MASTERARBEIT | MASTER'S THESIS

Titel | Title

The Health Platform: An Epic Challenge
A Case Study of Barriers to Acceptance of Electronic Health Records in the Healthcare Sector in Central Norway

verfasst von | submitted by

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angestrebter akademischer Grad | in partial fulfilment of the requirements for the degree of

Master of Arts (MA)

Wien | Vienna, 2025

Studienkennzahl lt. Studienblatt | Degree programme code as it appears on the student record sheet:	UA 066 906
Studienrichtung lt. Studienblatt | Degree programme as it appears on the student record sheet:	Masterstudium Science-Technology-Society
Betreut von | Supervisor:	Univ.-Prof. Dr. Ulrike Felt

Abstract

This research explores the dynamics behind the resistance and acceptance that emerge in the many complex and multifaceted interactions between the Health Platform (*Helseplattformen*) and healthcare professionals in Central Norway. The integration of the platform has been a visible challenge in Norwegian healthcare for some years, and still poses ongoing conflicts. The thesis aims to increase our understanding of how large-scale digital health systems, like the Health Platform, are experienced and negotiated by healthcare professionals in practice. Thus, it explores how healthcare professionals interact with the internal logics of the Health Platform, how they collaboratively redefine vocational roles and care practices, and how narratives of digitalization in the healthcare sector interact with the rollout of the platform. The analysis is inspired by the stepwise-deductive-inductive method, based on semi-structured interviews with healthcare professionals of different vocations in Central Norway. The thesis offers a nuanced understanding of digitalization as a multifaceted, context-dependent process, shaped by systems and policies, as well as by the everyday experiences, judgments, and negotiations of healthcare professionals.

Abstract (DE)

Diese Forschungsarbeit untersucht die Dynamik hinter dem Widerstand und der Akzeptanz, die in den vielen komplexen und vielschichtigen Interaktionen zwischen der Gesundheitsplattform (Helseplattformen) und den Angehörigen der Gesundheitsberufe in Mittelnorwegen entstehen. Die Integration der Plattform in das Gesundheitswesen entfachte schon seit einigen Jahren Diskussionen und Spannung. Diese Masterarbeit zielt darauf ab, das Verständnis dafür zu verbessern, wie groß angelegte digitale Gesundheitssysteme, wie die Gesundheitsplattform, von Beschäftigten im Gesundheitswesen in der Praxis erlebt und verhandelt werden. Dementsprechend untersucht diese Forschungsarbeit, wie Beschäftigte im Gesundheitswesen mit den internen Logiken der Gesundheitsplattform interagieren, wie sie gemeinsam berufliche Rollen und Pflegepraktiken neu definieren und wie Narrative der Digitalisierung im Gesundheitswesen mit der Einführung der Plattform interagieren. Die Analyse basiert auf der schrittweise-deduktiv-induktiven Methode, die anhand semistrukturierten Interviews mit Beschäftigten im Gesundheitswesen aus verschiedenen Berufen in Mittelnorwegen ausgeführt wird. Die Arbeit bietet eine ausführliche Analyse der Digitalisierung als einen vielschichtigen, kontextabhängigen Prozess, der von Systemen und Maßnahmen sowie von den alltäglichen Erfahrungen, Einschätzungen und Verhandlungen der Fachkräfte im Gesundheitswesen geprägt ist.

Acknowledgments

First, I would like to thank my supervisor, Ulrike Felt, for her invaluable guidance and support throughout the research and writing process. Her insightful feedback and impressive knowledge have been instrumental in shaping my thesis. Thank you to the interviewees who took time out of their otherwise busy days to share their experiences, thoughts, and opinions with me. I would also like to extend my gratitude to those who helped me come in contact with the participants, providing me with a diverse group of interviewees.

I would like to express my appreciation to my peers and colleagues, whose discussions and feedback have greatly enriched my academic journey. Further, I have found great support, motivation, and highly necessary breaks with my friends. This has meant a great deal to me, and the Viennese experience would not have been the same without them. All appreciated, even if unnamed. I wish them all the best of luck. Lastly, I am very grateful to my family for their unwavering support, patience, and belief in me. Their love and encouragement have been my greatest motivation.

Vienna, 2025

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1. Introduction and Research Question

As the eighth rule of the Norwegian Mountain Code dictates, “Don’t be ashamed to turn around” (*The Norwegian Mountain Code*, n.d.). The Code is directed toward people’s safety, and it is ingrained in Norwegian culture. The rule dictates that you should assess your route, and if conditions worsen, select the best alternative well before you become exhausted. Have the conditions changed? Is anyone struggling to complete the route? Should you turn around (*The Norwegian Mountain Code*, n.d.)?

At the beginning of 2025, the Centre Party (*Senterpartiet*) exited the Norwegian government due to disagreements with the Labour Party (*Arbeiderpartiet*) over the implementation of EU energy directives (Haugen, 2025). The Centre Party opposed the Labour Party’s stance on these directives, which led to the party’s decision to leave the coalition. Following their departure, the topic of the Health Platform in Central Norway was once again brought up in the Norwegian parliament (*Stortinget*). The Health Platform is a comprehensive digital health platform designed to unify and streamline healthcare information systems within a regional healthcare trust in Norway, namely Central Norway. It aims to improve patient care by providing healthcare professionals with seamless access to integrated electronic health records (EHR), enhancing coordination, efficiency, and decision-making. This time, the topic was brought up as a proposal to investigate whether the system should be abandoned. The proposal involved a request for the government to assess the consequences of terminating the contract and phasing out the Health Platform, compared to continuing its implementation (NTB & Kleven, 2025). The proposal also called for an evaluation of alternative EHRs (NTB & Kleven, 2025).

