, although being an external platform.

As highlighted above, many of the RPAs seems to exist to streamline administrative tasks and thus improve operational efficiency. Other RPAs are built to synchronize platforms, and the most common one discussed was the recent integration between Medrave, the quality statistics platform, and Flow, the communication platform. This will be discussed in the following subchapter.

4.3 Delivering Person-Centered Care Through Digitalization

There is much primary data gathered regarding digitalization and how this relates to the care provided by the case company. As discussed in 4.2 Digital Working Methods Supporting Operational Efficiency, the digital working methods themselves are considered the digitalization, not the specific digital tool. Moreover, all respondents highlighted the proactivity that Capio is trying to further implement within its primary care operations using these digital working methods. Paraphrasing Bremberg, Isaksson, and Olsson, two proactive digital working methods are prominent:

1. Obtaining information about the patient before their visit, whether digital or physical, by sending digital form(s), and
2. Renewing medical prescriptions and initiating the booking of planned appointments, such as annual appointments with persons with chronic disease(s).

Regarding obtaining information about the patient's visit, it could assist Capio's healthcare personnel to make a preliminary assessment, gain knowledge in how the care could be

recommended to be delivered to the patient, and if that specific digital or physical visit could be avoided altogether if an agreement is made with the patient (Meurling). These forms may also provide information which could streamline the visit itself, such as the healthcare professional having aggregated data about the prescriptions taken by the patient. However, the respondents placed a larger emphasis on the latter, i.e., proactive prescription renewal and proactive booking. And these are in large due to the digital working methods, allowed by the RPAs. Isaksson stated that:

"*We can continue to use Flow in the same way as we have met our patients using telephone, but then we have not gotten anywhere; we have just moved the interactions from telephones to Flow.* […] *we instead want to find solutions to anticipate. The patients should not have to chat with us, but we should instead contact them. That is a more important digitalization, namely proactively contacting the patient.*" – Isaksson

Isaksson continued by giving a recent anecdote of a patient with chronic disease, who, due to Medrave and the integration with Flow using RPAs, were able to be proactively contacted by their healthcare center for their annual visit. According to Isaksson, it was the first time since the person obtained their chronic disease 15 years ago, that they did not have to reach out to themselves to the healthcare center to 'remind them' of their annual visit, but rather they expressed gratitude as they felt 'seen' by the healthcare system. This was although having been listed at many different healthcare centers during this period, under both private and public management (Isaksson). Olsson explained the technical aspects behind it, with an RPA extracting information from Medrave regarding an upcoming visit and stating which patient has been contacted and not, which is then integrated into Flow. This was although, as stated

through Isaksson's anecdote, the patient itself did not prefer a digital way of being contacted, but rather received their proactive booking by physical mail.

As mentioned in 4.1 Strategic Implementation of Digitalization in Healthcare, an estimated half of Sweden's population has at least one chronic disease, and most of these are in regular contact with Swedish primary care. Bremberg, Meurling, Röjvall, and Wettin all elaborated on the possibilities with regards to the chronic patients, and how Capio's digital working methods, mostly allowed due to the Medrave integration with Flow, has allowed for the organization to have better control of their listed patients with chronic diseases. This is as the specific healthcare unit can, through Medrave, produce applicable lists of all the patients that should be contacted within a given time interval in combination with other medical data, and then synchronize it with the communication platform Flow (Isaksson). Rezai elaborated further by describing that this digital working method could be expanded to allow for patients to be proactively contacted although not currently having, for instance, a chronic disease, but rather observing a slight irregularity during a regular visit such as regarding their blood pressure. That specific patient could then be placed on a specific list so the healthcare center can keep better track of that specific patient, to keep them healthy (Rezai). Furthermore, Bohlin discussed that the digital working methods that allows Capio to obtain better data about the patient, aiding Capio to become more preventive. Lastly, all respondents except Bohlin and Rezai did discuss the actual usage of proactive prescription renewal, in which the digital working methods are being implemented at some Capio healthcare centers by using Medrave in combination with Flow, allowing for proactive prescription renewals before expiration, without a need for the patient to reach out to those specific healthcare centers.

Olsson, Röjvall, and Wettin directly discussed the responsibility being placed on the patient in the traditional working methods of Swedish primary care. Wettin stated that, generalized and in the traditional way of working, the healthcare professional often waits until the patient reaches out, and thereby putting all responsibility on that specific patient. Olsson's reasoning was similar, stating that many healthcare providers have traditionally conducted a physical evaluation, renewed the patient's prescriptions, and with the healthcare provider at the end of the meeting telling the patient to "*get in touch with us again in 12 months*". He added that this results in a "*one size fits all*"-approach, which might not be suitable. Röjvall expanded upon this, stating that this traditional approach, which Capio is trying to transition from with their proactive digital working methods, also involves equality aspects. Röjvall elaborated further by stating that if a patient is expected to reach out for their regular visits, such as regarding their chronic disease, or for their prescription renewal, then inequality might arise, as those with the greatest needs might not be able to "*watch over their own interests*". However, Röjvall emphasized that these new working methods are recent to Capio as well and have not been widely adopted yet.

Moreover, a key component of the digitalization efforts at Capio (within the given time reference of the case study) was argued to be Capio Go. All respondents except Wettin emphasized its importance, however, Wettin also indirectly discussed the platform by referencing the usage of it. Capio Go was described as the "*all-digital healthcare center*" of Capio, well integrated within the Flow platform (Bohlin; Bremberg; Rezai). This integration is also communicated externally, or rather the lack of it, as all current marketing of its existence regards the possibility to reach Capio digitally, "*the unified Capio*", every day throughout the year between 7 am to 10 pm (Meurling). This extends beyond the opening hours of the Capio's other healthcare centers (Rezai). Both Meurling and Rezai emphasized

that many of the primary care healthcare centers also operates online using the platform Flow, i.e., those not restricted to other communication systems by the region within which they operate. They stated that the individual healthcare center where the patient is listed operate separately with Capio Go on Flow, yet also in combination, through the usage of *Network* in Flow, which will be further elaborated upon by the end of this subchapter. Furthermore, the Flow feature *Switch* allows a healthcare center to adjust their online opening hours, based upon their opening hours, where patients instead can choose to await their opening, or talk directly with Capio Go (Isaksson; Röjvall).

For clarity, depending on how the patient initiates the contact, if they are the ones that initiate it, the form of care will depend. Bohlin, one of the internal "founders" of Capio Go, discussed how the form of care will depend on the patient's preferences. Isaksson stated that there is no way to reach Flow nor Capio Go by phone, but that the communication is rather conducted using chat or video. Rezai elaborated further that this can be conducted both in the Capio mobile app, or on the website. The patient has the possibility to reach out in the same way to their listed healthcare center during their respective operating hours, however, they might be closed on, e.g., holidays (Rezai). Either way, reaching out digitally, or by calling or physically visiting the healthcare centers, are the different ways a patient initiates contact with Capio's primary care (Isaksson).

The scope of this research regards digitalization being involved in delivering care, and all respondents discussed the ways the digital platforms themselves benefit the patients. When using Flow's features, Bohlin, Meurling, Olsson, Rezai, and Wettin discussed the advantages of these features being asynchronous, i.e., the patient and healthcare professional(s) not being required to be online at the same time. Bohlin exemplified it through digital forms, where a

patient can start submitting their information one day in the quiet and peace of their own home, and then finish the form the following day. Instead of, e.g., having to "*squeeze*" all the information in "*a short 40-minute conversation*" (Bohlin). Although all respondents present the increased availability to care due to Flow, Meurling, Olsson, and Rezai emphasized that the asynchronous chats allow for even further enhanced accessibility, whenever the need of the patient arises. Meurling stated that "*If a chat already existed, then the patient can just open up the chat again and start typing*", thus not having to reach out and explain their whole narrative and situation again, while possibly not even being able to reach their healthcare center in the traditional way of contacting, which she elaborated on earlier during the interview. Many respondents discussed how Flow allows for multiple instances of care or interpreter services, simultaneously or asynchronously being in contact with the patient. However, Wettin goes as far as stating:

"*Today, it is becoming even further difficult for everyone to meet physically at the same time. With asynchronous meeting, it is possible, for example for a patient, its healthcare center, and a specialist center to meet. And hear and share the same information. This improves the accessibility of care.* […] *without being at the same place, at the same time, which is only getting more difficult in today's healthcare environment. And to conduct this, the digital [contact] is a 100 percent necessity.*" – Wettin

Many respondents also discussed how Flow creates more documentation, benefitting the patient. For instance, both Bohlin and Meurling both discussed the difficulty that may arise when trying to recollect what has been stated physically, e.g., between a doctor and a patient, only five minutes after leaving the physical healthcare center. Bohlin stated that "*Perhaps the patient is worried, stressed, or whatever it may be. Making this information available*

digitally therefore provides both security and makes it easier for the patient to follow their treatment plan." Bremberg and Meurling further elaborated on the treatment plan, when discussing how the care can be further individualized yet informative, for instance on personalized medical dosage and informative guides, which are easily shared through Flow. For example, Bremberg exemplified using the knowledge support-system *Medibas* and how Capio uses Flow to send links to specific informative guides or tips, which are deemed applicable to that patient's specific needs. Both Bremberg and Meurling emphasized the importance for the patient of having this information well documented. Moreover, the additional documentation in Flow allows the patient, if they desire, to further include their social support network in their individualized healthcare plan, such as friends, family, or a legal guardian (Bohlin; Bremberg).

Many respondents also highlighted the increased possibility of patient empowerment due to the digital working methods, because of a further active participation in their respective care. For instance, both Olsson and Wettin discussed that a patient often takes as passive role in a physical healthcare center, where, e.g., a doctor measures a patient's blood pressure, and a subsequent dialogue might not be held between the measured numbers, nor what they indicate. Both exemplified that a patient more often remains actively involved in Flow, where a healthcare professional instead might ask the person seeking care for their blood pressure. Wettin stated that: "*By conducting the care from the safe of the patient's home, it also created a more balanced relationship between the patient and their doctor*". Moreover, Olsson highlighted another empowerment aspect when discussing digital working methods, highlighting that however often e.g., a chronic patient is in contact with the healthcare system, all remaining hours the patient lives with their own disease: "[…] *and everything we can do to facilitate the patient's own autonomy and their ability to help themselves, is very,*

very positive for both the patient himself, but also for the healthcare system as the acute cases can be limited."

Moreover, many of the respondents highlighted the importance of also empowering the employees in using a certain digital working method. For example, Rezai emphasized the importance of simplicity by design, arguing that "*if employees are required extensive training to use a certain digital working method, then it is likely unsuitable*". Meurling also discussed facilitating the care of using the new digital working methods, stating that:

"*A lot regards the 'why'. And what drives healthcare professionals to want to do something is for the sake of the patient. The patient should benefit.* […] *It is importance to pace the systems and get both the patient and those who work with them on board.* […] *And I think the most important thing is to get the staff involved. Because if they want [a new digital working method] to happen, it will happen.*" – Meurling

Bremberg also summarized that the goal of the care delivered is "*that our patients should feel better and that they should find it easier to contact us*", when discussing Capio's digitalization and how this fosters person-centered care. He also added: "*And then we have the employee's perspective, which is that it should be as easy as possible to do the right thing when having contact with their patients.*"

Lastly, when discussing how digitalization has facilitated and streamlined the coordination of, and the transition between, care units at Capio, all respondents mentioned the recent feature Network. Olsson stated this feature was released in late 2022. However, as there are

many ways for a patient to initiate contact, Meurling exemplified that if a patient contacts Capio Go but it becomes evident that care is recommended by another Capio unit, then: "*Capio Go can ask the patient if it is they agree to their patient data to instead be handled by their healthcare center. If the patient agrees, then the whole 'case' with its history will transition to the healthcare center's Flow, and they can then, for example, proceed with booking a physical appointment or delivering physical test kits to the patient.* […] *Or it could be the other way around, where a patient is seeking digital care from their healthcare center, such as to renew prescriptions or to look at that specific skin condition. And due to an increased demand of the healthcare center, such as during flu season, they could instead ask the patient if they are 'okay' to be assisted by Capio Go instead, as they will be able to assist the patient faster. Or with transitions to or from specialist care.*" – Meurling

Many respondents gave a similar description, and no one contradicted Meurling. For example, Wettin emphasized the seamless transition, as the patient is not required to "start over" in the process, nor required to have a traditional referral to another business unit, which takes longer; Bremberg described Network as allowing for unloading and supporting healthcare centers, thereby optimizing resources without the need of a central unit overseeing the operations. Isaksson summarized the feature: "*Network allows us to delegate patients between different business units using Flow*". Rezai emphasized that Network is a component of Flow itself, thus highlighting its importance for Capio. Both Bremberg and Olsson discussed the date when Flow was ultimately released, stating that the vision for the feature was presented before its launch in 2017. Either way, both are satisfied with the feature today. Lastly, Bohlin stated that "*In my opinion, the most importance functionality of Flow today is*

Network. There, we can transfer patients from primary care to specialty care, and vice versa. Network has become a kioskvältare."[4]

In the following subchapter, the innovation of new digital initiatives, such as Network, and its implementation throughout the organization, will be discussed.

4.4 Innovating and Implementing New Digital Initiatives

There are two primary ways new digital initiatives arise within Capio, as outlined by the respondents.

Firstly, Meurling and Rezai both discussed the annual *Pitch Day*, i.e., where externals present new ideas for possible implementation within Capio. More specifically, Rezai described that Capio frequently gets contacted about potential new products and services, most often technical solutions and presented by current suppliers that seek further collaboration. The ideas are then aggregated in a written list, and then sifted based upon the needs of the organization, or the strategic direction of the company. Then, the companies behind the most viable ideas are invited to present, or 'pitch', their respective ideas to a panel of various positions and expertise within Capio (Rezai). Meurling added that the panel also has certain pre-determined criteria for evaluation. Thereafter, a consensus is made regarding which idea(s) to proceed with (Meurling; Rezai).

[4] According to the author, the Swedish word 'kioskvältare' has no direct English translation. Possible equivalent words might include "bestseller" or "blockbuster", indicating a product or service with extremely high demand or usage.

Secondly, innovation may also arise internally, deriving from either the business units themselves based upon identified needs, or from managers actively involved with innovation. Most often, there are medical "enthusiasts" acting as a linkage between the autonomous healthcare center, and the upper management (Olsson). These are often in the form of working groups, where ideas can both spread and be further developed (Rezai).

When an idea, either external or internal, is deemed viable by the company, a 6-month pilot project is most often initiated (Bohlin; Bremberg; Isaksson; Meurling; Rezai; Wettin). Depending on the innovation being implemented it is piloted in different business units of the organization (Meurling). The ideas may range from, e.g., specific digital services moving analog information to a digital format, digital tools to specifically aid in the care delivered (such as monitoring cardiac arrhythmia), or RPAs to improve operational efficiency (Rezai). However, as discussed in 4.1 Strategic Implementation of Digitalization in Healthcare, all respondents agreed that Capio is a decentralized organization with autonomous primary care business units. Therefore, it is uncommon to enforce a top-down approach (Bremberg; Isaksson; Röjvall). Occasionally, some decisions are undertaken that the business units "*must align*" with, however, even then it is up to the respective operating managers to decide to what extent they will enforce the implementation of the same initiative (Bremberg). Isaksson stated that there are "*very few*" decisions that are non-negotiable, and most of these include complying with laws, regulations, and customs given by external stakeholders, such as the Swedish regions or other governmental organizations. Instead, the pilot phase is initiated by inviting business unit representatives that have either directly shown interest in the new feature by proposing it, or business units that are more prone to trying out innovations (Bremberg; Meurling; Rezai; Wettin). "*In Capio Proximity Care, there is often 3-5 business units that are very eager to try out innovations*" (Wettin). Rezai added that most often the

regional medical officers at Capio have aggregated knowledge of ideas, concerns, and which business unit are more open to innovations: "*And most often, the ideas that are realized are those where there has been an expressed need of a certain feature*." Then, if the business unit(s) agree to a certain pilot project, it is initiated (Rezai).

Following a pilot phase, the project is evaluated and possibly adapted (Bremberg). Both Meurling and Rezai discussed that some innovations function as intended or even surpass expectations, while others do not. If the latter, it is important to abandon that specific idea and instead evaluate other possibilities (Meurling). However, Rezai stated that "*if the project is proven successful, we proceed [with further implementation]*." However, before this phase, the pilot projects are often evaluated qualitatively by asking the pilot group-participants (the autonomous business units), and depending on the idea implemented, possibly asking for quantitative and qualitative feedback from patients (Rezai). Bohlin stated that quantitative feedback is often easier to aggregate digitally than physically. According to Meurling, this quantitative feedback may, e.g., be gathered when implementing a new feature of Capio Go, and qualitative measures often involve in-depth interviews with patients willing to participate. However, feedback from patients is generally not gathered directly at the pilot phase of an initiative, only indirectly through the respective operating managers of the business units, or through applicable regional medical officers (Rezai).

If a pilot project has been deemed successful, then a wide-scale adoption is likely to be recommended throughout Capio Proximity Care (Wettin). However, this recommendation is often given gradually within the business area (Bremberg). Moreover, it is most often provided through ambassadors, either "enthusiasts" of Capio, e.g., its regional medical officers, which highlights successful examples of the implemented ideas, or with the pilot-

phase participating business units sharing their experiences, either through conferences, at meetings, and on the intranet (Bremberg; Olsson; Rezai; Röjvall; Wettin). A recent example of a pilot project is the RPA between Medrave and Flow, and the associated digital working method (Röjvall; Wettin).

When ambassadors initiate the promotion of a certain innovation, Bohlin, Bremberg, and Wettin all discussed how this recommendation could be formulated. Both Bohlin and Bremberg stated that any recommendation derives from the prerequisites of that specific healthcare unit, and its possibilities and desires to implement a certain feature. Bohlin noted how specific operating issues may be highlighted by the ambassadors, which inspires change, "*they arouse curiosity*", and then the proposed changes could be either accepted, rejected, or tailored to the individual circumstances of that specific healthcare center. Bohlin further elaborated that "[…] *with this curiosity, we develop even further*" and Bremberg continued that this hopefully leads to a wider adoption. Meurling exemplified the adoption process by comparing it to a scene from a 1970s movie where one person starts dancing alone, initially viewed as an oddity, then "*a few more join in as their curiosity grows, and eventually everyone wants to participate.*" Additionally, Bremberg and Wettin both emphasized the importance of the ambassador's acknowledging the 'why' of implementing a certain new initiative, building upon Meuling's reasoning of empowering healthcare professionals presented in 4.3 Delivering Person-Centered Care Through Digitalization. Wettin exemplified it as:

"*describing 'why?', that is, 'why is this [initiative] good?'. Further, this includes 'how will this be a good initiate for you as an employee?', 'how will it create a better working environment for you and what will get easier?', and ultimately: 'how will this benefit the patient?*"' – Wettin

Bremberg elaborated further on the 'why' and how to demonstrate it:

"*The important thing is to try to show the benefits of the new way of working, the new technical solution, or the support that is provided. So that one feels that this gives relief in everyday life, this creates conditions for me to do other things, and that it might "be a more enjoyable way to work with my patients" put simply.*

And it is often about finding good examples – employees who tell their own experience and journeys. For example, an asthma/COPD nurse who themselves tell how they used the care-initiated contacts to follow up and have contact with their patients with asthma and COPD. That person is often a better representative to advocate for the tool, than if I stand up and talk about the benefits. Because then it is something self-experienced, which is often much more credible than if someone, for example, in the management team does it. So, we try to get our employees to contribute their own good examples and spread it in various contexts. We run webinars and different trainings where "Early Adopters" are involved and spread the message.