As one of the largest health IT projects in Norway, the Health Platform plays a crucial role in modernizing healthcare delivery through digital innovation. The aim of the Health Platform aligns with the central aims of the European Health Data Space (EHDS), a cornerstone of the European Health Union (European Commision, 2025). The EHDS is an initiative by the European Union (EU) aimed at creating a unified digital framework for the secure access, exchange, and use of health data across EU member states. It supports better healthcare delivery, cross-border access to medical records, and the use of health data for research and public health, all while ensuring strong data protection (European Commision, 2025). Although Norway is not an EU member state, its participation in the European Economic Area (EEA) means that it closely aligns with many EU regulations and initiatives, including those related to digital health and data governance. The Health Platform has not been expressed as a project directly tied to the EHDS initiative, but it shares similar features and goals. There is growing interest among Norwegian companies to align with the EHDS because it opens the door to a large and harmonized health data market across the EU and EEA. By meeting EHDS standards for interoperability, security, and data governance, Norwegian health technology and data-driven companies can more easily scale their solutions across borders, collaborate with European partners, and access valuable health data for innovation and research. Participation in the EHDS framework strengthens their competitiveness, fosters trust in their solutions, and ensures long-term relevance in a rapidly evolving digital health landscape. Therefore, aligning with the EHDS allows health technology companies to contribute to and benefit from a unified European ecosystem that prioritizes responsible data use, improved healthcare outcomes, and economic growth. However, the Health Platform has faced significant criticism due to technical issues, delays, and concerns over its ability to meet the needs of healthcare professionals and patients.

The central debate surrounding the Health Platform in Norway has focused on concerns regarding its functionality, cost-effectiveness, and patient security. Critics argue that the platform's complexity and the substantial investment required may not yield the expected improvements in efficiency (Haugen, 2025). Healthcare professionals have organized demonstrations, with signs stating that the Health Platform risks patient security, and "don't be ashamed to turn around" (NRK, 2023). On the other hand, supporters of the platform say that it is crucial for the future of Norway's healthcare system, despite the challenges encountered during its rollout (Haugen, 2025). The debate has centered on whether to continue investing in the platform, attempt further adjustments, or abandon it entirely in favor of alternative solutions (Haugen, 2025).

Still, the proposal to investigate whether the system should be abandoned was rejected on February 18th by a one-vote margin (Haugen, 2025). Ola Borten Moe voted against his own party, the Central Party, and argued that we have come too far to turn around. "[We] are at a point where we have spent nearly seven billion [NOK] on this project. It has been implemented. It has been implemented in almost the entire healthcare system. And, Mr. President, it is a bit like we have built a road 90% complete, and then we say that we are not satisfied with the route choice and will choose another route afterward." The eighth principle of the Mountain Code emphasizes the importance of reassessing one's path and having the courage to retreat when necessary, especially for safety and caution. However, Borten Moe justifies continuing the rollout of the Health Platform by calling upon the perceived impracticality of changing direction after significant investments. The analogy of a road being close to complete reinforces this mindset, suggesting that abandoning the effort at such a late stage would be irrational, even if the chosen route may not be the best. This perspective prioritizes completion over critical reassessment, which is precisely what the Mountain Code cautions against. By implying that turning back is not a viable option, the quote reveals a reluctance to acknowledge or act on the possibility that a different path might be wiser, thus contradicting the Mountain Code's philosophy of humble and cautious decision-making in the face of changing circumstances. Although the proposal was rejected, a separate resolution mandates a comprehensive review of the Health Platform to be conducted in 2026 (NTB & Kleven, 2025).

This thesis explores how healthcare professionals interact with the Health Platform, with a particular focus on the dynamics of resistance, acceptance, and everything in between that unfold throughout its implementation. A key understanding for the study is that digitalization in healthcare is not a straightforward or purely technical process, but one that is shaped through ongoing negotiations between technology and professional practice. Firstly, the overall case of the Health Platform is introduced, providing a picture of the initial aim and intentions of the system. Here, the overarching research question will be presented, and the aim of the study explained. Then, current research is presented, linking the Health Platform to cases of electronic health records in other European countries, such as England, Finland, Denmark, the Netherlands, and Estonia. Later, different theoretical approaches are considered. The thesis will engage with co-production, sociotechnical imaginaries, frictions, the political dimensions of innovation and technologies, as well as the logic of care. The empirical data were gathered through semi-structured interviews and analyzed using the framework of the stepwise-deductive-inductive method. The analysis begins by examining how healthcare professionals engage with the internal logics of the Health Platform, how they respond to its structure, design assumptions, and embedded norms. The analysis then focuses on how these interactions contribute to the redefinition of vocational roles and care practices, exploring the mutual shaping of technology and professional identity. Lastly, the chapter zooms out to analyze how broader narratives of digitalization in the healthcare sector interact with and influence the rollout of the Health Platform at the local level. Together, the thesis offers a nuanced understanding of digitalization as a multifaceted, context-dependent process, shaped by systems and policies, as well as by the everyday experiences, judgments, and negotiations of healthcare professionals.

1.1. Case

The Health Platform (originally *Helseplattformen*) is a regional EHR system owned by the Central Norway Regional Health Authority and Trondheim municipality (Hertzum & Ellingsen, 2019, p. 314). The Health Platform was initially implemented in Central Norway as a pilot project to modernize healthcare management in the region, specifically within the healthcare enterprises in Trøndelag. The goal was to test the system in a defined area before considering its nationwide rollout, allowing for the identification and resolution of technical issues and challenges. Central Norway was chosen due to its manageable geographic scope, providing a more controlled environment for implementation and the opportunity to gather insights before expanding the system across the country. However, as the platform has faced immense criticism, the system remains limited to Central Norway (Hertzum & Ellingsen, 2019, p. 314).

The Health Platform was purchased in 2019 through a public procurement process, and the finalist was the American vendor Epic Systems (Epic) (Ringdal, 2023, p. 2). Epic is a comprehensive software suite that ranges from patient administration to systems for various healthcare professionals. For instance, physicians, nurses, and lab technologists. It also includes billing systems, integration with primary healthcare, and patient access to personal data. Epic was originally developed for the US market but has been implemented in Europe as well. The aim is to provide more efficient and high-quality healthcare by connecting primary and secondary healthcare through a common platform. “One Citizen – One Record” (Ringdal, 2023, p. 2). Further, the goal is to acquire and implement the Health Platform for the entire region of Central Norway (Hertzum & Ellingsen, 2019, p. 314). This encompasses all hospitals, nursing homes, general practitioners (GPs), and home-care services (Hertzum & Ellingsen, 2019, p. 314). Currently, this has not yet been realized.

In 2019, the Central Norway region comprised around 40,000 healthcare professionals and a population of approximately 720,000 (Hertzum & Ellingsen, 2019, p. 314). Trondheim has three hospitals, of which the largest is the university hospital, St. Olavs Hospital. St. Olavs Hospital was already highly digitized, but many of its existing systems were replaced by the Health Platform. The level of digitization varies significantly among GPs, nursing homes, and home-care services, where GPs in particular already have well-functioning systems in place (Hertzum & Ellingsen, 2019, p. 314).

The platform was intended to serve as a comprehensive tool for managing patient data, enabling healthcare professionals to access up-to-date medical records, prescription details, lab results, and other vital health information in real time (Hertzum & Ellingsen, 2019). This was expected to reduce errors, improve efficiency, and create a more patient-centered approach to care (Sand et al., 2023, p. 2). However, the Health Platform has been surrounded by significant controversy and criticism since its initial phases. The main concerns have centered on patient safety, costs, delays, and technical difficulties. The project has faced numerous setbacks, including budget overruns and ongoing technical challenges (Riksrevisjonen, 2024). Healthcare professionals, in particular, have voiced frustration with the platform's usability, claiming that it has been difficult to navigate and has not lived up to its promises of improving workflow or easing administrative burdens (Riksrevisjonen, 2024). Additionally, some worry that the project may undermine the autonomy of regional healthcare systems, as it imposes a one-size-fits-all solution on diverse healthcare needs and practices across the region.

In recent debates, the Norwegian government and health authorities have defended the platform, arguing that the long-term benefits of a unified system will outweigh the initial challenges. They claim that the Health Platform is a crucial step towards ensuring the long-term sustainability and adaptability of the Norwegian healthcare system, increasing responsiveness to new medical technologies and practices. However, the ongoing issues with the implementation have led to calls for a reevaluation of its approach. The controversy continues to be a major topic of discussion within both the healthcare and political spheres in Norway.

1.2. Research Question

The aim of my thesis is not to assess whether the decision to implement the Health Platform in Central Norway was the right one. Nor is it to judge whether the system is objectively “good” or to pinpoint what is objectively “wrong” with it. The aim is to further our understanding of the dynamics behind the resistance and acceptance that emerge in the many complex and multifaceted interactions between the Health Platform and healthcare professionals. What are the underlying frictions that come into play? What is *really* the problem when healthcare professionals complain about unnecessary “clicks”? What impact does the Health Platform have on the practice of care?

Within the field of healthcare information technology, the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) are viewed as a golden standard for understanding and assessing the level of technology adoption (Ammenwerth, 2019; Lee et al., 2025). Within these two quantitative models, acceptance is portrayed as a precursor to adoption (Ammenwerth, 2019). As shown by Elske Ammenwerth, TAM and UTAUT respectively refer to adoption of technology as "actual use" or "use behavior." Thus, the technology at hand would not be utilized unless the surrounding actors had already accepted it and its presence. Acceptance, on the other hand, is characterized by perceived usefulness and perceived ease of use. UTAUT adds to this by highlighting performance expectancy, effort expectancy, social influence, facilitating conditions, gender, age, experience, and voluntariness of use. Based on TAM and UTAUT, adoption can be considered the decision to begin using a new technology based on its acceptance, which is influenced by how useful, easy to use, socially supported, and accessible it is. Together, TAM and UTAUT show that technology adoption is influenced by both personal beliefs and external factors (Ammenwerth, 2019).

Although the TAM and UTAUT models have become widely used in the field of health informatics, they have been criticized for their inconsistent ability to predict the acceptance and use of medical technologies (Lee et al., 2025). This inconsistency largely stems from significant limitations that arise when these models are applied to complex healthcare environments. Notably, they often overlook essential factors such as cultural diversity, trust, and regulatory constraints. Furthermore, a common critique is their portrayal of adoption as a straightforward, linear process that depends solely on prior acceptance of the technology, which oversimplifies the realities of implementation in healthcare (Lee et al., 2025).

Researching the dynamics behind the resistance and acceptance that emerge in the complex interactions between the Health Platform and the healthcare professionals can result in some valuable insight moving forward. First, these dynamics can further our understanding of how large-scale digital health initiatives are received, beyond policy intentions and technical implementations. Understanding why some professionals embrace the system while others resist it can reveal critical factors that influence the adoption process. Second, these interactions are embedded in broader institutional, cultural, and organizational contexts that shape how technology is negotiated and used in practice. Studying them can uncover structural or relational barriers to successful implementation, helping to inform more adaptive and responsive strategies for future health IT projects. Lastly, as digitalization continues to transform healthcare globally, examining a case like the Health Platform provides valuable lessons about the social processes that underlie technological change in sensitive and high-stakes environments. It highlights that resistance is not merely an obstacle, but a meaningful expression of professional concerns that must be understood and addressed. Therefore, the overarching research question for this thesis is: *How do interactions between healthcare professionals and the Health Platform shape and reflect evolving forms of resistance and acceptance?*

The Health Platform is not a neutral tool. It is built on specific assumptions about efficiency, standardization, documentation, and care coordination. These assumptions are embedded in the platform's design, interfaces, and workflows. Investigating how healthcare professionals engage with these logics, whether by adapting to them, resisting them, or working around them, offers valuable insight into the practical consequences of digital health infrastructures. It also sheds light on how professional knowledge, judgement, and routines are either supported or challenged by the system, revealing the tensions that can arise when technological rationalities meet the complexities of human-centered care. Thus, the first sub-research question guiding this thesis is: *How do healthcare professionals interact with the internal logics of the Health Platform?*