Because we have some who are early on the train, some who catch on in the middle, and then there are always some laggards who almost never come along." – Bremberg

While Wettin highlighted the importance of ambassadors, a recommendation could also be given by upper management, which could be stated as "*we [Capio] have tested this [new*

feature]. It works well in these ways. These values exist. Now, the feature will be available to all units within Capio Proximity Care, and we strongly recommend it being used.". And despite the influence of ambassadors and management's recommendations, Rezai underscores that ultimately "*it is up to the respective operating manager to decide whether they should implement it [the new initiative]*".

5. DISCUSSION

This chapter analyses the results. It begins by reiterating the aim of the research and summarizing the main findings. Subsequently, the findings are analyzed through both the theory of person-centered care and the conceptual models with their associated theories.

5.1 Main Findings

Before delving into the discussion of the specific findings presented in 4. RESULTS, it may be beneficial to reiterate the aim of the research and briefly present the main findings. Prior to that, the author wants to emphasize that, as discussed in 3.7 Limitations, there may be subjectivity involved with the respondents when presenting the utilization of digitalization at their company and its relation to delivering person-centered care, which may have skewed the findings.

The purpose of the thesis is to exemplify how digitalization can be utilized to enhance person-centered care, within the context of Swedish primary care. As presented in 1.1 Background, the Swedish government and the SALAR have jointly declared that Sweden, by 2025, should be the world leader in utilizing the opportunities of digitalization and eHealth. Swedish eHealth Agency (2023b) further states that all organizations must contribute to be able to achieve this. Capio is one of Sweden's largest primary care providers under private management, and by conducting a case study of this organization, the researcher seeks to uncover how their digital initiatives have supported or advanced their commitment to delivering care based upon the medical needs and individual circumstances of the patient. This is guided by the research question: "*How have managers and senior managers within Swedish primary care leveraged digitalization to foster person-centered care?*".

Capio seems to be a decentralized organization, which all respondents have stated while underscoring the autonomy of the specific business units. This decentralization affects how digitalization is being diffused and integrated within the organization. The respondents, all managers and senior managers involved in formulating and enforcing digitalization at Capio, do not generally seem to impose direct control over the respective business units either. However, the respondents seem to be able to influence which digitalization initiatives are being implemented by the business units, through their actions of highlighting and embracing certain initiatives to some or all business units of its primary care operations. Given the position of the respondents, one might argue that this is expected, however, as highlighted in 4.4 Innovating and Implementing New Digital Initiatives, the respective operating manager of the healthcare centers decides whether they should implement a certain initiative or not. Therefore, the perception and user acceptance of the operating manager, and arguably by extension also the other healthcare professionals at the same healthcare center and their respective patients, determine which digitalization initiatives should be implemented.

Additionally, all care delivered by Capio, including its primary care operations, is derived from its operating model, discussed by the respondents as “The Capio Model” (see Figure 2). This model is based upon the medical needs and individual circumstances of the patient, with close resemblance to the definition of “person-centered care”, as discussed in 2.1.1 Person-Centered Care.

Moreover, digitalization initiatives at Capio seems to regard both transferring analog information to a digital format, and the integration of digital initiatives that supports the organization’s operations, in line with 2.1.2 Digitalization. However, many of the respondents outlined “digital working methods” as being a large aspect of the utilized

digitalization in Capio's primary care operations. These working methods seems to imply the different ways digitalization has been utilized within Capio, with it predominantly being to deliver proactive and person-centered care, while limiting platform dependency to comply with laws and regulations. Furthermore, all respondents, directly or indirectly, highlighted the importance of integrating varying digital systems, both internal and external, through RPAs. These RPAs seem to be implemented to both streamline administrative tasks, resulting in operational efficiencies which result in time advantages for the healthcare professionals, and to synchronize platforms to allow for the implementation of new digital working methods. The latter is exemplified by most respondents through the recent integration between Medrave, the quality statistics platform, and Flow, Capio's co-created communication platform. This specific RPA allows for the synchronization of the patients lists and their medical data produced using Medrave, i.e., those patients deemed crucial for the healthcare center to be in contact with during a given period, and then clearly outlining who has received care or to initiate the care, using Flow. It may also allow for the healthcare center to proactively renew medical prescriptions before they expire. This RPA connecting Flow and Medrave is therefore an example of a digitalization initiative that has allowed for a new digital working methods to be implemented, which leads to the possibility of the healthcare center being proactive when conducting its primary care operations.

In the following two subchapter, the results will be further discussed. Firstly, the highlighted digitalization initiatives will be dissected to see how they relate to the theory of delivering person-centered care. Subsequently, the conceptual models and theories relating to the spread of innovations, the actual usage of new technology, and the complexities involved with it, will be compared with the ways managers and senior managers have enforced and promoted those digitalization initiatives within Capio's decentralized primary care operations.

5.2 Utilizing Digitalization to Foster Person-Centered Care

The results will now be comprehensively analyzed according to the definitions of person-centered care, as presented in 2.1.1 Person-Centered Care. Initially, the results will be analyzed against the eight dimensions of person-centered care outlined by Picker Institute (n.d.). By examining the digitalization utilized throughout Capio's primary care, an assessment will be made regarding the extent to which these initiatives have embraced the core principles of person-centered care. In the subsequent subchapter, the results will also be compared to the definition provided in a Swedish healthcare environment by University of Gothenburg (n.d.), which has been further expanded upon by Boström and Fischer Grönlund (n.d.). Although the components of person-centered care are not as explicitly defined in a Swedish context, they are still argued to offer a valuable definition of the localized expectations and ideals of Swedish primary care. Thus, the analysis will evaluate the person-centeredness of the digitalization initiatives at the case company and its alignment with both internationally renowned theory, and the widely applied definition within the national healthcare system being researched.

5.2.1 Picker Institute's Eight Dimensions of Person-Centered Care

Firstly, Picker Institute (n.d.) states that person-centered care should provide timely and easy access to reliable healthcare advice, which meets the individual's needs. This first dimension can be divided into many components: timely, easy access to reliable healthcare advice, and meeting the needs of the person seeking care.

With the opening hours of Capio Go, i.e., the all-digital healthcare center acting solely on Flow, being 7 am to 10 pm every day, including national holidays, it could be argued that the

opening hours of Capio's digital primary care services are generous. With regards to "timely", the response time has not been measured or discussed in this study due to the chosen research method. Therefore, it is not possible to give a definitive answer to this component, although one might assume that the response time is faster outside of the opening hours of the patient's listed healthcare center. The increased triaging of patients due to digitalization, as discussed by the respondents, may also better funnel patients and give an initial recommendation or a referral based upon when the patient seeks care, which could increase the speed at which a patient receives appropriate care.

Additionally, the proactivity of healthcare professionals contacting patients, allowed by digital working methods, is speculated by the author to also decrease the number of patient-initiated requests, supporting faster response times for those patients seeking digital care. But the author emphasizes, for clarity, that any effect on the response time of the healthcare professional has not been measured in this study. However, the results do indicate that the digital platforms foster ease of access to Capio's primary care. This is further argued due to the extended opening hours, the asynchronous communication allowed by the digital platforms (which respondents argue enhances accessibility and supports an easier continuity in the care delivered), and the additional ways of reaching Capio (improved eHealth access due to its website and mobile application). Furthermore, at the convenience of the person seeking care and depending on their preferred method of reaching primary care, a healthcare professional will assist to the best of their ability in giving reliable healthcare advice. Naturally, if a patient seeks digital care for something that demands physical care, then the healthcare professional will triage the patient accordingly, which by itself could be argued to be a component of "reliable healthcare advice". The author argues that triaging most likely would have happened in all-physical healthcare, but the digital communication should be

faster and more convenient. This is because multiple respondents have argued for faster referrals between different units of care, if needed, and Network allowing for seamless transitions. Additionally, using a digital platform by itself could be argued to grant the patient with easier access to healthcare advice, without the need to meet physically. Moreover, as for the component of healthcare meeting the individual needs of the patient, this will be discussed through the second dimension in the paragraph below, as they largely intertwine.

Secondly, Picker Institute (n.d.) notes that person-centered care should include effective treatment by trusted professionals, which comprises clinically appropriate care through trust-inspiring interactions with healthcare professionals that respect the patient's preferences. The author notes that the quality of care delivered is beyond the scope of this research. However, if one assumes that all care delivered by Capio, whether digital or physical, is at the clinically appropriate level and provided through positive and trust-inspiring interactions with the respective healthcare professional, the dimension can be elaborated upon in this discussion. As widely discussed by the respondents, all care at Capio is conducted based upon Capio's Operating Model, which incorporates the individual patient's medical needs and their individual circumstances. This further includes how the care is being delivered and personalized, and multiple respondents discuss how patients can initiate contact in a way they prefer, stating that Capio ultimately strives to maintain contact with the patient where it is most suitable for the patient. The results thereby indicate that implemented digitalization has enhanced the possibility of this care. Moreover, all respondents discussed that the digital tools should rather be seen as facilitators to deliver the desired care, where multiple respondents stated that "*digitalization is just a tool* […]", in line with the same reasoning. An example of this is the RPAs, as respondents state that these have both streamlined operations (resulting in better operating efficiencies) and allowed for the usage of new digital working

methods (such as enhancing the possibility to proactively contact patients due to the integration between Flow and Medrave). The respondents also discuss Flow specifically, as it has been both launched and further developed within the researched period, allowing Capio to transition from their previous all-physical operations to the digi-physical approach they have today. By doing so, the medical professional at Capio could be argued to be further allowed to deliver care in the way they deem most appropriate, based upon their medical expertise and with respect to the patient's needs and preferences, but enhanced by the digital initiatives.

Moreover, Picker Institute (n.d.) states that person-centered care should allow for continuity of care and seamless transitions between different care providers and different stages of treatment, and with consistency in information, relationships, and care management. As widely discussed by the respondents, Swedish primary care has a wide range of platforms, such as separate electronic health records in almost every region Capio operates. Therefore, the results seem to imply there is a lack of consistent information, relationships, and care management between the different healthcare providers within Swedish primary care. However, within Capio, the Flow platform itself but most notably the feature "Network" has allowed for the patient to experience seamless transitions between different stages of care, if the same person grants permission for the transition to happen (e.g., between Capio Go and the patient's listed healthcare center, or between primary care and other medical instances, such as specialty care). This was expressed by all respondents. Further, several respondents deliberated on the feasibility for a patient of resuming their care directly where a prior conversation ended in Flow, indicating that the platform aids in promoting a continuity of the care.

Picker Institute (n.d.) further states that person-centered care should support the involvement of a patient's support network. Many of the respondents discuss how the usage of Flow creates more accessible well-documented information compared to physical contact, and as argued by two respondents, if the patient desires, the patient may more easily include their social support network. This was presented when discussing Flow and how it allows the patient to easily access written and personalized healthcare plans, which they may share with whomever they desire. The digital platform therefore seems to embrace this dimension of person-centered care as well. Additionally, Picker Institute (n.d.) notes that accessible, high-quality information and clear communication should aid the patient in conducting self-care, to constitute person-centered care. This dimension is not widely discussed by the respondents, possibly due to its non-inclusion in the interview guide. However, the results indicate that the improved documentation when communicating through Flow can enhance self-care, e.g., the possibility for Capio's healthcare professionals to submit informative guides and personalized healthcare plans that remain in the chat. Many respondents also argued that the digital working methods enhance the possibility of patient empowerment, as they foster more active participation of the patient in their care (when compared with traditional physical primary care) and facilitate the patient's autonomy. This, in combination with digital platforms expanding the possibilities for a patient to use their preferred method of contacting healthcare, seems to align with the sixth dimension of Picker Institute (n.d.), stating that a patient should be allowed involvement in the decision-making regarding their own health and care, with respect to their preferences.

Lastly, the seventh and eighth dimensions will be discussed with regards to digitalization at Capio. The seventh dimension establishes that person-centered care should emphasize empathy and respect through a holistic approach, while also addressing the emotional aspects

and individually of the patient (Picker Institute, n.d.). The author argues that this dimension mostly concerns the nature of the care provided, which is beyond the scope of this study. However, with Capio's digi-physical approach, which includes digitally enabled asynchronous communication and physical visits, the results suggest that patients can initiate contact with primary care in their preferred manner, which might foster an environment where the dimension's components can be more thoroughly addressed. Moreover, multiple respondents discuss that digital working methods and platforms facilitate information sharing between different care providers, such as Capio's primary care and specialist care, whether the care is delivered digitally or physically. Using Flow, this is argued to seem intuitive based upon the previous reasoning in this subchapter. However, multiple respondents also discuss the RPAs and how they aid in facilitating information sharing, although the meeting itself with the patient may be physical. Furthermore, the eighth dimension of person-centered care emphasizes having attention to the physical and environmental needs of the patient, ensuring they are in a comfortable environment that preserves their dignity and privacy. With the asynchronous capabilities of Flow, such as digital forms, many respondents discussed the possibility of continuity of care (as outlined in the third dimension). Mainly, they highlighted how patients can start a form one day and complete it another day, at their convenience. This flexibility, enabled by digitalization, multiple respondents argue contributes to patients' emotional and physical comfort by allowing them to manage their care in a way that suits their personal needs in an environment they are comfortable with, such as in their home.

In the following subchapter, the digitalization initiatives will be compared to the definition provided in a Swedish healthcare environment.

5.2.2 Person-Centered Care in Sweden

In a Swedish context, person-centered care emphasizes the partnership that values mutual respect between healthcare professionals and the person seeking care, which includes listening to the patient's narrative, jointly planning treatment, and ensuring systematic documentation for continuity and quality that is always accessible to the patient (University of Gothenburg, n.d.). Furthermore, the person being cared for should be placed at the center, and the care should be based upon this person's narrative, their prerequisites, resources, and possible difficulties (Boström & Fischer Grönlund, n.d.).

The author argues that the outlined components somewhat overlap with either the results already discussed or with Picker Institute's eight dimensions. For instance, the care provided by Capio has been discussed as being delivered using its operating model, which derives from the medical needs and individual circumstances of the patient. This has many similarities to the full definition of person-centered care given by Boström and Fischer Grönlund (n.d.). The extent to which the type of care has been achieved is beyond the scope of this study, but the digitalization initiatives have, in various ways as argued by the respondents, allowed for enhanced possibilities of person-centered care. These enhanced possibilities include the increased ways of communicating between patient and primary care healthcare center (the transition from all-physical care to digi-physical care), the digital working methods aided by RPAs (which have allowed for proactivity and streamlined operations), increased availability for the patient (due to the digital platforms), and by providing increased documentation.

Many respondents emphasize the advantages for the patient of receiving more written healthcare data through Flow (such as Capio's healthcare professionals being able to

personalize healthcare plans and communicate them through text). Although this aligns with the structurally and systematically documentation outlined by University of Gothenburg (n.d.), multiple respondents also highlight the importance of 1177 in providing an aggregated view for the individual patient, across all instances of care and healthcare providers. The author argues that this implies that although the recent digitalization at Capio seems to have enhanced continuity and quality of documentation while granting their patients access to the same (through both Flow and the subsequent written electronic health records), further integration between 1177 and Flow could be made. As one respondent said it would be a "gamechanger" if a communication platform like Flow were able to interact directly with any of the region's electronic health records, an RPA between 1177 and Flow could allow for further digital working methods that could promote or enhance person-centered care.

Lastly, the results do not provide information regarding whether the patient's narrative is listened to or if the treatment is planned jointly between Capio and the patient. However, many respondents have discussed the digital forms in Flow, which may be sent to a patient prior to both a physical and digital visit, where a patient is asked to further elaborate on their narrative. Thereby, the digitalization implemented could be argued to support the principle of person-centered care. Regarding the jointly planning of treatment, that should be agreed between the patient and the respective autonomous healthcare center. However, both Flow and the proactive digital working methods seem to provide additional ways of receiving care at Capio, as compared to the prior all-physical care, which may support more options to allow for a satisfactory planning of care between both parties.

5.3 Conceptual Models and Theories

The following three subchapters will analyze the results using the theory of DI, TAM, and the NASSS framework. Capio seems to have a decentralized organizational structure where its managers and senior managers involved with digitalization, the respondents, generally do not impose direct control over their business units' digital initiatives. These three subchapters will therefore analyze how these managers and senior managers have leveraged the implemented digitalization within their decentralized structure.

5.3.1 Diffusion of Innovations

As presented in 2.3.1 Diffusion of Innovations, the theory of DI explains how new ideas spread via communication channels over time, among both individuals and organizations (Rogers, 1962). There are four main elements that influence how an innovation spreads: the innovation itself, communication channels, time, and the social system (Rogers, 2003). To evaluate how managers and senior managers at Capio have managed to diffuse digitalization initiatives across its decentralized primary care operations, many of which have been person-centered as discussed in 5.2 Utilizing Digitalization to Foster Person-Centered Care, it will be compared against DI.

Firstly, regarding the innovation itself. Rogers (1983) states that this element is further characterized by five distinct characteristics: relative advantage, compatibility, complexity, trialability, and observability.

According to Rogers (1983, p. 15), the relative advantage is "*the degree to which an innovation is perceived as better than the idea it supersedes*". Applied in a healthcare setting,

Dearing and Cox (2018) argue that this concerns how the innovation is perceived to be superior compared to current practice. The respondents, directly or indirectly, have unanimously emphasized how Capio's transition from all-physical care to a digi-physical care has offered a relative advantage for the patient, based upon their preferences. For instance, Flow was widely discussed as improving accessibility for the patients, enhancing internal triaging, and improving the continuity of care via asynchronous messaging and the Network feature. Moreover, Medrave, previously only used for quality measurement and statistics seems to have gained a clear relative advantage due to the integration of Flow using RPAs, aiding healthcare centers to proactively monitor and manage their patients.

Compatibility concerns "*the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters*" (Rogers, 1983, p. 15). In a healthcare setting, Dearing and Cox (2018) add that this also includes the way the innovation aligns with trying to accomplish the same goal. According to all respondents to various degrees, The Capio Model (i.e., Capio's Operating Model) seems to have played a significant role in ensuring the adoption of digital initiatives. The author argues The Capio Model itself, where all care is delivered based upon the medical needs and individual circumstances of the patient, is compatible with the digitalization initiatives. These initiatives include communicating using Flow, RPAs allowing for improved care and streamlining operations, and proactive digital working methods to decrease the responsibility placed on the patient to initiate contact, regardless of their medical condition. From this, the author concludes that the digitalization initiatives are consistent with The Capio Model and with the company's approach to delivering healthcare, which should facilitate the diffusion.

The spread of a healthcare innovation is also affected by the innovation's complexity, i.e., "*how easy the innovation is to understand and use*" (Dearing & Cox, 2018, p. 185). This characteristic has not been measured in this study, although multiple respondents discussed the importance of digital working methods in digitalization, rather than specific platforms, to minimize platform dependency. This seems to imply that if a certain platform must be changed, likely due to regulations, then the learning curve of using the new platform will be minimized, and thus the eventual complexity of the new platform will be mitigated. Rezai also directly emphasized "simplicity" when implementing new digital working methods, which could be argued to limit the perceived complexity for the healthcare professionals. Furthermore, the RPAs, at least those streamlining administrative tasks, are argued by the author to remove the possibility of complexity altogether, as the previous manual work is instead automated.

The fourth characteristic of an innovation concerns trialability, i.e., "*the degree to which an innovation may be experimented with on a limited basis*" (Rogers, 1983, p. 15). This means the ways a certain adoption decision can be reverted and managed in multiple stages (Dearing & Cox, 2018). Most of the respondents discussed the six-month pilot phase when initiating a new digital initiative, where certain business units volunteer to try out the innovation. Thereafter, the pilot is evaluated and then adapted, implemented, or abandoned. This implies that trialability is conducted, exemplified by a respondent when they discussed the usage of working groups with digital initiatives and how these allow for ideas to spread and develop further. Consequently, the author argues that digitalization seems to be experimented with and adjusted to some degree, although the data does not provide any detailed examples of digitalization's actual development.

The last characteristic of an innovation involves observability, i.e., "*the extent to which outcomes can be seen*" (Dearing & Cox, 2018, p. 185). Most respondents discuss how "successful" pilot projects are exemplified to other autonomous healthcare centers within Capio's primary care operations. By adopting this approach, the outcome of the specific innovation seems to be shared through ambassadors, which are either "enthusiasts" within Capio, such as the regional medical officers, or the pilot-phase participating business units which share their experiences across various internal gatherings and platforms. Thus, the outcomes of those digital initiatives endorsed by the regional medical officers or upper management team seem to spread throughout the decentralized organization, which may lead to wider adoption, given the autonomous healthcare centers' decision to adopt the innovation. This implies that observability exists for the digital initiatives when the ambassadors highlight their experiences of using the same "successful" digitalization, which should further facilitate its diffusion.

The second element on DI concerns the communication channels used, where Rogers (2003) presents the two major channels of mass media communication and interpersonal communication. When diffusing a digitalization initiative within Capio, it seems that both major channels are used. Firstly, many respondents discussed how the ambassadors use the intranet to outline the successful pilot projects, which the author deems as a mass media communication due to the definition given by both Rogers (2003) and Sundstrom (2016). One respondent also discussed specific internal webinars where innovations deemed successful are communicated. Rogers (2003) also states that this channel is often the most rapid and efficient way to inform potential adopters of a certain innovation, which could inform, e.g., the operating managers of the autonomous healthcare centers of an innovation. However, the respondents seem to imply that more diffusion happens through interpersonal

communication by ambassadors at conferences and through other meetings. Rogers (2003) argues that this form of communication channel is more effective in the persuasion to adopt a new idea, which should facilitate the diffusion. Lovejoy et al. (2009) also state that interpersonal communication is especially effective when delivered by a person of authority. The author argues that the managers and senior managers seem to hold some authority over their autonomous healthcare centers, although the data suggests this authority is not commonly enforced. Nevertheless, this element of DI suggests that if recommendations are given by those in authority, such as by managers or senior managers to implement a certain digital initiative, it is likely to facilitate its diffusion within the organization.

The third element of DI concerns time, which incorporates the innovation-decision process, the innovativeness and adopter categories, and the rate of adoption (Rogers, 1983). This element helps to understand how the digitalization initiatives at Capio are adopted over time, from initial awareness by the healthcare centers to widespread implementation.

The innovation decision-process is a mental process of an individual or decision-making entity regarding a certain innovation (Rogers, 1983). The author argues that when regarding digitalization initiatives at Capio, it includes the autonomous healthcare center gaining knowledge of the innovation through the communication channels described above and being persuaded to test the new digitalization due to the 'why' communicated by the ambassadors (as discussed by multiple respondents). Thereafter, the autonomous healthcare center themselves evaluates the applicability of the innovation to their specific healthcare center, which may result in the further adoption at Capio.

The innovativeness and adopter categories measure the relative speed with which an individual or entity adopts new ideas, compared to others in the same social system (Rogers, 1983). Many respondents have directly or indirectly discussed the five adopter categories shown in Figure 6, although they were not mentioned by the interviewer. For example, half the respondents mentioned that certain business units within its primary care operations are more prone to try out innovations, and they are therefore those most often contacted to initiate a pilot project. The author argues that this implies the categories of innovators (as the digitalization may have originated from any of those healthcare centers, which have then been funneled to the innovation team through Capio's regional medical officers), or early adopters, who are those eager to try out new digitalization derived elsewhere, such as from Pitch Day. Moreover, Bremberg directly implied that Early Adopters, which he stated in English in an interview conducted in Swedish, are those healthcare centers involved in a pilot phase, which then spread the message of a certain useful innovation. Bremberg also further elaborated on the remaining adopter categories shown in Figure 6, although not mentioning them by name: "[…] *Because we have some who are early on the train, some who catch on in the middle, and then there are always some laggards who almost never come along*". For clarity, Bremberg first stated "Early Adopters" in English, indirectly referencing the middle adopter categories in the quote above, which ended with the Swedish equivalent word of "laggards". Lastly, Meurling compared Capio's adoption process to a dancing scene from a 1970s movie and successfully incorporated the adopter categories outlined by Rogers (1983). She described how, initially, one person starts to dance, interpreted by the author as implementing new digitalization, which is first viewed by others as an oddity. Eventually, a few more people join in, and soon everyone wants to participate in the same dance, meaning implementing the same digitalization. This analogy suggests that Rogers DI accurately describes the diffusion at the case company.

According to theory, most innovations do not reach the "early majority" phase as they fail to diffuse because "opinion leaders" will have failed to adopt the innovation (Dearing & Cox, 2018; Rogers, 1983). At Capio, Olsson stated that certain medical "enthusiasts" act as a linkage between the autonomous healthcare center and the upper management, which the author interprets as the regional medical officers, in combination with the broader "working groups" involved in a pilot phase, outlined by Rezai. Within the case company, the author therefore argues that they are the opinion leaders of the digitalization initiatives, and whether they choose to adopt a certain digitalization initiative, it will affect whether the digitalization reaches the "early majority" phase. Thus, although many respondents acknowledge that the respective operating manager decides if a new initiative should be implemented, Capio seems to use opinion leaders to diffuse the innovation they have deemed applicable to deliver person-centered care. This implies that the successful diffusion of digitalization at Capio, given its decentralized structure, relies heavily upon the endorsement of these opinion leaders for the adoption in the autonomous healthcare centers.

The fourth and last element of DI is the social system, which involves "*a set of interrelated units that are engaged in joint problem solving to accomplish a common goal. The members or units of a social system may be individuals, informal groups, organizations, and/or subsystems*" (Rogers, 1983, p. 25). This broad definition includes social structures and norms which may affect the diffusion process of a certain technology (Rogers, 2003). For this study, the researcher defines the social system as the 'primary care operations of Capio'. Consequently, the last component of the third element of "time" was not addressed, as Rogers (1983) states it involves comparing the speed of adoption to other social systems, which is beyond the scope of this research. Understanding the specific social system in which digitalization is diffused, now defined, is crucial for comprehending the diffusion process.

The DI has aided in explaining how managers and senior managers have facilitated the diffusion of new digitalization within Capio's decentralized organization. Now, TAM will aid in further explaining how the managers and senior managers have influenced the actual usage of these innovations within their primary care operations.

5.3.2 Technology Acceptance Model

Figure 7 shows the components of TAM, and the author wants to emphasize that TAM is centered around the perceptions of a certain technology, rather than its objective features or quality. The model will help explain which perceptions influence both the acceptance and usage of healthcare technologies at the autonomous healthcare centers.

The external variables presented in Figure 7 are shown to influence both the PU and the PEU, through their direct impact on these two variables. The author argues that the aggregated empirical data seems to imply that two main variables constitute the external variables: Capio's decentralized organizational structure and the ambassadors promoting certain initiatives. This is motivated by the decentralization, which is argued to be a system characteristic that influences how easily, and effectively, new technologies can be implemented and utilized. Moreover, the ambassadors are argued to have social influence over the other healthcare professionals' perceptions of a certain technology. The external variables directly influence both PU and PEU and therefore indirectly affect the actual usage of a certain technology by an autonomous healthcare center. Furthermore, Bremberg seems to have aligned with the theory of external variables, PU, and PEU when implying that healthcare professionals themselves should elaborate on their experience of using a certain digitalization. More specifically, the respondent stated that ambassadors are better representatives for advocating for that specific tool (and in the process, their arguments likely

influence PU and PEU). Similar reasoning regarding ambassadors has been held by many respondents, as widely discussed in the previous subchapter.

Moreover, Davis (1989, p. 320) states that PU is "*the degree to which a person believes that using a particular system would enhance his or her job performance*". However, within Capio's primary care context, Holden and Karsh (2010) argue that PU should not concern the job productivity of the healthcare professional, but rather incorporate the perceived beliefs about usefulness in improving patient outcomes. This revised PU should therefore focus on the autonomous healthcare center's perceived ability to reduce medical errors, streamline its operations, maintain patient safety, and ensure efficient practice management (Holden & Karsh, 2010). Many examples of this have already been discussed above, such as Flow being a large part of Capio's digi-physical care (which is argued by respondents to improve accessibility for the patients), improve internal triaging (which structures the care based upon urgency and form of care), and enhanced continuity of care via asynchronous messaging and the Network feature (which is beneficial for the patient from both a person-centered perspective and form the perspective of the healthcare professional's ability to deliver proper care within the allocated time). Furthermore, the respondents provided other examples aligning with improved PU due to the recent digitalization. For example, multiple respondents discussed the time saved through efficient digital working methods, where more time can be devoted to a patient who, at least temporarily, needs it more. However, the parameters of medicinal errors and patient safety regarding digitalization have not been widely discussed by the respondents, but there are some examples. For instance, Meurling stated that RPAs mitigate the chance of a healthcare professional accidentally writing incorrect information, as the process of manually extracting and rewriting patient data is automated. But the author argues, based upon the organizational structuring of Capio, that the

autonomous healthcare centers should have the best knowledge of the suitability of a certain digital initiative for the care and safety of their patients. Additionally, when discussing which digital initiatives will be piloted, Rezai noted that "[…] *most often, the ideas that are realized are those where there has been an expressed need [from business unit(s)] of a certain feature*." This indicates a linkage between the initiated pilot projects, widely discussed in the previous subchapter, and the actual usage of a certain technology in an autonomous healthcare center.

Furthermore, PEU is defined as "*the degree to which a person believes that using a particular system would be free of effort*" (Davis, 1989, p. 320). In healthcare, given the high-pressure work and patient environment, technologies that are perceived by healthcare professionals to be easy to use and seamlessly integrate into existing workflows are more likely to be adopted (Holden & Karsh, 2010). The respondents have discussed various ways in which implemented digitalization has aligned with this. For example, RPAs result in fewer administrative tasks for the healthcare professional, and Network allows not only the patient to seamlessly move between different forms of care, but also integrates well into the current practices of using Flow. The author also argues that Network limits redundancy for Capio, which should improve PU as well. This is because it allows the patient to avoid having to repeat the reasoning for contacting Capio, which the author believes could include multiple follow-up questions from the healthcare professional to fully comprehend the patient's narrative, and these questions may have already been asked in a prior interaction (if Network had not been used). Additionally, Venkatesh et al. (2012) state that PEU includes having interfaces which are both user-friendly and require minimal training, as these should enhance user satisfaction and reduce the cognitive load. It seems that the recent digital initiatives at

Capio have also enhanced this, exemplified by Rezai when emphasizing that "simplicity" is advocated when designing digitalization.

The Attitude Toward Using a certain technology, as shown in Figure 7, involves the overall affective reaction of the individual(s), based upon PU and PEU (Davis et al., 1989). In the case study, the author argues that the "Attitude Toward Using" reflects the autonomous healthcare centers and their respective healthcare professionals' attitude toward integrating a certain proposed digital initiative into their practices. Davis et al. (1989) further state that this, combined with PU, affects the BI, which then directly influences the Actual System Use of certain technology. In the case study, the Actual System Use concerns all the separate digitalization initiatives elaborated upon by the respondents that are implemented within Capio's primary care operations, ranging from the RPAs reducing administrative tasks, Flow (including its separate components such as Network), and new digital working methods.

These new digital working methods may require certain technology to function as intended, exemplified with the RPA between Flow and Medrave, but it is argued by the author that the healthcare centers may perceive a positive effect on patient outcome as a result, which leads to their Actual System Use of a certain digital initiative. However, PU and PEU have merely been discussed with regards to the digitalization initiatives and how they may be perceived, but not the autonomous healthcare centers' actual perceptions of a certain technology. Holden and Karsh (2010) suggest that managers and senior managers may benefit from using BEM to collect qualitative data from potential users through open-ended questions when designing their upcoming technologies. Using BEM, the specific beliefs that influence the potential users may be identified, which could improve the technology's Actual System Use further (Holden & Karsh, 2010).

Now, the discussion will be concluded with the NASSS framework, as it provides insights into the complexities that the managers and senior managers may have encountered, and navigated, in the diffusion of their digitalization initiatives.

5.3.3 The NASSS Framework

There are many complexities involved in the adoption, scaling, and sustaining of healthcare technologies, and the NASSS framework can assist in understanding and evaluating these. The seven domains: condition, technology, value proposition, adopter system, organization, the wider context, and continuous embedding and adaptation over time, can also be further classified as either simple, complicated, or complex (Greenhalgh & Abimbola, 2019). The NASSS framework should provide some insights into the complexities that managers and senior managers at Capio have had to navigate when integrating digitalization into their decentralized primary care operations. The analyzed data, derived using the framework, may also be used to design a new healthcare technology and when planning for its implementation (Greenhalgh et al., 2017).

As illustrated in Figure 8, the first domain concerns the condition being targeted by the technology. There is a wide range of possible illnesses within primary care, each of which could be analyzed through the NASSS framework. The condition could therefore be argued to be any or all the medical reasons a patient seeks primary care. In line with The Healthcare Act, as presented in 1.4.1 Swedish Primary Care, primary care involves treatment of the most common health conditions and illnesses, provided it does not require specialized medical or technical resources, or other special skills. Although neither sociocultural factors nor comorbidities were discussed with the respondents, primary care should include anyone seeking care at that specific healthcare center, as mandated by The Healthcare Act. This

highlights the possible scope of conditions and the complexities involved when managing a healthcare provider like Capio. However, according to multiple respondents, patients with chronic disease(s) amount to almost half of Sweden's population and most of them are in regular contact with primary care. This could mean that, despite visits possibly being many in numbers, the number of unique conditions being targeted by the digitalization might be limited. This potential limitation suggests that some aspects of the care delivery could be seen as less complex. However, due to the absence of discussions on comorbidities in the empirical data, definitive conclusions cannot be drawn. Nevertheless, if, e.g., specialized care is required, the healthcare provider should refer the patient to that level of care within the Swedish healthcare system. For these reasons, the author argues the domain is 'complicated'. This complexity, alongside the complexity levels of the other domains presented below, will affect the likelihood of sustained adoption of the technology. Moreover, understanding these levels of complexity will aid in understanding the challenges the managers and senior managers have addressed during the diffusion of their digitalization initiatives within Swedish primary care.

Regarding the second domain, technology, the respondents have discussed various digitalization initiatives. The most prominent ones, as discussed earlier in this chapter, include the digi-physical approach (supported by the communication platform Flow and its associated features), the usage of RPAs (to synchronize Flow with Medrave), monitoring and proactively contacting patients with chronic illnesses, proactive prescription renewals, and the digital working methods involved in all of these. Isaksson explained that whenever possible, Capio prefers to procure digital tools and services, rather than developing them in-house. Although the procurement could be argued to increase the complexity of using the technology, the discussed digital working methods limit the platform dependence.

Additionally, while the reliance on RPAs seems to bridge the integration gap between some platforms, as widely discussed by the respondents, it also reflects the fragmentation of digital tools across Swedish primary care operations. For example, Bremberg stated that it would be a "*gamechanger*" if it became possible to directly interact with the electronic health records using a communication platform like Flow, indicating this continued fragmentation. Conversely, simplicity in the digitalization's design, as presented by Rezai, is argued by the author to limit the levels of complexity. Therefore, the domain is deemed 'complicated'.

Capio's digital initiatives seem to offer a clear value proposition, the third domain, both upstream (its healthcare professionals) and downstream (its patients). The digi-physical approach has been argued by all respondents to deliver care tailored to patients' medical needs and individual circumstances, in line with Capio's Operating Model. For healthcare professionals, the proactive digital working methods free up time to focus on more urgent cases, and RPAs automate monotonous administrative tasks which also streamline operations and limit the risk of errors. Efficiency can also be argued to be increased for both upstream and downstream, due to the seamless transitions using Network. The domain is argued to be 'simple'.

The adopter system, the fourth domain, includes healthcare professionals, patients, and other caregivers. Many respondents discuss the significant autonomy of each healthcare center, resulting in varying adoption rates for digital innovations. Neither practice changes nor job security have been discussed by the respondents with regards to acceptance by the healthcare professionals of the digital initiatives, but it has rather been discussed that it is most often up to each operating manager to decide whether a certain initiative should be implemented. As the ability to retrieve physical primary care remains at Capio, the patient adoption aspect of

the domain, i.e., the ability and willingness to use the digital initiatives, is argued to be limited. The written documentation also allows for greater inclusion of other caregivers, if desired. With an asterisk regarding the autonomy of the healthcare centers which has therefore not been discussed by the respondents, the author argues that the data implies 'simple'.