Rather than viewing the Health Platform as a passive tool and healthcare professionals as mere users, we must recognize them as active agents in an ongoing negotiation. As the Health Platform is implemented, it inevitably influences how care is organized, how responsibilities are distributed, and how professional identities are understood. Simultaneously, healthcare professionals interpret, adapt, and sometimes resist these changes, thereby shaping how the system is used in practice. Exploring this co-constitutive relationship can reveal how new forms of collaboration, accountability, and care emerge, as well as how practices are reconfigured, in response to digitalization in the healthcare sector in Central Norway. Therefore, the second sub-research question guiding the study is: *How do healthcare professionals and the Health Platform collaboratively redefine vocational roles and care practices?*

Narratives of digitalization, such as promises of efficiency, improved patient outcomes, modernization, and innovation, play a powerful role in justifying and guiding large-scale technological initiatives like the Health Platform. These narratives influence expectations, frame the perceived purpose of the system, and legitimize certain choices while marginalizing others. At the same time, the lived experiences of healthcare professionals during the rollout may reinforce, challenge, or reinterpret these narratives. Investigating this interaction helps uncover the symbolic and political dimensions of digital transformation in healthcare and highlights how grand visions of progress are negotiated, resisted, or reimagined in everyday clinical practice. Thus, the last sub-research question guiding this research project is: *How do narratives of digitalization in the healthcare sector interact with the rollout of the Health Platform?*

2. State of the Art

The digitalization of healthcare in recent decades has led to significant transformations in the delivery, organization, and experience of health services. Introducing digital health platforms, EHRs, artificial intelligence (AI) in medical decision support, and self-monitoring via mobile applications has created new opportunities and challenges. Science and Technology Studies (STS) provide analytical tools to examine how these technologies are not merely neutral instruments but are embedded in complex sociotechnical systems where power, responsibility, and knowledge about health are continuously negotiated. This chapter provides an overview of key themes and findings from STS research on digital health.

Firstly, the chapter explores how e-health services have been implemented and received in the Nordic welfare states. As technological tools are often considered to carry political values, the chapter dives into how this interacts with the fundamentals of the Nordic societal models. The chapter then explains what electronic health records are and their potential in digital healthcare. Further, cases of electronic health records in different national contexts are illustrated, namely England, the Netherlands, Finland, Denmark, and Estonia. Lastly, accounts of healthcare professionals with different national and vocational backgrounds are presented, including how they experience digitalization to shape their work and provision of care.

2.1. Digital Health Services in the Nordic Welfare States

From the outset, technology has been integral to the development of the welfare state, particularly information and communication technologies (Dencik & Kaun, 2020). It has played a crucial role in shaping bureaucratic structures and systems for managing populations, which have long been central to the administration of welfare services. The early establishment of citizen databases and population monitoring is considered crucial for assessing societal needs and allocating resources effectively. At the same time, digitalization has also been seen as a challenge to the welfare state, as it disrupts labor relations, undermines social security structures, and reshapes state governance – characteristics that are integral to the state model (Dencik & Kaun, 2020). In Denmark, the welfare state has traditionally been characterized by values of trust, universal access, and collective responsibility (Jørgensen, 2023). However, Rikke Jørgensen (2023) argues that the increasing reliance on digital infrastructures and automated decision-making systems marks a shift toward a more technocratic and surveillance-oriented model of governance, which challenges these foundational principles.

Klaus Hoeyer (2019) argues that digitization is a technical development as well as a process of creating new roles, responsibilities, and expectations. He claims that we are entering a new phase of digitalization, where data centralization enables broader data sharing for an expanding range of purposes. Among these, facilitating personalized treatment and prevention stands out as a key objective of this evolving digital infrastructure. As a result of increasing and expanding problems related to budget restraints and demographic challenges, public authorities have turned to intensified data sourcing. Intensified data sourcing refers to the increased collection and utilization of data from multiple sources on a larger scale and at a higher frequency. In the context of digital health, it involves gathering health-related data from different inputs such as electronic health records, mobile health apps, genomic databases, and social determinants of health. This process aims to enhance healthcare analytics, personalized medicine, and predictive modeling, but also raises concerns about data privacy, security, and the ethical implications of large-scale health data utilization. Hoeyer exemplifies this through the case of personalized medicine in Denmark. He describes the nation as characterized by an elaborate IT infrastructure, digitized health services, and national registers containing detailed data of all citizens. This is also the case for the other Nordic countries (Hoeyer, 2019, p. 534).

Further, Denmark has a high degree of cultural acceptance and trust concerning digital services and data, as well as in their government (Hoeyer, 2019, p. 534-535). Ideals of standardization and digitalization initiatives to reform and sustain existing levels of care (Hoeyer, 2019, p. 535). This is echoed by Andreassen et al. (2024). The Nordic welfare states are defined by a strong public trust in institutions, which plays a crucial role in fostering broad acceptance of extensive data collection. In the Nordic countries, comprehensive datasets already exist for all citizens, encompassing information on health, education, employment, and other aspects of life. The vast and growing volume of collected information presents significant potential for large-scale digitalization. The Nordic countries are actively pursuing digitalization as a means to enhance public administration and welfare services. This effort extends beyond digitizing physical records to implementing digital automation in decision-making processes. Denmark, Sweden, and Finland all aim to be leading nations in the use of AI in public services, defining official national strategies and referring to themselves as leaders and vanguards (Andreassen et al., 2024, p. 209). Norway presents a similar strategy, saying that they have one of the most digitalized public sectors in the world and that they must continue to build on their advantages in the development and application of artificial intelligence (Digitaliserings- og forvaltningsdepartementet, 2019). Additionally, the World Health Organization (WHO) has recently referred to Norway as "leading by example" in the case of telehealth (World Health Organization, 2024). The WHO defines telehealth as the provision of healthcare services in situations where patients and providers are geographically distant. This can include video consultations, remote monitoring via wearable devices, or the management of chronic conditions through mobile health apps. Telehealth can play a key role in achieving universal health coverage by enhancing access to high-quality, cost-effective healthcare services, regardless of location. It offers a valuable solution for individuals living in remote areas or those with disabilities, ensuring broader accessibility (World Health Organization, 2024).