The fifth domain, the organization, concerns Capio's readiness and capacity to innovate and implement technology-supported change. External innovations include ideas derived from Pitch Day, and internal digitalization initiatives arise from either the business units themselves, or from managers actively involved with innovation. The implementation is funneled through the ambassadors (widely discussed in 5.3.1 Diffusion of Innovations), and then it is most often up to the operating managers to decide whether to implement a certain digitalization. The same asterisk as above applies due to the autonomy of the healthcare centers, however, given that the operating managers have a good understanding of whether a certain digital initiative aligns with their capabilities to adopt the same, such as if it aligns with current working methods, the domain is argued to be 'simple'. If many changes are required, to align with the new working methods or platforms, the domain could be both 'complicated' or 'complex'.

The sixth domain, the wider context, is where many complexities may be present. Capio operates within Sweden's publicly funded healthcare system, subject to various regional differences and regulations. Although the respondents did not discuss or mention the regulatory complexities in-depth, the author argues that the main underlying reason for implementing digital working methods to limit platform dependency is to comply with laws and regulations. And this limiting of platform dependency was widely. Additionally, the

author suggests that complexities are somewhat mitigated through the initiated pilot projects, where a specific digitalization initiative could be evaluated for its potential to be scaled up for widespread adoption. However, the long-term sustainability of the wider context is beyond the scope of this thesis, and therefore, the domain complexity could not be classified by the author.

The seventh and last domain concerns the continuous embedding and adaptation over time. The pilot projects seem to allow for the digitalization to be refined and abandoned before its potential implementation across Capio's primary care operations, which lowers the complexities. Also, the responsiveness of the company Doctrin in adapting Flow to certain desired digital working methods was also discussed by multiple respondents, most notably the Network feature. However, the author argues that even if a digital working method like seamlessly transitioning patients could be useful to, e.g., patients, resulting in widespread adoption, the possibilities to tailor a platform like Flow could also increase the complexities. This is argued because if regulations are enforced that stop the tailored platform from being used, this would also result in an inability to use the digital working method. The domain is therefore argued to be 'complicated'.

In summary, the digitalization initiatives, as analyzed through the NASSS framework, reveal varying levels of complexities across the domains. Greenhalgh and Abimbola (2019) state that the more complexity in each respective domain, ranging from simple to complex, the less likely the healthcare technology will achieve a sustained adoption. When possible, the author has argued for each domain complexity with regards to the implemented digitalization, and these mostly indicate moderate complexities involved. However, it is important to note that the respondents have likely reported the "successful" digital initiatives which have not, due to

various reasons, been non-adopted or abandoned. There might therefore be more complexities involved than what the data indicates, especially in the second and fifth domains. Either way, the provided analysis should have helped to better understand the complexities that managers and senior managers have experienced when trying to integrate digitalization into Capio's primary care operations.

6. CONCLUSION

This chapter answers the research question, summarizes the key insights, and concludes with a discussion of the study's implications and recommendations for future research.

6.1 Answering the Research Question

The Swedish healthcare system is restructuring towards primary care, which should be facilitated by digitalization and have an emphasis on person-centered care. However, there is insufficient research on digitalization being used to foster person-centered care. Through a qualitative single case study of Capio, an actor with a notable market share within Swedish primary care, this study has aimed to fill that research gap. The research question is: "*How have managers and senior managers within Swedish primary care leveraged digitalization to foster person-centered care?*"

Firstly, Capio has leveraged digitalization to foster person-centered care by implementing a digi-physical approach, transitioning away from their traditional all-physical operations. While the managers and senior managers emphasize the importance of using digital working methods to limit platform dependency, the communication platform Flow seems to have been central in implementing the organization's digi-physical approach. Flow includes both Capio Go, its all-digital healthcare center, and further allows each healthcare center to conduct their primary care digitally. Flow's Network feature has also allowed for seamless patient transitions between different healthcare centers. Moreover, Flow has allowed for a proactive working method, as the respective healthcare center are able to obtain relevant information about patients before their visit, whether digital or physical, through digital forms.

Secondly, the RPAs have been utilized to streamline administrative tasks and synchronize platforms. The respondents argue that the automation allows for operational efficiencies, which provides the healthcare professionals additional working time with other patients. Furthermore, the automated synchronizing of platforms, mostly exemplified through the integration between Flow and Medrave (a quality statistics platform) has allowed for proactive digital working methods in Swedish primary care. This includes the healthcare center initiating contact with a patient before its regular visit, such as booking annual appointments with patients having chronic disease(s), or proactively renewing patients' medical prescriptions, which may eliminate the need for a patient's digital or physical visit altogether.

However, Capio is a decentralized organization with autonomous healthcare centers. The digitalization outlined above seems to mostly have been diffused through ambassadors, rather than directly by its managers or senior managers. This means that it is not the managers or senior managers that use the digitalization that fosters person-centered care, but they rather promote certain digital initiatives to the autonomous healthcare centers through the ambassadors. Thereafter, it seems to be up to the respective operating manager to decide whether they should implement a certain initiative at their healthcare center, based upon their perceived value and relevance to their specific needs. The ambassadors are the regional medical officers and the healthcare centers that have been eager to participate in a pilot project of a new digital initiative. Moreover, it seems that if a pilot project is deemed successful, the managers and senior managers will advocate for the ambassadors to share their experience of the new digital initiative with additional healthcare centers through various forums, with an emphasis on them explaining the 'why' behind their possible endorsement. Most innovations do not reach the adopter category "early majority", i.e., wide-

scale adoption, as they will have failed to diffuse because opinion leaders have not adopted the innovation (Dearing & Cox, 2018; Rogers, 1983). This case study suggests that the opinion leaders are the ambassadors of certain digital initiatives, indicating their importance in diffusing digitalization. The author therefore concludes that although many respondents acknowledge that the respective operating manager ultimately decides if a new initiative should be implemented, the managers and senior managers use opinion leaders to diffuse digitalization they have deemed applicable to deliver the desired person-centered care.

Moreover, the findings correspond well with TAM in a healthcare context, as PU is stated to regard improving patient outcomes, and the PEU concerns the perceived ease-of-use technologies which seamlessly integrate into existing workflows (Holden & Karsh, 2010). Capio's digital initiatives, such as its digi-physical approach supported by Flow, streamlined operations due to RPAs, and the facilitation of proactive digital working methods when using RPAs, may have enhanced its perceived usefulness. Additionally, the digitalization initiatives may provide a perceived ease of use, as the RPAs seem to result in fewer administrative tasks, Network integrates well into the current practices of using Flow, and simplicity is advocated when designing digitalization. Davis et al. (1989) state that the Actual System Use of a certain technology is affected by its PU and PEU. However, Holden and Karsh (2010) suggest that managers and senior managers may benefit from using BEM when designing their technologies. Practically, this means collecting qualitative data from potential users through open-ended questions, to identify the specific beliefs that influence their perception, which may improve Actual System Use further (Holden & Karsh, 2010).

Furthermore, the NASSS framework has revealed varying levels of complexities involved with implementing digitalization at Capio. After the analysis of each of the seven domains,

the author also argued, when possible, for the complexity level of each one. It is stated there mostly seems to be moderate complexities involved, which is the mid-level according to Greenhalgh and Abimbola (2019). The same framework states that when more complexity is involved, the less likely the healthcare technology will achieve sustained adoption. Consequently, the theory supports that the implemented digitalization has experienced some complexities in its adoption, scaling, and sustained usage, which may aid in better understanding how managers and senior managers have managed to utilize digitalization across Capio's primary care operations.

The digitalization implemented within Capio's primary care, most notably those allowing for the digi-physical approach and the various RPAs, has enhanced person-centered care. This is as these have improved documentation (allowing for enhanced self-care and improved involvement of a patient's support network), improved continuity of care (through seamless transitions), and increased availability (due to both extended opening hours and asynchronous communication). All of these align with the eight dimensions of person-centered care presented by Picker Institute (n.d.). Although there are some person-centered aspects of digitalization which have been more difficult to evaluate based upon the results, the initiatives are argued to support Capio's Operating Model, which states that all care should derive from the medical needs and individual circumstances of the patient. The latter aligns well with person-centered care in a Swedish context. However, all respondents emphasized that digitalization should rather be seen as a facilitator to deliver the desired care, rather than an end goal by itself. Either way, the author argues the utilized digitalization has fostered person-centered care.

In summary, although there are some constraints to the results as discussed in 3.7 Limitations, the comprehensive single case study of Capio provides insights into how managers and senior managers within Swedish primary care have leveraged digitalization to foster person-centered care. Capio is a major actor in Swedish primary care, and as exemplified above, they have utilized various person-centered digitalization initiatives to deliver its primary care.

6.2 Implications

The following two subchapters outlines the practical and theoretical implications of the study.

6.2.1 Practical Implications

This research suggests that digitalization is being utilized to enhance person-centered care, showing practical benefits within Swedish primary care through many examples. Additionally, the data suggests digitalization should be viewed as a tool to facilitate person-centered care, rather than being its own purpose. Consequently, this research contributes to the wider theoretical discourse on the usage of digitalization in healthcare and practically demonstrates its utility in delivering person-centered care, potentially influencing both practitioners and policymakers. This research also supports prior research on utilizing digitalization to deliver person-centered care, particularly within primary care.

Moreover, this study provides a practical guide for practitioners on how to utilize DI within a decentralized healthcare organization. It underscores the importance of effectively engaging early adopters and leveraging opinion leaders to promote and diffuse digitalization to achieve wide-scale adoption, as they can demonstrate practical benefits through their firsthand

experiences. Consequently, this strategy could likely be implemented by similar decentralized healthcare organizations to encourage the adoption of digitalization.

The NASSS analysis also provides practitioners with insights into the current landscape of healthcare technologies in a Swedish primary care context. These insights can be used when designing new healthcare technologies and when planning their implementation. This should aid practitioners in navigating the complexities identified using the NASSS framework.

Although this study focuses on Swedish primary care through a case study, the findings may be generalizable to other organizations, industries, and geographical contexts with similar political, economic, and socio-cultural structures. The principles of leveraging digitalization to enhance specific objectives and using opinion leaders for its diffusion might be applied broadly, although some adaptations to local and industry-specific requirements may be necessary. This potential generalizability indicates that the strategies and insights gained from this research can be valuable for a wider audience and offer a broader societal benefit. For example, this may include insights for managers of domestic and international primary care organizations. Moreover, it could provide valuable information for policymakers evaluating whether to implement certain regulations, such as requiring the usage of certain digital communication platforms or removing barriers to synchronize certain digital platforms. Ultimately, as stated by one respondent, “care is care”, and this care affects many. By exemplifying digitalization leveraged in Swedish primary care to foster person-centered care, the form of care being advocated for by the Swedish government and SALAR, a broader societal benefit is also anticipated, if the same initiatives can be adopted and successfully utilized by other practitioners.

6.2.2 Theoretical Implications

This study reinforces the role of opinion leaders as crucial when diffusing innovations in a healthcare context, which provides additional empirical support to existing literature, such as Dearing and Cox (2018). Moreover, the study both validates and contributes to TAM in the same context. The Actual Use of a technology in an autonomous healthcare center at Capio seems to be influenced by the PU and PEU of these technologies. The implementation of the digi-physical approach and RPAs has enhanced patient outcomes and streamlined operations, aligning with the PU aspect of TAM. Furthermore, the respondents' emphasis on simplicity to achieve PEU also aligns with TAM. However, the expressed need from healthcare professionals for certain digital features seems to influence their actual usage of the same, which further highlights TAM's applicability in understanding digitalization acceptance in healthcare. This seems to align with the TAM adjustments proposed by Holden and Karsh (2010), which states that using BEM could improve healthcare technologies' Actual System Usage by collecting qualitative data from its potential users to better understand their beliefs.

Additionally, the application of the NASSS framework reveals the varying levels of complexity that managers and senior managers in Swedish primary care may have encountered, and managed, during their diffusion of Capio's digitalization initiatives. This contributes to the theoretical understanding of how complexity affects the sustained adoption of technology-supported healthcare innovations. Although the NASSS framework has been widely used to understand and evaluate NASSS in various medical fields, its publication in 2017 is relatively recent. This research has therefore contributed to a more comprehensive understanding of its utility in primary care.

In summary, this study provides guidance to the practical utilization of digitalization to enhance person-centered care, while underscoring the importance of viewing digitalization as a tool rather than an end goal. The research also reinforces the crucial role of opinion leaders in the DI theory, validates and extends upon TAM in a healthcare context, and provides valuable insights into managing complexity using the NASSS framework. This contributes to a broader theoretical understanding for researchers and applicability for practitioners.

6.3 Future Research

To better understand how digitalization can be utilized by managers and senior managers in primary care to foster person-centered care, future research could address both patients' and frontline medical professionals' perspectives. This would likely provide a more nuanced understanding of how digitalization can be leveraged and would further elaborate on its effects on those unanswered components of person-centered care, i.e., patient interactions and treatment effectiveness. Moreover, conducting similar research through multiple-case studies in Swedish primary care, other healthcare sectors, or in other countries, may reveal contextual differences and similarities that impact the implementation and outcome of certain digitalization initiatives. It may also be beneficial to conduct longitudinal studies on digitalization initiatives to determine and possibly quantify the long-term effects of certain initiatives being used to deliver person-centered care.

Finally, the author identified a lack of research on the effectiveness of leveraging digital communication channels, such as video calls, to persuade individuals or organizations to diffuse a certain innovation. Future studies in this area could provide valuable insights and guidelines for both practitioners and researchers.

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APPENDICES

This chapter includes the thesis' appendices. Appendix A contains the interview guide used during the semi-structured interviews, Appendix B provides a transcription with one of the interviewees, and Appendix C outlines the identified codes and themes from the thematic analysis.

Appendix A: Interview Guide

This appendix presents two versions of the same interview guide used during the semi-structured interviews. Appendix A1 contains the original Swedish version, while Appendix A2 shows an English translation. The translation is made by the author.

Appendix A1: Interview Guide, in Swedish

Introduktion

- Ni får gärna börja med att introducera er själv och era huvudsakliga arbetsuppgifter idag.
- Upplever ni digitalisering som betydelsefullt för Capio idag? Kan ni ge exempel på engagemang ni haft inom området som styrker detta?

Personcentrerad vård: definition och främjande

Kärnan i denna studie handlar specifikt om digitalisering och dess koppling till person-centrerad vård. Därför är det viktigt att vi har en gemensam förståelse för dessa begrepp.

- Upplever ni att Capio har någon exakt definition vad personcentrerad vård är? Och om inte, hur skulle ni själva definiera begreppet?

Definitionen av Boström och Fischer Grönlund (u.å.) [Boström and Fisher Grönlund (n.d.)] presenterades.

- Vad upplever ni att Capio haft för initiativ inom primärvård för att främja personcentrerad vård?

Digitalisering: definition och dess tillämpning

Skiftas fokus till digitalisering är en vanlig definition att det både omfattar övergången från analog till digitalt format och den bredare IT-integrationen inom diverse organisationer och dess processer. *Detta överensstämmer med definitionen från Regeringskansliet (2016) [Government Offices of Sweden (2016)].*

- Hur har Capio tillämpat digitalisering och på vilka sätt har detta underlättat personcentrerad vård?

Om Flow nämnts

- Vänligen berätta mer om Flow.
- Nyttjar Capio andra former av digitalisering förutom Flowplattformen för att främja personcentrerad vård? Isåfall, vilka är dessa och kan ni beskriva deras funktionalitet och påverkan?

Om Flow ej nämnts

- Hur centralt är Flow i Capios digitaliseringsarbete?
- Nyttjar Capio andra former av digitalisering förutom Flowplattformen för att främja personcentrerad vård? Isåfall, vilka är dessa och kan ni beskriva deras funktionalitet och påverkan?

Digitaliseringsinitiativ och vidareutvecklingen av dessa

- Inom Närsjukvård, hur skulle ni säga att dessa plattformar och andra digitala initiativ förankras och integreras?
- Vänligen exemplifiera hur ett nytt digitalt initiativ på Capio föranleds. Hur ser processen ut och vilka är övervägandena bakom?
    - Hur uppstod den ursprungliga idén bakom detta beslut, och vem eller vilka var dem centrala personerna involverade i dess utveckling och implementering?
- Baserat på er erfarenhet med att vidareutveckla digitala initiativ, kan ni belysa några betydande framgångar eller utmaningar?

Det verkar som att digitaliseringsinitiativ på Capio fokuserar mer på digitala arbetssätt snarare än specifika plattformar. Även om digitala verktyg som Flow av vissa anses vara betydande i digitaliseringsarbetet, verkar andra snarare se dem som ett av flera sätt att uppnå önskad digitalisering.

- Vilken roll upplever ni att digitala verktyg som Flow har i Capios digitaliseringsarbete?
- Anser ni att en betoning på digitala arbetssätt över specifika plattformar är fördelaktigt för företagets digitaliseringsarbete? Varför?

Om ja: använd digitala arbetssätt nedan.

Om nej: använd Flow nedan.

Personcentrerade digitala initiativ och dess påverkan

- Hur säkerställer Capios digitala arbetssätt(/Flow) att patienters värderingar, preferenser och behov både belyses och respekteras?

- Ökar de digitala arbetssätten(/Flow) medvetenheten kring värdet av personcentrerade lösningar? Alltså, tror ni patienter och personal förstår varför Capio tillämpar ett digifysiskt arbetssätt?
- Baserat på nuvarande digitala initiativ på Capio, kan ni beskriva ifall både patienter och personal får vägledning och stöttning för att optimera dess använda av dessa digitala verktyg? På vilka sätt?
- Förbättrar de digitala initiativen patienternas tillgång till vård? Hur då?

- Tror ni att de digitala arbetssätten(/Flow) bidrar till patienters emotionella och fysiska välbefinnande? På vilka sätt?
- Tror ni att användandet av de digitala arbetssätten(/Flow) leder till patienter får en bättre överblick över sin egen hälsa?
  - *Om ja:* har initiativen dessutom lett till att patienten får bättre kontroll över sin egen hälsa? På vilka sätt?
  - *Oavsett om ja eller nej:* har dessa initiativ underlättat för att inkludera patienters vänner och familj, om så önskas? Hur då?
- Hur har digitaliseringen underlättat samordningen av vård, och övergången mellan vårdenheter, inom Capio?
- Baserat på er expertis, hur har Capios digitalisering påverkat kvaliteten på tillhandahållen vård?

<u>Avslutning</u>

- Slutligen, finns det något mer ni vill tillägga som anses extra viktigt för förståelsen av Capios digitaliseringsarbete och hur detta främjar personcentrerad vård?

Appendix A2: Interview Guide, in English

Introduction

- Please begin by introducing yourself, detailing your current role and main responsibilities at Capio.
- Do you perceive digitalization to be significant at Capio? If so, could you provide examples of initiatives or projects where you have been involved that highlight its impact?

Person-Centered Care: Definition and Practices

The essence of this study revolves around the interplay between digitalization and person-centered care. Therefore, it is important that have a common understanding of these concepts.

- Does Capio adhere to a specific definition of person-centered care? And if not, could you provide your interpretation of the concept?

The definition by Boström and Fischer Grönlund (n.d.) was presented.

- What initiatives has Capio undertaken in primary care to advance the practice of person-centered care?

Digitalization: Definition and Applications

Shifting focus to digitalization, a common definition is that it encompasses both the transition from analog to digital, and the deeper integration of IT into operational activities. *This aligns with the definition by Government Offices of Sweden (2016)*.

- How has Capio implemented digitalization, and in what ways has this supported the provision of person-centered care?

If Flow Has Been Mentioned

- Please elaborate more on Flow.
- Does Capio utilize digitalization methods beyond the Flow platform in fostering person-centered care? If so, what are these methods, and could you describe their function and impact?

If Flow Has Not Been Mentioned

- How central is Flow in Capio's digitalization strategy?
- Does Capio utilize any other digitalization methods in fostering person-centered care? If so, what are these methods, and could you describe their function and impact?

<u>Advancement, Development, and Integration of Digital Initiatives</u>

- How have these platforms and other digital initiatives been embedded throughout Capio Proximity Care's operations?
- Could you outline the process and considerations that led to the adoption and evolution of a new digital initiative at Capio?
    - How were the initial idea originated, and who were the central figures involved in its development and implementation?
- Based upon your experiences when working with the digital initiative's ongoing development, have you encountered any significant successes or challenges?

It appears that at Capio, digitalization efforts are more focused on adopting digital working methods than committing to specific platforms. While some consider digital tools like Flow to significantly contribute to digitalization, others see them as just one of the various means to reach the company's digitalization objectives.

- How do you perceive the role of digital tools like Flow in Capio's broader digitalization strategy? Please elaborate.
- In your opinion, is an emphasis on digital working methods over specific platforms beneficial for the company's digitalization? Why do you think so?

If yes: use digital working methods below.

If no: use Flow below.

<u>Person-Centered Digital Initiatives and Their Impact</u>

- How do Capio's digital working methods(/Flow), ensure that the patient values, preferences, and needs are highlighted and respected?
    - Do the digital working methods(/Flow) raise awareness about the importance of person-centered solutions? I.e., Capio's patients and staff understand the rationale behind Capio's digi-physical approach?
    - In the context of the ongoing digital initiatives at Capio, could you describe if both staff and patients receive guidance and support to optimize their usage of these digital tools? How?
    - Do the digital initiatives improve patients' access to care? How?
- Do you believe digital working methods(/Flow) contribute to patients' emotional and physical well-being? Why?

- Do you believe Capio's digital initiatives provide patients with a clearer overview of their own health?
    - *If yes:* have the initiatives also enabled patients in having greater control of their own health? In what ways?
    - *Regardless of whether yes or no:* have these initiatives facilitated the inclusion of patients' friends and family in the care, when desired? How?
- How has digitalization facilitated and streamlined the coordination of, and the transition between, care units within Capio?
- Based upon your expertise, could you please elaborate how Capio's digitalization have impacted the quality of its provided care?

Final Thoughts

- To conclude, are there any additional insights you can highlight that are crucial in understanding Capio's digitalization strategies and how these have fostered person-centered care?

Appendix B: Transcriptions

According to common practice when qualitative research has been conducted, at least one transcript should be included. Thus, this appendix presents two versions of the same transcription of the interview between Bremberg and the author. Appendix B1 contains the original transcript, while Appendix B2 shows an English translation. The translation is made by the author.

Appendix B1: Bremberg, in Swedish

David Törnered

Härligt, men då tänker jag att vi kör igång.

Stefan Bremberg

Låter bra.

David Törnered

Ni får gärna börja med att introducera er själv och era huvudsakliga arbetsuppgifter ni har idag.

Stefan Bremberg

Ja, Stefan Bremberg heter jag. Jag är specialist i allmänmedicin sen, vad blir det nu, 20, snart 30 år tillbaka och har jobbat i Capio sedan början av 2000. Och de senaste 12 åren har jag haft uppdraget som chefläkare och medicinsk chef i affärsområdet Närsjukvård.

Så att jag jobbar med patientsäkerhetsfrågor, avvikelser, utvecklingen av den medicinska agendan tillsammans med alla våra övriga medarbetare som är involverade i detta. Jag sitter även med i affärsområdets ledning och ledningsgruppen.

David Törnered

Jättespännande! Vi kommer nog att beröra många av dem här områdena idag skulle jag tro.

Men kärnan i den här studien handlar ju om digitalisering och specifikt dess koppling till personcentrerad vård. Jag tänkte därför först att vi tillsammans skulle försöka definiera vad dessa två begreppen är.

Om vi börjar med personcentrerad vård, upplever ni att Capios har någon exakt definition av vad detta är...? Och eftersom jag tror detta saknas, hur skulle ni själva definiera begreppet?

Stefan Bremberg

Jag brukar välja att prata om att vi måste sätta patienten i centrum, personcentrerad vård eller patientfokuserad vård.

Det är ju patientens perspektiv som vi måste försöka ta i så stor utsträckning som möjligt, utan att vi som sjukvårdspersonal, hälso- och sjukvårdspersonal, försöker omtolka eller tolka vad patienten säger. Visst, vi måste förstå vad patienten säger, men det är ju patientens perspektiv som är det viktiga och då är det varje enskild patients perspektiv som vi behöver få in – patientens farhågor, förväntningar, föreställningar.

Sen pratas det, i samhället i stort, väldigt mycket om personcentrerad och patientfokuserad vård. Men då ser jag ju det som att vi ofta tolkar var en större grupp utav patienter tycker. Men för mig är ju den enskilda patienten det viktiga att ha i fokus i varje specifikt möte. Och det är någonting jag tycker vi jobbar väldigt mycket utifrån på Capio.

David Törnered

Någonting som är väldigt närbesläktat med det du sade är att man pratar om patientens

förutsättningar, dess resurser, behov, hinder, upplevelser. Och det lät som att du var inne på mycket detsamma.

Stefan Bremberg

Ja, och i vårt sätt att arbeta – Capiomodellen – bygger ju på att vi tittar och försöker ha koll på vad det är för patienter som är listade på vår vårdcentral, vad de har för medicinska behov, vad deras förutsättningar är. Så att det är ju liksom där vi börjar vår resa, vårt arbete.

David Törnered

Just det. Capiomodellen kommer nog nämnas snart igen, men om vi istället riktar in oss mer specifikt på digitalisering och då mer mot primärvården… Här upplever jag att definitionen ofta är tvådelad, att det dels handlar om digitalisering där man övergår från analog information till digitalt format. Det här ”digitization, digitalization”. Men även de diverse typer av IT stöd som integreras i samhällsfunktioner. Hur skulle ni säga att Capio tillämpat digitaliseringen och på vilket sätt har detta främjat personcentrerad vård?

Stefan Bremberg

Vi var ju tidigt ute och började med det som vi kallar för Capio Go. Detta är ju nu vår digitala region, men som egentligen startade lite mer enkelt, där vi skulle vara ett alternativ till Kry och Min Doktor vilka snabbt seglade upp på nätläkarmarknaden. Men där vi ville hålla det internt i våra verksamheter och patientnära till våra patienter.

Där var vi ju ett antal entusiaster som var med och drog i det här arbetet med utvecklingen utav Capio Go, tillsammans med Doctrin. Så det var ju en del utav digitaliseringen, och sen har vi ju liksom spunnit vidare på detta med att jobba mer med vår Flowplattform.

Då byggde det ju på att patienten tog kontakt med oss, men sen nästa steg är ju att vi tar kontakt med våra patienter. Dem vårdinitierade kontakterna ger förutsättningar för en mer integrerad vård, tillsammans med patienten, där vi hjälper till att stötta och håller koll. Så det är ju ett sätt att göra vården mer personcentrerad.

Den andra vägen är att patienten tar kontakt, och då är det patienten som hela tiden tar kontakt med oss. Men vi kan ju vara med och hjälpa till att stötta patienterna genom att vara proaktiva och ta våra kontakter. Så där är ju den delen.

Vi har även samverkan mellan olika specialiteter och har byggt lösningar där vi kan, mer eller mindre, sömlöst flytta patienten och låta patienten flyta mellan primärvård och olika former utav specialistvård. Det är ju ytterligare ett sätt att göra det enklare för patienterna och så, sen har vi ju dem andra mer tekniska bitarna som ligger i bakgrunden. Jag menar du nämnde digitaliseringen, och ja, när vi gick från pappersjournaler till elektroniska journaler. Det var ju också en form utav digitalisering, men det var ju egentligen bara att vi digitaliserade pappersrullen. Det var stort i sig på den tiden, men det är egentligen ingen stor digitalisering i dagens perspektiv.

Det är många olika delar i detta, vad man gör, och sen bygger vi ju de här AI-liknande robotarna som plockar information från ett system och för över till ett annat system, på ett automatiserat och väldigt strukturerat sätt. Istället för att vi behöver göra det för hand. Och det är klart det kommer i slutändan kommer patienterna till del, men egentligen är det ju mer ett verktyg att underlätta för medarbetarna att göra dessa enkla och repetitiva moment, smidigt och bra.

David Törnered

Men är inte det också en form av digitalisering, alltså dem här robotarna, att man då sparar in på dem här arbetssätten som har inneburit mer att man haft ett system där man behövt klippa och klistra, och någon kanske gör det via Excel, någon gör det via Postit-lapp fast man egentligen kanske inte borde, och att data då istället skickas över automatiskt då, med hjälp av robotarna. Är inte det också en typ av digitalisering?

Stefan Bremberg

Ja. Visst är det.

David Törnered

Superspännande. Vi kommer nog komma tillbaka till mycket av det här.

Men jag tänkte på den här produktiviteten som du nämnde, kan du ge något exempel på där det först gick från att patienten initierade kontakten, till att nu ha blivit mer proaktiv…? Kan du ge exempel på några proaktiva moment som Capio gör idag?

Stefan Bremberg

Ja, ett exempel kan ju vara att vi tar kontakt med patienterna inför planerade kontroller. Det kan vara halvårs kontroller, eller i alla fall uppföljningsbesök, som är planerade. Att man sagt till patienten att ”vi ses igen om 6 månader, 12 månader”. Och inför en sådan kontakt så skickar man istället ut ett enkelt formulär. Man kan då också ställa frågor kring de aktuella läkemedlen som patienten använder.

Och ibland kan det bara röra sig om en receptförnyelse som patienten behöver. Och då behöver vi kanske kolla några labprover innan vi skriver receptet, och då kan vi sköta det helt digitalt. Först, ett enkelt formulär som patienten fyller i, och sedan så kanske de behöver komma och lämna några prover, och sen så skickar vi ett digitalt svar med information om att recepten är klara. Och då kan man ju spara både tid och miljö, både för oss och för våra patienter. Och den tiden vi sparar in kan ju ägna till någon annan patient som bättre behöver det just nu.

David Törnered

Just det.

Stefan Bremberg

Så det är ju ett sätt att jobba proaktivt. Likadant att låta patienterna förstå att vi har koll på när deras recept går ut. Alltså att vi kontaktar dem i god tid innan dess för att följa upp och se att allting är bra, och vad som behöver göras inför den nya receptförnyelsen helt enkelt.

David Törnered

Skulle du säga att det leder till ett fysiskt och/eller emotionellt välbefinnande hos patienterna, nämligen att dem, till exempel, vet om att denna proaktivitet, eller genom andra digitala arbetssätt som Capio tillämpar?

Stefan Bremberg

Jag tror att det kan bidra till många patienter att de känner sig mer trygga, framför allt emotionellt, att vi har koll. Att det inte bara är upp till dem att själva hålla koll på när recepten går ut, eller när det är dags för en ny kontroll. Så att, det tror jag kan skapa en

trygghet hos våra patienter som är bra. Och det gör ju säkert också att de kontaktar oss själva mindre ofta, och då får vi en mindre belastning både i chatten och i telefonen. Vilket gör att vi kan spara in ett och annat fysiskt besök också.

Sen är det ju säkert vissa patienter som tycker att det där besöket på vårdcentralen är lite småmysigt. Att det är kul att komma iväg och kanske sitta i väntrummet och prata litegrann med andra patienter. Och, ja, att det är ett avbrott i vardagen. Så det där är dubbelt. För vissa passar det väldigt bra att sköta allting så digitalt som möjligt. Andra vill ha den fysiska kontakten. Och där är det ju vår uppgift att hitta den balansen, att hitta de patienterna som verkligen uppskattar och behöver det här fysiska besöket. Då skall ju vi inte ta det ifrån dem. För då skapar vi en otrygghet, och gör oss själva en otjänst och även patienten. Så de behöver vi ju fortsätta hantera fysiskt. Men jag tror att allt fler kan helt, eller delvis, skötas digitalt.

David Törnered

Det finns ju ett berömt citat som kommer från Capio kring just detta, tror du att du kan nämna det utan att jag behöver säga vilket det är?

Stefan Bremberg

Haha, ja: ”Digitalt när det är möjligt, fysiskt när det behövs.”

David Törnered

Toppen, då fick jag med det också.

Stefan Bremberg

Ja, vi var väl med och myntade det för ett antal år sedan när vi skulle starta upp Capio Go.

David Törnered

Det känns ju väldigt tillämpbart på precis det du säger.

Alltså att när det går och underlättar för patienterna, så möjliggör medarbetarna den här digitala kontakten genom de digitala arbetssätten, samtidigt som Capio ändå har kvar det fysiska för när det behövs, av olika anledningar, utifrån den patientens förutsättningar. Det låter väldigt rimligt.

Stefan Bremberg

Framöver så tror jag också att man kan tänka sig att vi ser en möjlighet i att, om vi behöver… ja, säg att vi har ett möte med en patient där det föreligger ett problem från rörelseapparaten som vi inte riktigt kan bedöma själva, men där vi egentligen… på det gamla sättet så hade vi sagt att jag beskriver en remiss till ortopeden. Så får patienten ett besök och träffa ortopeden, så får han eller hon tittar på denne och göra sin bedömning.

Men nu är ju möjligheten att vi istället kopplar upp oss digitalt med ortopeden, samtidigt som vi har patienten i rummet på vårdcentralen. Och så kör vi besöket och där vi både får ortopedens specialistkompetens, tillsammans med patienten och allmänläkare eller fysioterapeut – eller vad det nu är på vårdcentralen – att prata tillsammans. Då hör alla samma sak och då får vi ett mycket bättre resultat av det eller dem mötena, än om vi hade kört dem i två separata spår. Så där tror jag också vi kan vinna mycket på att jobba digitalt tillsammans med specialister.

David Törnered

Jag tänker därtill – förutom alla dem saker du precis nämnde – även potentiellt en tolk, där det går att få en tolk digitalt istället, och att man därigenom kan spara både tid och resurser.

Stefan Bremberg

Ja visst. Vi har ju haft telefontolkar sedan lång tid tillbaka. Det är både bra och dåligt med telefontolkar, då de inte alltid är närvarande på sitt sätt digitalt, men samtidigt är det bra ibland ifall de kanske inte kan prata så mycket vid sidan om med patienten eller använda sitt kroppsspråk. Fysiskt blir de mer neutrala i bakgrunden, så det gäller att hitta samma möjligheter när man kanske gör det via Teams eller något motsvarande.

David Törnered

Men om vi går över lite till plattformar. För jag har upplevt att både Flow och Medrave till exempel, känns centrala i Capios digifysiska arbetssätt idag. Skulle ni kortfattat vilka beskriva vad dessa plattformar är?

Stefan Bremberg

Ja för mig, för mig är ju Flow kommunikationsplattformen med våra patienter. Det är ju den vi använder för att kommunicera.

Medrave är ju egentligen ingen plattform på det sättet, utan ett medicinskt utdata-verktyg eller rapporteringsverktyg.

Medrave är ju ett medicinskt utdata system som vi egentligen inte vill använda i de här sammanhangen, för vi skulle ju vilja kunna kommunicera med journalsystemen direkt och då

hämta över informationen till Flow. Men eftersom de flesta journalsystemen ägs och administreras utav våra regioner, så har vi ju inte den accessen till journaldatan. Utan då måste vi gå via Medrave och den datan som vi får där. Så det är ju egentligen en spegling utav merparten utav det som finns i journalsystemet, men det blir ändå tillräckligt för att vi ska kunna använda det när vi gör de här vårdinitierade kontakterna och följer upp patienterna helt enkelt – identifiera patienter med diabetes, eller kronisk obstruktiv lungsjukdom, hjärtsvikt och så vidare, och ta kontakt med dem på ett proaktivt sätt.

Så att det är väl egentligen skillnaden mellan Flow och Medrave, där Medrave är ett substitut för journalsystemen.

David Törnered

Just det, och där då egentligen kan få en översiktlig och tydlig bild av patientgruppen som behandlas. Men om ni då inte direkt har tillgång till journalerna, i och med att systemen är uppbyggda som dem är… Medraves data då, lyckas den ändå hämtas ut från 1177s journalhanteringssystem då, eller?

Stefan Bremberg

Nej, den får vi levererad från våra regioner. Och det är egentligen kopia på journalen i respektive region, eller på respektive vårdcentral. Och då får vi en sådan kopia för att kunna göra medicinska uppföljningar.

I vissa regioner får vi får kopior dagligen, veckovis i andra regioner, och i enstaka fall så kommer det en uppdatering en gång i månaden på de patienter som har haft kontakt senaste

månaden helt enkelt. Så att det är lite latens på det och inte riktigt realdata, men nästintill får man säga, för majoriteten utav datan kommer i alla fall inom en vecka.

David Törnered

Man får såklart göra vad man kan utifrån den verkligheten som råder, men om man samtidigt hade lyckats att komma förbi den spärren med journalerna... alltså om man hade kunnat koppla in Flow direkt i journalen och göra ändringar, skriva in, och diktera in...