2.1.1. Reshaping the Welfare State

Consequently, public administration increasingly utilizes data collection and algorithms to make autonomous decisions, promotes fairness by reducing human interference and errors, and manages operations more efficiently (Dencik & Kaun, 2020, p. 2-3). Often, it is done under the promise of increased efficiency, innovation, and cost-effectiveness (Kamp et al., 2019). These promises can be recognized in the neoliberal public sector reform. This shift mirrors the principles of New Public Management (NPM). NPM imports private-sector logics into public services and emphasizes performance, standardized outputs, and accountability mechanisms. This often comes at the expense of professional discretion and service quality (Hoeyer & Wadmann, 2020; Kamp et al., 2019). Kamp et al. (2019) demonstrate how welfare technologies enable greater managerial oversight. Welfare technologies are digital and technological tools designed to support the delivery of welfare services, particularly in healthcare, eldercare, and social work. These technologies aim to improve efficiency, safety, quality of life, and cost-effectiveness in public and social services. Still, they lead to the fragmentation of care tasks, they get tracked and evaluated through digital systems. This allows managers to monitor staff performance in real-time and optimize resource allocation (Kamp et al., 2019).

The rise of mass datafication, automation, and artificial intelligence has sparked a reshaping of the welfare state (Dencik & Kaun, 2020; Jørgensen, 2023; Kamp et al., 2019). The adoption of welfare technologies signals a shift away from its historical foundation in solidarity and universalism. It is moving toward a new regime in public services and welfare provision, one that is deeply embedded in digital infrastructures and gives rise to novel forms of control and support (Dencik & Kaun, 2020; Kamp et al., 2019). Jørgensen (2023) shows that as welfare services become increasingly mediated by data-driven technologies, public institutions gain unprecedented capacity to collect, store, and process personal information about citizens. This expansion of state surveillance, under the guise of efficiency and cost-effectiveness, reframes citizens as data subjects to be monitored, profiled, and managed. This transformation has profound implications for democratic accountability and social rights. As Jørgensen highlights, datafication introduces new logics of control and conditionality into welfare provision. Citizens are expected to comply through digital interfaces and may experience increased scrutiny, automation-induced errors, or exclusion from services if they fail to navigate complex systems. Thus, the rights-based foundation of the welfare state is being displaced by a data-driven regime where access to support is increasingly conditional, monitored, and dehumanized. Further, Jørgensen argues that these developments occur without adequate public debate or democratic oversight, raising concerns about legitimacy and fairness. The digitalization of welfare is not just a technical revolution; it is a political and ethical shift that redefines how the state sees and treats its citizens. Thus, the welfare state is moving from a system based on solidarity to a datafied regime of surveillance, efficiency, and risk management. This reconfiguration reflects a significant reshaping of the welfare state's purpose, mechanisms, and relationship with its citizens (Jørgensen, 2023)

Kamp et al. (2019) discuss how these changes lead to ethical tensions in care work, as well as concerns about the depersonalization and commodification of welfare services. While the collection and aggregation of information stem from longstanding processes of "modernization" and "rationalization" in public administration, the increasing datafication of social life is integrating specific data practices into these frameworks (Dencik & Kaun, 2020, p. 3). These practices encompass both the expanded sharing of data among various entities and actors and the emergence of new methods for decision-making and assessing population needs and risks. This transformation raises critical questions regarding the evolving nature of professional expertise (Hoeyer & Wadmann, 2020) and the policy approaches that may be either reinforced or undermined by these shifts. These concerns are particularly salient as public services increasingly move online, with some policies adopting a "digital by default" model. This shift has drawn attention to how it intensifies conditionality in social protection and introduces new forms of surveillance, which risk fundamentally reversing the traditional principle that the state should be accountable to the individual. This growing dependence on data-driven systems and algorithmic processing can be considered a paradigm shift within public administration. Within this framework, these technologies assume regulatory roles and establish themselves as a dominant force in delivering public services and social welfare (Dencik & Kaun, 2020, p. 3).

New forms of privatization are also emerging as part of these transformations, particularly through the involvement of new actors such as technology companies in public administration (Dencik & Kaun, 2020, p. 3; Kamp et al., 2019). These actors may not necessarily uphold the same values that define the professional identity of civil servants (Dencik & Kaun, 2020, p. 3). By enabling greater surveillance, task automation, and data collection, welfare technologies contribute to the managerialization of welfare services, like care work (Kamp et al., 2019). This means that frontline workers increasingly operate under strict protocols and performance indicators, reducing their professional autonomy and undermining the relational and ethical dimensions of care. The care relationship is traditionally rooted in empathy, trust, and individualized attention. However, with the introduction of more managerial technologies, the relationship is redefined through the logic of efficiency and technical optimization (Kamp et al., 2019). Public administration institutions have traditionally served as key intermediaries between the state and citizens (Dencik & Kaun, 2020). Therefore, changes in how these institutions are structured have significant implications for the relationship between the state and its citizens, as well as for democratic governance. These shifts not only reshape citizen-state interactions but also affect public trust in governmental and public-sector institutions, particularly when algorithms and autonomous systems increasingly drive decision-making. In this context, automated decision-making influences core public values that are integral to democratic governance, creating a "black box" effect around how the decisions are made, effectively decreasing the state's accountability. At the same time, citizens have minimal control over the technical infrastructures underpinning public administration. They are largely excluded from participating in the governance and design of these technologies, limiting their ability to engage in discussions about the values embedded within digital infrastructures and the broader digital culture (Dencik & Kaun, 2020).