Stefan Bremberg

Det hade varit en ”gamechanger” om man hade kunnat fått det att interagera direkt med journalsystemet, för då hade vi ju säkert också kommit runt en del utav problematiken med hur man journalför. För nu måste vi ändå jobba i Flow och sen klippa och klistra på något sätt, för att föra över information till journalsystemet, där vi ju är skyldiga att föra patientens anteckningar.

David Törnered

Just det. Men om vi går in på mer specifikt på Flow då, var du involverad i den här arbetsgruppen inför dess lansering, eller har du jobbat med det vid sidan av, eller...?

Stefan Bremberg

Jag har väl inte varit så direkt involverad. Jag var med på sidan och hjälpte till att värdera och kvalitetssäkra formulären som man började använda i Flowplattformen, men inte själva plattformsbyggandet har jag inte varit alls involverad i. I alla fall inte mer än lite grann på bakgrunden när man pratar om personuppgiftshantering och sådana saker, eftersom jag då dessutom är dataskyddsombud inom affärsområdet, så har jag haft den rollen att bevaka.

David Törnered

Just det, men bevakning, insyn och bollande såklart, men upplever att ni har varit med i vidareutvecklingen av Flow, eller andra digitala plattformar?

Stefan Bremberg

Ja, vi har väl varit med i det. Capio är ju delägare i Doctrin och vi ingår ju även i styrgrupp och annat där.

Resan fram till det samarbete som vi har idag, där vi ändå tycker att vi har ganska goda möjligheter att vara med och påverka utvecklingen. Detta trots att vi inte är de enda kunderna till Doctrin för de har såklart fler att ta hänsyn till när det gäller önskemål om utveckling, men jag känner ändå att idag har vi ett bättre samarbete kring detta än vad vi delvis haft under resan.

Det var rätt bra i början och sen så har det varit lite ”ups-and-downs” om man säger så.

David Törnered

Ups-and-downs i samarbetet, det är klart att ni gärna får utveckla kring detta om ni vill det, men även andra plattformar kanske, eller andra delar av Flow... upplever ni att ni mött några särskilda framgångar eller utmaningar i just utformningen av plattformen som den är idag?

Stefan Bremberg

Ja, det var en bra fråga. Jag tycker ändå att utvecklingen utav Network är där vi har varit tydliga med från början, just att vi har velat ha den här funktionen. Den har varit viktig för oss. Nämligen att kunna avlasta vårdcentralerna via den heldigitala tjänsten, att bygga

Network med våra specialister, och så vidare. Det utvecklingen har vi pushat för väldigt mycket, och tycker ändå att jag tycker att vi har kommit rätt så långt på den resan.

David Törnered

Riktigt spännande. Vi kommer definitivt komma tillbaka in på Network, men om då ser till en plattform som Flow, eller andra olika typer av digitala initiativ som på något sätt framkommer inom verksamheten… hur integreras detta och förankras runtom Capio, är det kanske ett beslut uppifrån som sedan skall förankras, tvärtom, eller kanske både och?

Stefan Bremberg

Kan ta frågan en gång till? Jag var lite ofokuserad.

David Törnered

Inga problem, jag var nog både otydlig och pratar snabbt. Men, ifall just ett digitalt initiativ skall integreras eller förankras i verksamheten, säg att det antingen har växt fram organiskt på en enhet, eller att det kanske kommer direktiv från högre instans, hur förankras och integreras det här inom till exempel hela Närsjukvård? Eller delar av det?

Stefan Bremberg

Det är ju viktigt att få mig de lokala medarbetarna på resan, så att det inte kommer alltför mycket uppifrån. Sen måste man ibland försöka få ut det mer samlat.

Jag tycker ändå vi numera har hittat ett sätt där vi har ett antal... Vi testar saker, vi kör lite pilottester där 6, 8, 10 verksamheter får testa nya saker som vi vill jobba med, eller jobba utifrån processer som ska sättas… så får de testa det och sedan så lär vi oss litegrann där

under den pilotfasen. Sedan har vi ett ordnat breddinförande, där vi ofta tar det stegvis Capioregion för Capioregion, så att vi kommer i mål med alla verksamheter som har någon form utav möjlighet att använda dessa system eller plattformar.

David Törnered

Hur får man då med sig… jag förstår att det är bra att man testar, att man ser ifall det här är lämpligt, ifall det funkar på dessa pilotprojekt, eller om det är någonting som bör ändras eller kanske skrotas helt. Men om du upplever att de lokala medarbetarna är viktiga att få med sig, hur får man då det i en sådan här satsning...? Vad är det som gör att man, utifrån pilotfasen, senare går till att dem lokala medarbetarna vill satsa på detta, ge det en chans, och se möjligheterna med det?

Stefan Bremberg

Det viktiga är att försöka visa på fördelarna med det nya sättet att jobba, den nya tekniska lösningen, eller stödet som man får. Alltså att man känner att det här ger en avlastning i vardagen, det här skapar förutsättningar för mig att göra andra saker, och att det kanske ”blir ett roligare sätt att jobba med mina patienter” helt enkelt.

Och där är det ju ofta så att det gäller att hitta goda exempel – medarbetare som själva berättar om sin egen upplevelse och resa utav detta. Till exempel en astma/KOL-sköterska som själva berättar om denna själv använt dem vårdinitierade kontakterna för att följa upp och ha kontakt med sina patienter med astma och kol. Det är ju ofta en bättre representant att förespråka för verktyget, än om jag ställer mig upp och berättar om fördelarna. För då är det ju något självupplevt, och det är ju ofta mycket mer trovärdigt än om någon i till exempel ledningen gör det. Så vi försöker få våra medarbetare att bidra med sina egna goda exempel

och sprida det i olika sammanhang. Vi kör ju webbinarier och vi kör olika utbildningar där Early Adopters är med och spider budskapet.

För vi har ju några som är tidigt på tåget, några som liksom hakar på mitt i, och sen är det alltid ett antal eftersläntrare som nästan aldrig kommer på.

David Törnered

Jättespännande, verkligen. Du nämnde ”Early Adopters”, och om pratar normalfördelningen och liknande kurvor och ser till andra svansen där, då låter det väldigt likt ”Laggards”.

Men om jag förstår dig rätt då, så finns det väldigt få initiativ där man egentligen tvingar ut det från centralt håll eller från högre instans, utan det är mer det är upp till varje enhet att bedöma om det här känns lämpligt utifrån deras situation?

Stefan Bremberg

Ja, vi försöker undvika att köra top-down på det. Men sen är det ju ändå så att man ibland måste säga att ”det här är inget fritt valt arbete, utan det här måste ni gå in i”. Sen kan ju dem göra det mer eller mindre helhjärtat, eller till exempel bara välja att göra det inom vissa områden, men ibland kan man inte bara välja att stå utanför.

Man kan göra det när det finns ett annat… till exempel i vissa regioner där vi är tvingade att använda regionernas system för kommunikation genom Platform24 och via 1177. Och där kan ju inte vi säga till dem enheterna att de också skall använda Flow, utan då får vi ju de göra det valet, att, på grund av villkoret i förfrågningsunderlaget, så måste de följa

regionernas beslut, och då är det bara att tugga i sig det helt enkelt. Och då är det ju verkligen top-down, för dem har ju inget alternativ, för dem måste ju gå med i det.

När det är vi själva, Capio, som tar initiativ kan man vara lite mer avvaktande och komma in lite senare och så.

David Törnered

Just det. Men då låter mer som att det är externa direktiv som resulterar i denna top-down styrning, utan att så länge enheterna ligger i linje med Capios digitala strategi, så är det ganska autonoma enheter, självbestämmande enheter alltså. Där man från ledningens håll då istället försöka lyfta fram exemplen för att få med sig enheterna, alltså dem lokala medarbetarna, verksamhetscheferna osv.

Stefan Bremberg

Ja.

David Törnered

Bara snabbt, om jag förstått det hela rätt, så är Platform24 den tjänst som sålts in till 1177… Är det på nationell nivå som Platform24 gäller genom 1177, eller finns det diverse olika plattformar?

Stefan Bremberg

Genom det nationella initiativet 1177, så tror jag det var elva regioner som var med i den upphandlingen och som nu, mer eller mindre, använder Platform24. Sen har det ju varit några stycken regioner utanför det som har börjat använda och skrivit egna avtal med Platform24.

Om jag uppfattat det rätt, även om jag kan jag ha fel, så är väl Platform24 och Doctrin/Flow-plattformen de två stora som används idag, eftersom Flow även används utav Praktikertjänst, Achima Care och jag tror även Prima Vård använder Flowplatformen. Så det är ju fyra större privata vårdgivare som kör via Flow, och sen är det då 1177/Platform24 på resten.

David Törnered

Jag läste i en rapport skriven av ”Afa försäkringar” att Doctrins plattform används av 70 procent av den privata primärvården, så det är det ligger väldigt linje med det du säger. Men om jag förstått det rätt då: Region Skåne, VGR och Region Stockholm, vilka kanske är de mest centrala för Capio, har ingenting som egentligen tvingar bort dem från Doctrin i dagsläget?

Stefan Bremberg

Inte i dagsläget i alla fall, nej.

David Törnered

Sen kan ju det såklart förändras. Och är faktiskt en brygga över till nästa fråga, då jag har hört av flera andra respondenter att de upplever att just Capios digitaliseringsinitiativ snarare är kopplat till digitala arbetssätt i stället för de här specifika plattformarna, så som Flow. Och du var väl också inne på det lite förutom, nämligen att Flow såklart spelar en stor roll, så beskrivs det av andra snarare ses som ett verktyg för att uppnå önskad digitalisering. Det låter om att ni håller med om det här?

Stefan Bremberg

Ja, det gör jag. För vilken plattform man egentligen använder spelar mindre roll, utan det är

själva arbetssättet och förhållningssättet till hur vi kommunicerar och interagerar med våra patienter som är det viktiga.

Men nu ligger ju Doctrin-utvecklingen och implementeringen utav de här nya arbetssätten många år före var Platform24 och 1177 är, så det skulle vara ett stort steg tillbaka för oss att behöva gå in i ett regiongemensamt system där vi är tvingad att använda 1177/Platform24. För där har man ju inte kommit så här långt, när det gäller att interagera och kommunicera med patienterna och vara proaktiva. Man pratar om att den möjligheten ska finnas där också, alltså att det ligger i pipelinen, men de är ju inte där än.

David Törnered

Just det. Hur tycker ni att Flow, eller kanske snarare de digitala arbetssätten då, säkerställer att patienternas värderingar, preferenser och behov både belyses och respekteras?

Stefan Bremberg

I och med att det, genom alla dem strukturerade formulären som skickas ut, så ju frågorna kring patientens föreställningar, förväntningar och farhågor, och det är egentligen de här 3 F:en som vi skall fånga i alla mötena med patienterna, men där vi i de fysiska mötena, och i telefonmötena, inte har det på det strukturerade sättet. Och jag tror att vi ger patienten mycket bättre förutsättningar och möjligheter att uttrycka sina föreställningar, farhågor och förväntningar när vi gör det via Flow-plattformen, än i de andra kontakterna med patienterna.

Så att på det sättet så tillvaratar vi patientens förväntningar och så vidare, på ett bättre sätt. Sen gäller det ju för oss att läsa det också, alltså det som patienten har skrivit och där har vi

litegrann en resa att göra. Det kan vi bli bättre på framöver, nämligen att ta till oss det tidigt och ha med oss det i den fortsatta diskussionen och dialogen med våra patienter via Flow.

David Törnered

Tror ni dessutom att Flow ökar medvetenheten kring värdet av de här personcentrerade lösningarna/personcentrerade arbetssätten som vi försöker att få igenom…? Det vill säga, tror du patienter och personal förstår varför Capio tillämpar ett digifysiskt arbetssätt?

Stefan Bremberg

Jag hoppas det i alla fall, alltså att det ökar förutsättningarna. Att man blir mer positivt inställd på att jobba, mer varierade uppgifter genom att få in det digitala i vardagen, helt enkelt.

David Törnered

Skulle du säga att patienterna och de anställda får information och vägledning i hur man bäst nyttjar de digitala funktionerna/lösningarna?

Stefan Bremberg

Ja, det får de. Framförallt våra medarbetare, som vi ju försöker utbilda och informera när det gäller just de här arbetssätten. Och vi har ambassadörer som jobbar för att sprida de här goda exemplen, så att det blir fler och fler som använder. Kring patienterna, ja, där är det ju i de enskilda mötena som patienterna får testa på då det, och förhoppningsvis upplever de också att det här underlättar kontakterna och även förbättra informationen de får.

I chatten så får de i alla fall informationen skriftligt. Då kan de ju både läsa den och de kan dessutom be någon närstående göra detsamma, alltså titta på det och ta del utav infon om de så önskar. Sitter man i telefon så är det ju liksom bara det. Då har man bara öronen och lyssna med, och så glömmer man, och kan inte dela det med andra på samma sätt.

Så att jag tror att det finns stora fördelar att jobba mer och mer skriftligt, och där kan man ju faktiskt också numera använda journalen till att kommunicera med patienterna utan att behöva gå omvägen via Flow. Utan man skriver till patienten kring planerade uppföljningar, man kan ge information om när det är dags att komma och ta nya prover, och så vidare. Och så ber man patienten logga in på 1177-journalen läsa sin journal den vägen. Sen om vi behöver ha någon ytterligare dialog så kan vi använda Flow vid sidan om, men genom att använda journalen i en direktkommunikation med dig som patient så sparar vi ju väldigt mycket tid och vi sparar väldigt mycket av både papper och porto.

David Törnered

Ja, det kan man ju verkligen. Men om man nu har de här stora fördelarna – och när det är möjligt så försöker man köra digitalt – men hur gör man då? Jag menar, för merparten av besöken sker ju inte genom Flow, utan då antingen via telefon eller över fysiska besök. Vad gör man för att öka användarbasen skulle du säga…? Alltså vad är det enheterna gör, eller kanske det ni gör, för att ”sälja in” det hela till patienten, alltså belysa och få dem att testa?

Stefan Bremberg

Ja, vi försöker få medarbetarna, läkarna, sjuksköterskor, fysioterapeuter att berätta om att vi kan ha en digital kontakt med patienterna. Då behöver vi inte tala om att det heter Flow, men att vi har en plattform där vi skickar ett SMS och så öppnar patienten det SMS:et och

kommer in genom en länk. Eller att denna öppnar vår app, Capioappen, så kommunicerar vi när vi behöver ha kontakt. Så får patienten en länk som denna öppnar och där får den då formuläret, eller någon annan skriven information. Och det försöker vi prata med alla våra patienter om, och på det sättet få dem att testa. Det kräver ju att de har Mobilt BankID så att de kan identifiera sig, men det har ju faktiskt de flesta idag, så att det är ju sällan något hinder.

Utan det är väl mer att patienterna är tveksamma, kanske lite rädda, för att öppna länkar som kommer via ett SMS eller i en app. Nästan alla är ju rädda för att de ska bli lurade och bedragna.

David Törnered

Just det. Verkligen. Jag kan tänka mig för egen del om man får en länk… alltså har man appen i sig, då kan man gå in där, men att trycka på en länk direkt i ett mail eller SMS, det förstår jag kan kännas obekvämt.

Stefan Bremberg

Ja, det kan man definitivt ha en tveksamhet till. Ja. Sen har vi ju det här både skriftligt, och ibland också på våra TV:s i väntrum, och så vidare, alltså om de här kontaktvägarna och de här arbetssätten. Så vi försöker att på olika sätt sprida information och få med oss patienterna på den här resan.

David Törnered

Jag såg någon kampanj om det här nyligen, just med Capio Go då som har jag fått är en del

av Närsjukvård numera, men att det varit mycket marknadsföring det senaste månaderna om ”att man alltid finns där” och så.

Ja, vi får raskt gå vidare för jag vill respektera din tid. Vi har 3.5 frågor kvar…

Stefan Bremberg

Det hinner vi.

David Törnered

Absolut! Tycker ni att våra digitala arbetssätt leder till att patienten både får en bättre överblick OCH kontroll över sin egen hälsa och behandling, och på vilka sätt då?

Stefan Bremberg

Ja, det tror jag att jag kan säga att jag tycker att de får. Dels att vi nu har en mer direkt kommunikation. Alltså det jag nämnde kring det skriftliga – att vi skickar formulär som patienterna får svara på, så vi tar del utav informationen. Vi kan även kommunicera behandlingsråd och annat via plattformen. Vi har ju ett kunskapsstöd som heter Medibas, där vi då via Flow kan skicka länkar till patientinformation. Det kan till exempel vara träningsråd, eller information om varför patienten har de eller dem besvären, och så vidare. Så lite grundläggande medicinsk information, kanske man kan nästan se det som lite medicinsk utbildning i vardagsmedicin, husmorstips och så vidare. Så där ger det ju faktiskt en hel del möjligheter att kommunicera och utbilda våra patienter.

David Törnered

Ja, men är ju också just det. Det är ju möjligheter som ges, men man kan inte göra mer än så,

utan det är såklart upp till varje individ i hur engagerad denna vill vara i sin egen vårdresa, även om det här är möjliggör för det.

Stefan Bremberg

Det möjliggör. Men man kan också jobba interaktivt på ett resurseffektivt sätt med patienterna, och ge dem lite coachning och stöd fortlöpande via Flowplattformen. Det kör vi nu i ”Capio livsstil” och där har vi ju sett det litegrann i system, alltså att försöka hjälpa till med beteendeförändringar och livsstilsförändringar. Kost, motion, psykisk ohälsa, och så vidare. Och det blir väldigt resurseffektivt när man kan göra på det sättet, och då kanske man till och med kör i gruppbehandlingar, om då blir det ju ännu mer effektivt. Och samtidigt kan det vara ett gott stöd för patienterna att se att de inte är ensamma med sina besvär.

David Törnered

Jättespännande. Digitalisering då, om vi nu pratar om samordningen av vård och övergången mellan vårdenheter inom Capio, hur skulle du säga att digitaliseringen har underlättat för detta?

Stefan Bremberg

Ja, då kan vi jobba via Network. Och då kan vi även flytta patienterna på helger och kvällar. Och på nätter är det också teoretiskt möjligt. Där kan vi ta hand om de medicinska problem som vi kan hjälpa till med heldigitalt. Och det ju vara en tydlig och bra avlastning för vårdcentralerna, om de till exempel plötsligt har många sjuka eller många som vabbar, så kan en annan vårdcentral eller Capio Go, hjälpa till och stötta. Så att det här ”Networkandet” finns ju där vårdcentraler, utan att ha en central enhet som styr allting och som sen skall

fördela det, istället hjälpas åt. Och får man in någonting till Capio Go som kräver en fysisk kontakt, ja, då kan vi lätt flytta över det ärendet och patienten till patientens vårdcentral.