Thus, the adoption of data-driven systems in public services is not just a question of efficiency and a larger volume of information sharing (Dencik & Kaun, 2020; Kamp et al., 2019). On the contrary, it is rather a transformation of fundamental, qualitative aspects of the welfare state (Hoeyer & Wadmann, 2020). The shift toward datafication should be understood as a form of policy intervention instead of merely technological advancements. Consequently, datafication should be recognized as a political development that shapes epistemological frameworks and societal definitions, influencing which values, logic, and responses are prioritized over others (Kamp et al., 2019). In this sense, the digital welfare state is subject to "politicization through technology," highlighting how technology shapes political decisions, power dynamics, and public policies (Dencik & Kaun, 2020).

2.2. Implementing Electronic Health Records in Digital Healthcare

An Electronic Health Record (EHR) is a digital version of a patient's medical history maintained by healthcare providers over time (Hertzum & Ellingsen, 2019). It includes comprehensive health information such as diagnoses, medications, laboratory results, and radiology images. EHRs aim to facilitate better coordination among healthcare professionals by allowing secure access to up-to-date patient data, improving decision-making, and efficiency in medical care. Unlike paper records, EHRs enable data sharing across different healthcare institutions, enhancing continuity of care and supporting public health initiatives (Hertzum & Ellingsen, 2019).

Among the main objectives of EHRs is enhancing collaboration between healthcare professionals (Vos et al., 2020, p. 2). As the symptoms of many patients, particularly among those with chronic diseases, are complex, they often require healthcare professionals with different specializations to collaborate. To ensure effective collaboration, sharing skills and knowledge, integrating information, and working as a united team is necessary. EHRs can help support coordination and collaboration and facilitate shared decision-making, and are considered a key factor in providing high-value care (Vos et al., 2020, p. 2). With access to a patient's healthcare data, physicians can promptly review their medical history, lab results, and other relevant information. However, EHRs have also been found to constrain medical work, including collaboration. Unanticipated challenges have emerged, such as alert fatigue, paper persistence, workflow mismatches, and time-consuming system demands. According to healthcare professionals, these problems can lead to reduced interpersonal patient care (Hoeyer & Wadmann, 2020), resulting in more troublesome collaboration (Vos et al., 2020, p. 2).

While the EHR enables healthcare professionals to coordinate patient care and make informed decisions anytime and anywhere, it limits access to patient records to asynchronous use (Vos et al., 2020). Additionally, the comprehensive patient file supports joint clinical decision-making through shared data, but specialized user interfaces make it challenging for different specialties to communicate effectively. Moreover, not all relevant information is easily shared across specialties or beyond the hospital. While reducing the need for in-person communication can save time, it is often seen as diminishing collective responsibility, which can disrupt the smooth flow of work. Furthermore, the EHR facilitates source-based registration and activity logging through orders, but the increased administrative burden on physicians and strict authorization rules regarding data entry restrict flexible, multidisciplinary collaboration. Finally, although the EHR provides a complete overview, information overload can occur due to the simultaneous creation of individual notes and frequent asynchronous communication, with messages of varying clinical priority. The authors highlight that EHR-enabled collaboration is influenced by contextual factors such as organizational policies, role authorizations, system representation, and how medical professionals utilize collaborative affordances (Vos et al., 2020, p. 9).

Even though EHRs are often introduced to improve coordination, access to patient information, and efficiency in healthcare delivery, both Hertzum and Ellingsen (2019) and Vos et al. (2020) acknowledge that their implementation has also brought a range of unintended consequences. Hoeyer and Wadmann (2020) recognize these consequences as symptoms of a broader shift in healthcare work caused by datafication, rather than mere technical glitches. They highlight how datafication leads to what they describe as "meaningless work." This refers to the experience of healthcare professionals who spend significant time documenting care activities to satisfy system demands, rather than engaging in the relational, interpretive, and often collaborative aspects of care. While these systems aim to streamline information sharing, they can undermine collective responsibility and hinder the informal, tacit knowledge exchange that is crucial in complex patient cases. Hoeyer and Wadmann emphasize that datafication is a form of governance that restructures healthcare work according to managerial logics. Issues such as workflow mismatches, role-based access constraints, and the strain on interdisciplinary collaboration reflect how these logics materialize in practice. Often, they do so in ways that conflict with the values and expertise of healthcare professionals. Thus, Hoeyer and Wadmann (2020) reveal how the datafication of health transforms systems and workflows, as well as redefining what counts as valuable work in healthcare, often at the expense of professional autonomy, meaningful care, and effective collaboration.

2.3. Cases of Electronic Health Records in Europe

Healthcare institutions in many developed countries are currently replacing their first-generation EHRs with large-scale EHRs, such as Epic (Hertzum et al., 2022). These systems promise increased rewards for the institutions but also pose increased implementation risks. Large-scale EHRs offer healthcare professionals customized views of a shared database to enhance information access, streamline communication, reduce data fragmentation, and improve overall oversight. However, adding more functionality increases the system's socio-technical complexity, raising the risks associated with implementation (Hertzum et al., 2022). EHRs are complex systems that directly impact care documentation and coordination while also influencing process efficiency, care quality, staff satisfaction, and hospital finances (Hertzum & Ellingsen, 2019, p. 312). They require alignment among departments, specialties, staff groups, and work processes. EHRs must correspond to many paper records and legacy systems to achieve proper integration. The complexity makes the integration of new EHRs a daunting task (Hertzum & Ellingsen, 2019, p. 312).

Continuing their strive to increase efficiency and sustain their existing levels of care, many of the Nordic countries have decided to go forward with large-scale EHRs (Hertzum & Ellingsen, 2019; Hoeyer et al., 2019). In 2016, Denmark decided to introduce a new EHR system at Herlev and Gentofte Hospital (HGH). The provider was the American company Epic. Before implementing the EHR, the Danish hospitals used a mix of paper forms and digital systems. Therefore, the vision for Epic was to eliminate paper records and combine multiple existing clinical information systems into a single integrated electronic health record (Hertzum & Ellingsen, 2019).

The primary expected benefits of Epic were increased efficiency in patient administration and clinical processes (Hertzum & Ellingsen, 2019). To realize these benefits, Epic had to be adapted to fit the Danish healthcare context. These adaptations included modifications to both the user interface and the underlying functionality. The implementation was the first in a series of rollouts introducing Epic across all hospitals in two of Denmark's five healthcare regions. The implementation adopted the "big-bang" approach recommended by Epic, meaning that HGH went live all at once rather than in phases. As did the subsequent implementations at other hospitals within these regions. Between these large-scale rollouts, designated periods were allocated for learning and adjustments (Hertzum & Ellingsen, 2019, p. 314). In 2018, Finland implemented Epic Systems at Peijas Hospital (Hertzum et al., 2022, p. 3). The project combined both health and social care records in the Helsinki-Uusimaa region, covering primary healthcare, specialized healthcare, and social care. The system would be used by 50,000 professionals and serve a population of 1.7 million citizens (Hertzum et al., 2022, p. 3).

In Norway, the Health Platform (produced by Epic) "went live" in 2022 at St. Olavs Hospital (Ringdal, 2023, p. 7). The Health Platform was initially implemented in Central Norway as a pilot project to modernize healthcare management in the region, specifically within the healthcare enterprises in Trøndelag (Hertzum & Ellingsen, 2019, p. 314). The goal was to test the system in a defined area before considering its nationwide rollout, allowing for the identification and resolution of technical issues and challenges. In 2019, the Central Norway region comprised around 40,000 healthcare professionals and a population of approximately 720,000 (Hertzum & Ellingsen, 2019, p. 314). Trondheim has three hospitals, where the largest is the university hospital, St. Olavs Hospital. The hospital was already highly digitized, but many of its existing systems were replaced by the Health Platform. The level of digitization varies significantly among GPs, nursing homes, and home-care services, where GPs, in particular, already have well-functioning systems in place (Hertzum & Ellingsen, 2019, p. 314). The total costs for the preparation, development, and introduction of the Health Platform in health enterprises, municipalities, and GPs were, as of October 2024, estimated at around NOK 6.7 billion (Riksrevisjonen, 2024). This equals about € 5.8 million.

Epic has also been integrated into other European healthcare systems outside of the Nordic (Hertzum & Ellingsen, 2019, p. 314). In the UK, it was launched at Cambridge University Hospitals (CUH) in 2014. Before the implementation of the EHR, CUH was minimally digital. They also decided to use the big-bang approach for implementation (Hertzum & Ellingsen, 2019, p. 314). Other European countries, like the Netherlands (Vos et al., 2020) and Estonia (Metsallik et al., 2018), have also implemented EHRs in their healthcare services. However, they have used different providers than Epic.

2.3.1. The Challenges of Implementing Electronic Health Records

As previously mentioned, the process of implementing an EHR system in the healthcare sector is no easy task. All three countries implementing the EHR provided by Epic experienced severe problems after the rollout (Hertzum et al., 2022; Hertzum & Ellingsen, 2019). HGH experienced unreliable messaging functions, patient security, malfunctioning integration with medical equipment, and delays (Hertzum & Ellingsen, 2019, p. 314). Training in the use of Epic began two weeks later than planned, only six weeks before the rollout. The compressed timeline resulted from delays in completing the training materials, which were delayed due to ongoing adjustments to Epic. Consequently, modifications continued after training had begun, leading many users to be trained in an environment that differed from the system they encountered at go-live. The testing of Epic also began later than scheduled. Critical technical tests were not conducted until a week before the rollout due to delays in the features that required testing. These tests were further complicated by known errors that had not yet been resolved, and identified new issues. Several critical errors emerged, which were not addressed until after the rollout. Additionally, the functional test to determine whether Epic met the specified requirements was postponed until five months after the rollout. Consequently, at the time of go-live, HGH had incomplete knowledge of existing defects. Two years later, the transition remained ongoing (Hertzum & Ellingsen, 2019, p. 312).

Similar to the Danish case, significant problems followed the implementation in Finland (Hertzum et al., 2022, p. 3). The transition in Denmark and Finland still faced challenges five and three years after their initial go-live, respectively. In Denmark, the business case and implementation process have been heavily criticized, as the progress in resolving usability issues and unstable system integrations has been slow. Clinical tasks take longer to complete, and 1/3 of users remain dissatisfied with the system. In Finland, technical performance did improve. Still, physicians and nurses report worse usability and less work support compared to their previous EHR. The reality of post-implementations in both Denmark and Finland has not met the expectations set before the process (Hertzum et al., 2022, p. 1). The full impact of using Epic only became clear after going live, leaving implementing organizations and users in a reactive position. Thus, they have to address issues when they arise instead of working to proactively realize benefits (Hertzum et al., 2022, p. 1).

In Norway, the Health Platform was intended to serve as a comprehensive tool for managing patient data, enabling healthcare professionals to access up-to-date medical records, prescription details, lab results, and other vital health information in real time (Hertzum & Ellingsen, 2019). This was expected to reduce errors, improve efficiency, and create a more patient-centered approach to care (Sand et al., 2023, p. 2). However, the Health Platform has been surrounded by significant controversy and criticism since its initial phases. The main concerns have centered on patient safety, costs, delays, and technical difficulties (Riksrevisjonen, 2024). The project has faced numerous setbacks, including budget overruns and ongoing technical challenges. Healthcare professionals, in particular, have voiced frustration with the platform's usability, claiming that it has been difficult to navigate and has not lived up to its promises of improving workflow or easing administrative burdens (Riksrevisjonen, 2024).