David Törnered

Det låter ju som Network möjliggör en effektiverare allokering av resurser, där det säkerställs att ingen vårdcentral har noll att göra, medan en annan är helt överbelamrad. Så det låter ju väldigt bra.

Stefan Bremberg

Ja, resursoptimering kallar man väl det.

David Törnered

Precis. Jag måste gå tillbaka till det du tidigare sade kring att ge coachning och stöd genom Flow och då även i grupp. Jag är bara lite nyfiken på ifall man får ett samtycke där ifrån patienten eller hur hamnar man i den gruppkontakten, så att säga? Jag menar, vissa patienter kanske inte vill…?

Stefan Bremberg

Nej, man ju aldrig tvinga dem till en att sitta i grupp och diskutera, eller ta del utav information och interagera. Men de flesta patienterna tycker ändå det är rätt så trevligt att göra det här i grupp. Vi inhämtar givetvis patientens samtycke till det. Vi stoppar ju inte in dem i en grupp utan att dem sagt ”ja” till det.

David Törnered

Utan är det mer – ”vi har några andra patienter som har liknande besvär, vissa vill prata om det med andra, är du okej med det?”

Stefan Bremberg

Ja. Eller att vi då, som i exemplet med ”Capio livsstil”, säger att vårt arbetssätt här bygger på att vi har lite mindre grupper där vi samtalar. Och då får man vara med på det om man vill. Vill man inte, ja, då kan kanske ”Capio livsstil” inte erbjuda något för dem, för de har bara de här med gruppinterventionerna. Då får patienten istället gå tillbaka till vårdcentralen och ta det individuellt i så fall. Så det lämpar sig inte för alla patienter, men de allra flesta accepterar det.

David Törnered

Ja, då var vi ju inne på det här utifrån deras förutsättningar, behov och preferenser.

Stefan Bremberg

Ja.

David Törnered

1.5 fråga kvar då, det här löste vi med bravur Stefan. Jag har haft lite svårt att veta vad jag tillåts publicera i form av till exempel till exempel interna siffror kopplade till Nationella patientenkäten, men om vi ändå pratar om kvalitet… vilka parametrar tror ni används för att mäta de digitala arbetsrättens framgång mät just i personcentrerad vård, och om ni själv får spekulera – om ni tror att eller om ni till och med vet och får säga – har kvaliteten gått upp till följd av Capios digifysiska arbetssätt?

Stefan Bremberg

Ja, det kan jag säga att jag tror… eller nej, jag säger inte bara ”tror”, utan jag vet att vi har förbättrat våra medicinska resultat genom de digifysiska arbetssätten. Och framförallt då med de vårdgivareinitierade kontakterna. Där har vi kan vi ju se att vi har bättre koll på våra patienter med KOL-sjukdom, bättre koll på patienten med hypotoni. Vi kommer säkert också att få bättre koll på våra patienter med diabetes och hjärtsvikt, kanske även njursvikt och så vidare. Detta eftersom vi inte lika lätt ”tappar bort” patienter och provsvar när vi jobbar på det här systematiska sättet med vårdinitierade kontakter och uppföljningar. Så där får vi en bättre medicinsk kvalitet på sikt. Men det här är ju sådant som det tar väldigt lång tid innan man direkt kan påvisa det. Vi kan säkert också se i Capio Go att vi har en minskad antibiotikaanvändning jämfört med vad man har på vårdcentralerna, eftersom man är betydligt mer strikt till att förhålla sig exempelvis till Stramas kriterier för antibiotikaförskrivning vid till exempel öroninflammation, och inte minst vid halsont, halsfluss, tonsilliter och urinvägsinfektion. Vi har väldigt noggranna processbeskrivningar för hur vi säkerställer en diagnos och behandling, via det digitala. Och där vi har vi inte samma riktigt samma följsamhet till när vi träffar patienterna fysiskt på vårdcentralen, så det blir bättre kvalitet också utifrån ett antibiotikaperspektiv.

David Törnered

Men just det du började med att säga med kroniska sjukdomar, då är det CROM-resultatet vi pratar då, bara så jag hänger med?

Stefan Bremberg

Ja, det är provresultat, medicinskt indikatorer, när det gäller kroniska sjukdomar. Jag tror också på sikt att man kan få en bättre upplevd livskvalitet.

David Törnered

Och kopplat till PROM?

Stefan Bremberg

Ja, PROM-måtten gäller livskvalitet. Vi är generellt i vården inte så duktiga på att följa patientupplevd kvalitet, PROM. Men den upplevda livskvaliteten är ju en viktig aspekt här, och patienttryggheten är ju en annan aspekt som inte heller riktigt kommer fram i den nationella patientenkäten. Trygghet finns inte direkt formulerat, utan man vänder på det och har andra formuleringar i de frågorna. Men på sikt inkluderas förhoppningsvis också antalet vårdkontakter som patienten har, för en mer trygg patient har färre vårdkontakter.

David Törnered

Superspännande. Jag tror att vi hade kunnat prata en timme endast detta. Men jag vill verkligen respektera din tid, så slutligen, där det är helt din tid som avgör…

Stefan Bremberg

Jag ska svara på din sista fråga här också, självklart.

David Törnered

Toppen, tack. Fem minuter, max. Men finns det någonting ni vill tillägga som avses extra viktigt förståelsen för Capios digitaliseringsarbete, och hur detta främjar personcentrerad vård?

Stefan Bremberg

Det var en stor fråga som inte är helt enkel att ytterligare svara på.

Målbilden är ju våra patienter skall må bättre, och att patienterna skall uppleva att det är enklare att ha kontakt med oss. Det är patientens perspektiv i detta som jag ser det.

Och sen har vi ju medarbetarens perspektiv, vilket är att det skall vara så enkelt som möjligt att göra rätt, i det där med att ha kontakt med sina patienter.

Förmodligen blir det så, i ett mer digitaliserat vårdcentralsarbete, att vi har fler patientkontakter per dag, men att de är kortare och förhoppningsvis också betydligt mer strukturerade än vad de hittills har varit. Så även om vi då skulle hantera fler patienter, att flödet ökar så, så upplever vi inte att det innebär någon ökad belastning, eller att det skulle vara någon försämrad arbetsmiljö. För ibland kan det ju vara så att ju mindre någon har att göra, desto bättre arbetsmiljön, men jag tror faktiskt att med ett välfungerande digitalt arbetssätt och ett bra stödsystem så kan vi kombinera bra arbetsmiljö och ett relativt högt flöde.

David Törnered

Ja, och en sista kommentar på det där… i och med att ju allt beror på, till exempel, vilka sjukdomar patienten har… alltså alla de individer som lever med sina respektive kroniska sjukdomar vilka de kämpar med varje dag, men ändå bara är i kontakt med vården en gång om året. Säg, att det är den typen av kronisk sjukvård som bedrivs. Ja, då kan ju två digitala besök vilka går smidigt vara mer gynnsamt för patienten tänker jag, än ett koncentrerat möte där patienten kanske inte riktigt minns vad som sades, och sen behöva fortsätta kämpa helt på egen hand.

Stefan Bremberg

Ja.

David Törnered

Då vill jag passa på att tacka så hjärtligt för dessa värdefulla insikter, och för det viktiga arbetet ni utför varje dag.

Stefan Bremberg

Tack själv.

David Törnered

Jag kommer att skicka den färdigställda rapporten, så får ni gärna läsa igenom den om intresse finns. Men jag förväntar mig inte det. Oavsett så kommer jag skicka den, och den blir klar till sommaren.

Stefan Bremberg

Det blir jättebra David. Jag får önska dig lycka till här. Om det är någonting som dyker upp när du skall sammanfatta det här, så hör gärna av dig på mail eller över telefon så skall vi försöka reda ut eventuella oklarheter.

David Törnered

Underbart, tusen tack. Ni får ha en riktigt fin vecka.

Stefan Bremberg

Tack detsamma, ha det gott.

Appendix B2: Bremberg, in English

David Törnered

Great, then I think we should get started.

Stefan Bremberg

Sounds good.

David Törnered

Please start by introducing yourself and your main responsibilities today.

Stefan Bremberg

Yes, my name is Stefan Bremberg. I am a specialist in general medicine and have been for, what is it now, 20, almost 30 years, and I have been working at Capio since the early 2000s. And during the past 12 years, I have had the role of chief physician and medical director in the primary care business area.

So I work with patient safety issues, deviations, and the development of the medical agenda, together with all our other colleagues involved. I am also in the management team of the business area and the management group.

David Törnered

Very exciting! I think we will touch on many of these areas today.

But the core of this study is about digitalization and specifically its connection to person-centered care. Therefore, I thought we could first try to define what these two concepts are.

If we start with person-centered care, do you believe that Capio has an exact definition of what this is…? And since I believe this is lacking, how would you define the concept yourself?

Stefan Bremberg

I usually choose to talk about the need to put the patient at the center, person-centered care or patient-focused care.

It is the patient's perspective that we must try to take to the greatest extent possible, without us healthcare professionals trying to reinterpret or interpret what the patient says. Of course, we must understand what the patient says, but it is the patient's perspective that is important, and it is each individual patient's perspective that we need to obtain – the patient's fears, expectations, and beliefs.

There is a lot of talk in society at large about person-centered and patient-focused care. But there I often see it as interpreting what a larger group of patients think. For me, it is the individual patient that is important to focus on in each specific meeting. And that is something I think we work very much with at Capio.

David Törnered

Something that is very closely related to what you said is that we talk about the patient's conditions, resources, needs, obstacles, experiences. And to me, it sounded like you were implying much of the same.

Stefan Bremberg

Yes, and in our way of working – The Capio Model – we look at, and try to keep track of, what kind of patients are listed at our health center, what their medical needs are, what their conditions are. So that is where we start our journey, our work.

David Törnered

Exactly. The Capio Model will probably be discussed within shortly, but if we instead focus more specifically on digitalization within primary care… Here I often hear a twofold definition, partly that digitalization involves transitioning from analog information to a digital format, that is, "digitization, digitalization". But also the various types of IT support that are integrated into societal functions. How would you say Capio has applied digitalization and in what way has this promoted person-centered care?

Stefan Bremberg

We were early to start what we call Capio Go. This is now our digital region, but it actually started a bit simpler, where we wanted to be an alternative to Kry and Min Doktor, which quickly emerged in the online doctor market. But we wanted to keep it internal in our operations and close to our patients.

We were a number of enthusiasts who were involved in this work with the development of Capio Go, together with Doctrin. So that was part of the digitalization, and then we have kind of spun further on this by working more with our Flow platform.

It was initially based on the patient contacting us, but then the next step is that we instead contact our patients. The care-initiated contacts create conditions for more integrated care,

together with the patient, where we help support and monitor. So that is a way to make care more person-centered.

The other way is that the patient contacts us, and then it is the patient who constantly contacts us. But we can help support the patients by being proactive and taking our contacts. So there is that part too.

We also have collaboration between different specialties and have built solutions where we can, more or less, seamlessly move the patient and let the patient flow between primary care and various forms of specialist care. This is another way to make it easier for patients and, then we have the other more technical aspects in the background. I mean, you mentioned digitalization, and yes, when we moved from paper records to electronic records. That was also a form of digitalization, but it was really just that we digitized the paper roll. That by itself was bit at that time, but it is not really a major digitalization in today's perspective.

There are many different parts to this, what you do, and then we build these AI-like robots that pick information from one system and transfer it to another system, in an automated and very structured way. Instead of us having to do it by hand. And of course, in the end, this benefits the patients, but it is really more of a tool to make it easier for the employees to do these simple and repetitive tasks smoothly and well.

David Törnered

But is that not also a form of digitalization, these robots, saving on these work methods that involved more cutting and pasting, and some doing it via Excel, some via Post-it notes when

they probably should not, but instead that the data is sent over automatically with the help of the robots. Is that not also a type of digitalization?

Stefan Bremberg

Yes. Indeed it is.

David Törnered

Super exciting. We will probably continue to discuss much of this.

But I was thinking about the productivity you mentioned, can you give an example where it first went from the patient initiating the contact, to now being more proactive…? Can you give examples of some proactivity Capio is implementing today?

Stefan Bremberg

Yes, an example could be that we contact patients before planned check-ups. It could be semi-annual check-ups, or at least follow-up visits that are planned. We have told the patient "we will see you again in 6 months, 12 months", and before such contact, we send out a simple form. We can then also ask questions about the current medications the patient is using.

And sometimes it may just be a prescription renewal that the patient needs. And then we may need to check some lab tests before we write the prescription, and then we can handle it entirely digitally. First, a simple form that the patient fills out, and then maybe they need to go and leave some samples, and then we send a digital response with information that the prescriptions are ready. And then you can save both time and the environment, both for us

and our patients. And the time saved can be devoted to another patient who has a greater need of it right now.

David Törnered

Right.

Stefan Bremberg

So that is a way to work proactively. Similarly, by letting patients know that we keep track of when their prescriptions expire. That is, that we contact them well in advance to follow up and see that everything is fine, and what may need to be done before the new prescription renewal.

David Törnered

Would you say that leads to physical and/or emotional well-being for patients, namely that they, for example, know about this proactivity, or through other digital working methods that Capio applies?

Stefan Bremberg

I think it can contribute to many patients feeling more secure, especially emotionally, knowing that we are keeping track. That it is not just up to them to keep track of when prescriptions expire or when it is time for a new check-up. So, I think it may create a good sense of security for our patients. And this probably also means that they contact us themselves less often, and then we have a lower burden in both the chat and on the phone. Which means we can save a physical visit or two as well.

Then there are certainly some patients who think that the visit to the health center is a bit cozy. That it is fun to go out and maybe sit in the waiting room and talk a bit with other patients. And, that it is a break in their everyday life. So it is double. For some, it works very well to handle everything as digitally as possible. Others want physical contact. And it is our task to find the balance, to find those patients who really appreciate and need the physical visit. Then we should not take that away from them. Because then we create insecurity and do both ourselves and the patient a disservice. So them we need to continue handling physically. However, I think more and more can be handled entirely, or partially, digital.

David Törnered

There is a famous quote that originates from Capio regarding this, do you think you can mention it without me needing to say which one it is?

Stefan Bremberg

Haha, yes: “Digitally when possible, physically when needed.”

David Törnered

Great, then I got that in too.

Stefan Bremberg

Yes, we were involved in coining that several years ago when we were starting Capio Go.

David Törnered

And it feels very applicable to exactly what you are saying.

I mean, that when it is possible and facilitates for patients, employees enable this digital contact through digital working methods, while Capio still maintains the physical for when it is needed, for various reasons, based on the patient's prerequisites. It sounds very reasonable.

Stefan Bremberg

In the future, I also think we can see an opportunity in that, if we need… let's say we have a meeting with a patient where there is a problem with the musculoskeletal system that we cannot assess ourselves, but where we really… in the old way, we would have written a referral to the orthopedist. Then the patient gets a visit and meets the orthopedist, and they look at them and make their assessment.

But now we instead can digitally connect with the orthopedist, while we have the patient in the room at the health center. And we run the visit where we get the orthopedist's specialist expertise, together with the patient and the general practitioner or physiotherapist – or whoever it is at the health center – to talk together. Then everyone hears the same thing, and we get a much better result from those meetings., than if we had held them in two separate tracks. So there I also think we can gain a lot by working digitally together with specialists.

David Törnered

I also think – in addition to all those things you just mentioned – potentially an interpreter, where it is possible to instead get a digital interpreter, and thereby save both time and resources.

Stefan Bremberg

Yes, that is right. We have had phone interpreters for a long time. It is both good and bad with phone interpreters, as they are not always present in the same way digitally, but at the same time, it is good sometimes if they cannot talk as much on the side with the patient or use their body language. Physically, they become more neutral in the background, so it is important to find the same opportunities when meeting via Teams or something equivalent.

David Törnered

But if we move transition a bit to platforms. Because I have felt that both Flow and Medrave, as examples, feel central to Capio's digi-physical working methods today. Could you briefly describe what these platforms are?

Stefan Bremberg

Yes, for me, Flow is the communication platform with our patients. It is what we use to communicate.

Medrave is not really a platform in that sense but a medical data output tool or reporting tool.

Medrave is a medical data output system that we would prefer not using in these contexts, because we would like to be able to communicate directly with the journal systems and then transfer the information to Flow. But since most journal systems are owned and administered by our regions, we do not have access to the journal data. Instead, we must go through Medrave and the data we get there. So it is really a mirroring of most of what is in the journal system, but it is enough for us to use when we conduct these care-initiated contacts and

follow up with patients – to identify the patients with diabetes, chronic obstructive pulmonary disease, heart failure, and so on, and contacting them in a proactive way.

So that is really the difference between Flow and Medrave, where Medrave is a substitute for the journal systems.

David Törnered

Right, and where you can get an overview and clear picture of the patient group being treated. But if you do not directly have access to the journals, because the systems are built as they are… Medrave's data then, is it still retrieved from 1177's journal management system?

Stefan Bremberg

No, we get it delivered directly from our regions. And it is really a copy of the patient journal in the respective region, or at the respective health center. We receive such copy to be able to do medical follow-ups.

In some regions, we get copies daily, weekly in others, and in some cases, an update comes once a month on the patients who have had contact with during the last month. So there is a bit of latency on it and not really real-time data, but almost, because the majority of the data comes within a week.

David Törnered

One must, of course, do what is possible given the prerequisites, but if would have been possible to get past the barriers with the journals…if one would have been able to connect Flow directly to the journal and make changes, submit new data, and dictate in…

Stefan Bremberg

It would be a ‘gamechanger’ if one could directly interact with the electronic health records, because then we would surely also circumvent some of the issues with how we document. Because now we still have to work in Flow and then cut and paste this somehow, to transfer information to the journal system, where we are required to document the patient’s notes.

David Törnered

Exactly. But if we more specifically discuss Flow, were you involved in this working group before its launch, or have you worked with it on the side, or…?

Stefan Bremberg

I have not been directly involved. I was involved from the side and helped evaluate and quality assure the forms that were being used in the Flow platform, but I have not been involved in the actual platform building. At least not more than a little in the background when it comes to data protection and such matters, as I am also a data protection officer within the business area, so I have had the role to monitor.

David Törnered

Right, but monitoring, insight, and bouncing ideas around, of course, but do you feel that you have been involved in the further development of Flow or other digital platforms?

Stefan Bremberg

Yes, we have been involved. Capio is a co-owner of Doctrin, and we are also part of a steering group and such there.

The journey to the collaboration we have today, where we still feel that we have fairly good opportunities to influence the development. This despite not being the only customers of Doctrin and with more considerations regarding development requests, but I still feel that we have a better collaboration today than we had at some points during the journey.

It was quite good in the beginning, and then there have been some "ups and downs," so to speak.

David Törnered

Ups and downs in the collaboration. Please elaborate more on this if you want, but also perhaps other platforms, or other parts of Flow… do you feel that you have encountered any particular successes or challenges in the design of the platform as it is today?

Stefan Bremberg

Yes, that was a good question. I think that the development of Network is where we have been clear from the beginning, in that we wanted this function. It has been important to us to be able to relieve the health centers through the all-digital service, to build Network with our specialists, and so on. We have pushed a lot for this development, and I think we have come quite far on that journey.

David Törnered

Really exciting. We will definitely return to Network, but if we look at a platform like Flow, or other types of digital initiatives that somehow emerge within the operations… how are they integrated and anchored around Capio, is it perhaps a decision taken above that is then to be anchored, or the other way around, or maybe both?

Stefan Bremberg

Could you please state the question again? I was a bit unfocused.

David Törnered

No problem, I was probably both unclear and talked quickly. But, if a digital initiative is to be integrated or anchored in the operations, say that it either has grown organically in a unit or that it may arise from directives from a higher instance, how is this anchored and integrated within, for example, Capio's Proximity Care? Or parts of it?

Stefan Bremberg

It is important to get the local employees on the journey so that it does not come too much from above. However, sometimes, you must try to get it out it more collectively.

I think we have found a way now where we have a number of… We test things, we run some pilot tests where 6, 8, 10 units get to test new things that we want to work with, or work based on processes that need to be set… so they get to test it, and then we learn a bit during the pilot phase. Then we have an organized broad implementation, where we often take it step by step, Capio region by Capio region, so that we eventually reach all units that have any form of possibility to use these systems or platforms.

David Törnered

How do you get… I understand that it is good to test, to see if it is suitable, if it works in these pilot projects, or if it is something that should be changed or maybe scrapped completely. But if you feel that the local employees are important to get on board, how do you achieve that in such initiatives…? What is it that makes us, from the pilot phase, later go

to the local employees wanting to invest in something, give it a chance, and then see the possibilities with it?

Stefan Bremberg

The important thing is to try to show the benefits of the new way of working, the new technical solution, or the support that is provided. So that one feels that this gives relief in everyday life, this creates conditions for me to do other things, and that it might "be a more enjoyable way to work with my patients" put simply.

And it is often about finding good examples – employees who tell their own experience and journeys. For example, an asthma/COPD nurse who themselves tell how they used the care-initiated contacts to follow up and have contact with their patients with asthma and COPD. That person is often a better representative to advocate for the tool, than if I stand up and talk about the benefits. Because then it is something self-experienced, which is often much more credible than if someone, for example, in the management team does it. So, we try to get our employees to contribute their own good examples and spread it in various contexts. We run webinars and different trainings where "Early Adopters" are involved and spread the message.

Because we have some who are early on the train, some who catch on in the middle, and then there are always some laggards who almost never come along.

David Törnered

Very exciting, indeed. You mentioned “Early Adopters,” and if we talk about normal distribution and similar curves and look at the other end of the spectrum, it sounds very similar to “Laggards”.

But if I understand you correctly, there are very few initiatives where, centrally or from higher instance, an initiative is actually forced, but it is rather up to each unit to assess whether it feels suitable, based on their situation?

Stefan Bremberg

Yes, we try to avoid top-down as much as possible. But sometimes, one must say that “this is not an elective task, you must participate in this.” Then they can do it more or less wholeheartedly or, for example, only choose to do it in certain areas. But sometimes one cannot choose to abstain.

They can do so when there is another… for example, in certain regions where we are forced to use the region’s system for communication through Platform24 and via 1177. And there, we cannot tell those units that they should also use Flow, but then we have to let them make that choice because, due to the conditions in the procurement specifications, they must follow the region’s decision, and then we simply have to accept that. And then it is really top-down because they have no alternative, they must join.

When it is us, Capio, taking the initiative, one can be a bit more reserved and join a bit later and so on.

David Törnered

Right. But then it sounds more like it is external directives that result in this top-down management, but as long as the units align with Capio's digital strategy, they are fairly autonomous, self-governing units. From the management's side, you then try to highlight examples to get the units on board, that is, the local employees, the operational managers, etc.

Stefan Bremberg

Yes.

David Törnered

Just briefly, if I have understood correctly, Platform24 is the service sold to 1177… Is it on a national level where Platform24 is being used through 1177, or are there various platforms?

Stefan Bremberg

Through the national initiative 1177, I think it was 11 regions that participated in the procurement and now, more or less, use Platform24. Then there have been a few regions that initially were outside of the agreement which have then started using Platform24, by signing their own agreements. If I understand correctly, and I might be wrong, but Platform24 and Doctrin/Flow platform are the two big ones used today, as Flow is also used by Praktikertjänst, Achima Care, and I think even Prima Vård uses the Flow platform. So the four larger private healthcare providers are operating via Flow, and then the rest use 1177/Platform24.

David Törnered

I read in a report written by “Afa försäkringar” [an insurance company owned by Sweden's labor market parties] that Doctrin’s platform is used by 70 percent of private primary care, so that aligns very well with what you are saying. But if I understand correctly then: Region Skåne, VGR, and Region Stockholm, which perhaps are the most central for Capio, do not have anything that actually forces them away from Doctrin at the moment?

Stefan Bremberg

Not at the moment, no.

David Törnered

Of course, that can change. And that actually bridges to the next question, as I have heard from several other respondents that they feel Capio’s digitalization initiatives are more linked to digital work methods rather than specific platforms, such as Flow. And it seems that were also somewhat on this track, in that that Flow certainly plays a big role, but it is described by others as more of a tool to achieve the desired digitalization. It sounds like you agree with this?

Stefan Bremberg

Yes, I do. Which platform we actually use matters less, it is the working method and approach to how we communicate and interact with our patients that is important.

But now, Doctrin’s development and implementation of these new working methods are many years ahead of where Platform24 and 1177 are, so it would be a big step back for us to enter a region-wide system where we are forced to use 1177/Platform24. Because they have

not come this far in terms of interacting and communicating with patients and being proactive. They talk about that possibility being there as well, that it is in the pipeline, but they are not there yet.

David Törnered

Right. How do you think Flow, or perhaps rather the digital working methods, ensure that patients' values, preferences, and needs are both highlighted and respected?

Stefan Bremberg

By sending out all the structured forms, questions are asked about the patient's beliefs, expectations, and fears, and it is really these 3 F's [Swedish equivalents of these three words start with the letter "F"] that we should capture in all meetings with patients, but where we do not have it structured in the same way in physical meetings and phone calls. And I think we give the patient much better conditions and opportunities to express their beliefs, fears, and expectations when we do it via the Flow platform, than in the other contacts with the patients.

So, in that way, we better consider the patient's expectations and so on. Then it is up to us to read it too, that is, what the patient has written, and we have a bit of a journey to do there. We can get better at it in the future, that is, to assimilate early and have it with us in the continued discussion and dialogue with our patients via Flow.

David Törnered

Do you also think Flow increases awareness of the value of these person-centered solutions/person-centered working methods that we are trying to implement…? That is, do you think patients and staff understand why Capio apply a digi-physical working method?

Stefan Bremberg

I hope so anyway, that is, to increase the conditions for it. That one becomes more positively inclined to work and having more varied tasks by incorporating the digital into everyday working life.

David Törnered

Would you say that patients and employees receive information and guidance on how to best utilize the digital features/solutions?

Stefan Bremberg

Yes, they do. Especially our employees, whom we try to educate and inform about these working methods. And we have ambassadors who work to spread these good examples, so that more and more people use them. Regarding patients, yes, in individual meetings, patients get to try it, and hopefully, they also feel that this facilitates contacts and also improves the information they receive.

In the chat, they at least get the information in writing. They can both read it, and they can also ask someone close to them to do the same, to look at it and take part in the information if they want to. Sitting on the phone, it is just that. You only have your ears to listen with, and you may forget, and you cannot share it with others in the same way.

So I think there are big advantages to working more and more in writing, and nowadays you can actually also use the journal to communicate with patients without having to go through Flow. Instead, you write to the patient about planned follow-ups, you can give information about when it is time to come and take new samples, and so on. And then you ask the patient

to log in to 1177 journal and read their journal that way. Then if we need further dialogue, we can use Flow on the side, but by using the journal in direct communication with you as a patient, we save a lot of time and a lot of paper and postage.

David Törnered

Yes, indeed. But if we do have these great advantages – and when it is possible, we try to go digital – but how do we do that? I mean, most visits do not happen through Flow, but rather over the phone or during physical visits. What do Capio do to increase the user base, would you say…? What do the business units, or maybe you, do to "sell" it to the patient, to highlight it and get them to try it?

Stefan Bremberg

Yes, we try to get the employees, doctors, nurses, physiotherapists to tell that we can have digital contact with patients. Then we do not have to say that it is called Flow, but that we have a platform where we send an SMS, and the patient opens that SMS and joins through a link. Or that they open our app, the Capio app, and we can communicate when we need to be in contact. So the patient gets a link they open, and there they get the form or other written information. And we try to talk to all our patients about this and, in that way, get them to try it. It requires that they have Mobilt BankID [Swedish electronic identification system] so that they can identify themselves, but most people have that today, so it is rarely an obstacle.

Instead, it is more that patients are hesitant, perhaps a bit afraid, to open links that come via an SMS or in an app. Almost everyone is afraid of being scammed.

David Törnered

Exactly. Really. I can imagine for myself if I get a link… if you have the app, then you can go in through there, but pressing a link directly in an email or SMS, I understand it may feel uncomfortable.

Stefan Bremberg

Yes, one can definitely be hesitant about that. Yes. Then we have this both in writing and sometimes also on our TVs in the waiting room, and so on, about these contact routes and these working methods. So we try to spread information in various ways and get patients on board on this journey.

David Törnered

I saw a campaign about this recently regarding Capio Go, which I understand is now part of Capio Proximity Care, but that there has been a lot of marketing during the recent months about “always being there” and so.

Yes, we need to quickly move on because I want to respect your time. We have 3.5 questions left…

Stefan Bremberg

We will manage.

David Törnered

Absolutely! Do you think our digital working methods lead to the patient getting both a better overview AND control over their own health and treatment, and in what ways?

Stefan Bremberg

Yes, I believe they do. Partly because we now have more direct communication. That is what I mentioned about the written part – that we send forms that patients respond to, and we take in the information. We can also communicate treatment advice and other things through the platform. We have a knowledge support system called Medibas, where we can send links to patient information via Flow. It can be exercising advice or information about why the patient has certain issues, and so on. So basic medical information, almost like medical education in everyday medicine, home remedies, and so on. So there it actually provides a lot of opportunities to communicate and educate our patients.

David Törnered

Yes, but that is just it. It is opportunities that are given, but one cannot do more than that. It is, of course, up to each individual in how engaged they want to be in their own care journey, even if this enables it.

Stefan Bremberg

It enables. But you can also work interactively in a resource-efficient way with patients and give them a bit of coaching and support continuously through the Flow platform. We are now running "Capio livsstil" [Capio lifestyle] and there we have seen it a bit in the system, that is, trying to help with behavior changes and lifestyle changes. Diet, exercise, mental health, and so on. And it becomes very resource-efficient when delivered this way, and perhaps it is even run in group treatments, and then it becomes even more efficient. And at the same time, it can be a good support for patients to see that they are not alone with their conditions.

David Törnered

Very exciting. Digitalization then, if we talk about the coordination of care and the transition between care units within Capio, how would you say digitalization has facilitated this?

Stefan Bremberg

Yes, then we can work through Network. And we can also move patients on weekends and evenings. And at nights, it is theoretically possible too. There, we can handle the medical problems we can help with entirely digitally. And that can be a clear and good relief for the health centers, if, for example, they suddenly have many sick or many who are on parental leave, so another health center or Capio Go can help and support. So this "Networking" is there where health centers, without having a central unit that controls everything and then allocates it, instead help each other. And if something comes to Capio Go that requires physical contact, we can easily move that case and patient to the patient's health center.

David Törnered

It sounds like Network allows for more efficient allocation of resources, ensuring that no health center is sitting idle while another is overloaded. It sounds very good.

Stefan Bremberg

Yes, resource optimization, you could call it.

David Törnered

Exactly. I must go back to what you previously said about providing coaching and support through Flow and then also in groups. I am just a bit curious about how you get consent from

the patient or how they end up in that group contact, so to speak? I mean, some patients might not want to…

Stefan Bremberg

No, you can never force them to sit in a group and discuss or take part in information and interact. But most patients still find it quite nice to do this in a group. We, of course, obtain the patient's consent for that. We do not put them in a group without them saying "yes" to it.

David Törnered

Instead, is it more – "we have some other patients with similar issues, some want to talk about it with others, are you okay with that?"

Stefan Bremberg

Yes. Or that we say, as in the example with "Capio livsstil", that our way of working here is based on having smaller groups where we have a dialogue. And then the patient can participate if you want. If not, then maybe "Capio livsstil" cannot offer anything for them, as they only have these group interventions. Then the patient has to go back to the health center and meet individually instead. So it is not suitable for all patients, but most accept it.

David Törnered

Yes, as we have touched upon before, based on their conditions, needs, and preferences.

Stefan Bremberg

Yes.

David Törnered

1.5 questions left then, we have solved this with flying colors, Stefan. I have had some difficulty knowing what I am allowed to publish in terms of, for example, internal numbers linked to the National Patient Survey, but if we still talk about quality… what parameters do you think are used to measure the success of digital work methods measured in person-centered care, and if you are to speculate – do you think or even know and are allowed to say – that the quality has increased as a result of Capio's digi-physical working methods?

Stefan Bremberg

Yes, I can say that I think… or no, I do not just "think," but I know that we have improved our medical results through the digi-physical working methods. And especially with the care provider-initiated contacts. There we can see that we have better control over our patients with COPD, better control over the patient with hypertension. We will certainly also get better control over our patients with diabetes and heart failure, maybe even kidney failure and so on. This is because we do not as easily "lose" patients and test results when we work in this systematic way with care-initiated contacts and follow-ups. So there we get a better medical quality in the long run. But this is something that takes a long time to directly demonstrate. We can probably also see in Capio Go that we have reduced antibiotic use compared to what is seen at the health centers, as one is significantly stricter in adhering to Strama's criteria [organization working for a responsible usage of antibiotics] for antibiotic prescription due to, for example, ear infections, and especially for sore throats, tonsillitis, and urinary tract infections. We have very detailed process descriptions for how we ensure a diagnosis and treatment through the digital. And we do not have the same level of adherence when we meet patients physically at the health center, so it also becomes better quality from an antibiotic perspective.

David Törnered

But what you started by saying about chronic diseases, is that the CROM results we are talking about, just so I understand?

Stefan Bremberg

Yes, it is test results, medical indicators for chronic diseases. I also believe in the long run, we can get better perceived quality of life.

David Törnered

And linked to PROM?

Stefan Bremberg

Yes, PROM measures concern quality of life. We in healthcare are generally not very good at following patient-reported outcomes, PROM. But the perceived quality of life is an important aspect here, and patient security is another aspect that is not really highlighted in the national patient survey. Security is not directly formulated, but it is turned around and has other formulations in those questions. But in the long run, hopefully, also the number of healthcare contacts the patient has will be included, because a more secure patient has fewer healthcare contacts.

David Törnered

Really exciting. I think we could have talked for an hour only regarding this. But I really want to respect your time, so finally, where it is completely your time that decides…

Stefan Bremberg

I will answer your last question too, of course.

David Törnered

Great, thanks. Five minutes, max. Is there anything you want to add that is extra important for understanding Capio's digitalization work and how this promotes person-centered care?

Stefan Bremberg

That was a big question that is not easy to further answer.

The goal is that our patients should feel better and that they should find it easier to contact us. That is the patient's perspective in this as I see it.

And then we have the employee's perspective, which is that it should be as easy as possible to do the right thing when having contact with their patients.

Probably, with a more digitalized health center work, we will have more patient contacts per day, but they will be shorter and hopefully also much more structured than they have been so far. So even if we handle more patients, that the flow increases, we do not experience it as any increased burden, or that it would be become a deteriorated work environment. Sometimes it can be that the less someone has to do, the better the work environment, but I actually believe that with a well-functioning digital working method and a good support system, we can combine a good work environment and a relatively high flow.

David Törnered

Yes, and a final comment on that… since it all depends, for example, on the diseases the patient has… all individuals living with their respective chronic diseases that they struggle with every day, but still maintain contact healthcare once a year. Say, it is that type of chronic care that is provided. Yes, then two smooth digital visits can be more beneficial for the patient, I think, than one concentrated meeting where the patient may not quite remember what was said, and then having to continue while struggling entirely on their own.

Stefan Bremberg

Yes.

David Törnered

Then I want to take the opportunity to thank you so much for these valuable insights, and for the important work you do every day.

Stefan Bremberg

No, thank you.

David Törnered

I will send the finalized report and you are more than welcome to read it through if you are interested. But I do not expect it. Regardless, I will send it, and it will be ready by summer.

Stefan Bremberg

That sounds great, David. I wish you the best of luck. If there is anything that comes up when you are summarizing this, please reach out via email or phone, and we will try to clarify any uncertainties.

David Törnered

Wonderful, thank you so much. Have a great week.

Stefan Bremberg

Thank you, likewise. Take care!

Appendix C: Coding for Thematic Analysis

Identified Codes	**Resultant Theme**
Capio's Operating Model, Digital Strategy Integration, Digi Physical Healthcare, Implementation and Utilization of Digitalization, Person-Centered Care, Role and Impact of Digital Platforms	Strategic Implementation of Digitalization in Healthcare
Digital Tools as Facilitators, Digitalization Equals Digital Working Methods, Limiting Platform Dependency, Operational Efficiency, RPA, Streamlining Administrative Tasks, Synchronizing Platforms	Digital Working Methods Supporting Operational Efficiency

Identified Codes	**Resultant Theme**
Continuity Based on the Patients' Narrative, Digital Working Methods Facilitate Patients' Social Support Network, Digital Working Methods Resulting in Proactive Care, Education and Training for Optimized Digital Tools, Enhanced Communication, Improved Documentation, Individualized Care, Patient Autonomy, Patient Empowerment, Patient Involvement, Person-Centered Approach, Platforms Improve Patients' Access to Care, Seamless Care, Staff Engagement	Delivering Person-Centered Care Through Digitalization
Ambassadors Promoting Successful Initiatives, New Digital Initiatives Both Internally and Externally, Pilot Projects	Innovating and Implementing New Digital Initiatives