The UK also faced significant issues after the rollout of its EHR (Hertzum & Ellingsen, 2019, p. 312). The cost of the implementation also contributed to an overspend of approximately £1.2 million per week. As a result of the financial strain and subsequent inspections, CUH was placed under special measures in September 2015, and its chief executive was required to resign. The reason for these actions was that in some of CUH's services, "patient safety and welfare were placed at risk." That is, approximately one year after the go-live, CUH faced multiple and severe challenges rather than realizing the expected benefits from its implementation of the EHR (Hertzum & Ellingsen, 2019, p. 312). The Health Platform has received criticism regarding the same outcomes, and patient safety has been of particular concern (Riksrevisjonen, 2024). However, despite initial challenges, Epic has now reached routine use at CUH (Hertzum & Ellingsen, 2019, p. 312). The Care Quality Commission conducted a second inspection at CUH in September 2016, nearly two years after the Epic system was implemented. By this time, CUH services had improved to a "good" rating. The inspection report, explicitly referencing Epic, stated that staff have easy access to clinical records, that significant modifications had been made, and that previous concerns have been addressed. These improvements were partly due to CUH staff's increased familiarity with Epic, but also included the integration of all patient administrative and clinical information. With Epic, paper records were eliminated and no longer needed to be retrieved when required. This alone saved CUH an estimated £460,000 annually in staff time. Additionally, all patients wore barcoded wristbands linked to Epic, enhancing patient safety by reducing the risk of misidentification (Hertzum & Ellingsen, 2019, p. 312).

These accounts of delayed rollouts, persistent technical issues, and usability failures reflect more than the technical and logistical challenges of large-scale digital health projects. It also reflects deeper structural tensions (Hoeyer et al., 2019; Hoeyer & Wadmann, 2020). The widespread dissatisfaction among healthcare professionals in Denmark and Finland, the usability concerns in Norway, and the severe disruptions initially experienced in England all underscore how EHR systems restructure clinical workflows around data entry and documentation (Hoeyer & Wadmann, 2020). These systems frequently impose rigid interfaces and standardized processes that may conflict with the flexibility, judgment, and relational aspects of healthcare work. In these cases, rather than supporting professionals, the EHR becomes a source of friction, slowing down tasks and undermining clinical autonomy (Hoeyer & Wadmann, 2020). Further, in the cases cited, implementing organizations operated under assumptions that digitization would automatically lead to improved coordination, financial savings, and better patient outcomes. Still, as Hoeyer et al. (2019) argue, datafication introduces new forms of accountability and control that may not align with clinical logic or everyday practices. Instead of supporting staff, these systems often embed surveillance and audit mechanisms that prioritize traceability and metric-based performance over professional expertise and care quality. This dynamic is visible in the way technical errors and workflow disruptions continued for years after rollout, with healthcare professionals having to adapt reactively to problems that could not be resolved through training or system alterations alone (Hoeyer et al., 2019). Healthcare professionals are made responsible for using complex digital systems effectively, while often lacking meaningful input in their design or implementation. They are increasingly held accountable through digital systems that demand standardized documentation and traceable actions. However, these systems often fail to support the complexity of actual clinical work. This results in healthcare professionals being responsible for meeting institutional data and accountability demands, while lacking the flexibility to act on their own judgment. This disconnect creates what Hoeyer and Wadmann (2020) describe as a loss of meaning and autonomy in healthcare work. Finally, while the implementation of Epic at CUH eventually led to some measurable benefits, such as financial savings and improved ratings, this outcome came only after significant disruption, financial strain, and staff adaptation (Hertzum & Ellingsen, 2019). This underscores Hoeyer et al.'s (2019) argument that datafication does not simply optimize systems; it transforms them. Improvements were linked to users' growing familiarity with the platform, as well as system modifications. This suggests that it is the work of adaptation by staff, rather than the technology itself, that makes the EHRs function effectively over time.

2.3.2. Pitfalls regarding the Electronic Health Records Implementation in Norway

As demonstrated, Epic faced significant challenges during its initial rollout in the UK, Denmark, and Finland (Hertzum et al., 2022; Hertzum & Ellingsen, 2019). For instance, system malfunctions, integration issues with other clinical systems, disruption in patient care, and declines in performance. In Norway, experiences, especially from Denmark, were carefully considered in planning the rollout of the Health Platform. The dominant expectations were that the system would improve efficiency and patient care. However, Hertzum and Ellingsen's (2019) analysis discusses six pitfalls that could hinder these benefits: 1) higher organizational complexity, 2) tensions between deadlines and clinicians, 3) uncertainty tied to a formal decision structure, 4) a need for committed clinicians, 5) post-implementation configurations, and 6) avoidance of claiming economic benefit (Hertzum & Ellingsen, 2019, pp. 315–316).

First, the organizational complexity in the case of Norway is higher than in the cases of the UK and Denmark (Hertzum & Ellingsen, 2019, pp. 315). In the UK and Denmark, the implementation was restricted to specific hospitals, respectively, the Cambridge University Hospital and the Herlev and Gentofte Hospital. In Norway, the Health Platform has been implemented throughout one region, Central Norway. This includes its hospitals, GP clinics, nursing homes, and home-care services of 84 municipalities. Involving the municipalities may increase the possibility of transforming and streamlining regional healthcare. However, it makes the users more heterogeneous, increasing the difficulty of the implementation (Hertzum & Ellingsen, 2019, pp. 315).

Second, the organization responsible for implementation finds itself in a challenging position between Epic and the clinicians (Hertzum & Ellingsen, 2019, pp. 316). The Norwegian top managers interviewed in the study expressed concern about the strict deadlines imposed by Epic. They also highlighted the need for extensive user participation to foster ownership and ensure proper functionality. This dual pressure leaves little room for the implementation organization to be proactive, which may result in shortened training schedules, delayed testing, and frustrated staff (Hertzum & Ellingsen, 2019, pp. 316).

Third, the Norwegian approach relies on establishing a comprehensive formal decision structure with strong clinician involvement (Hertzum & Ellingsen, 2019, pp. 316). The intention is to mitigate the risks associated with the large-scale implementation of Epic. This was seemingly a key lesson drawn from the Danish case. However, it is unclear whether a more formalized decision structure would have improved the situation in Denmark. Some Danish clinicians feel that their structure was too top-down and too inattentive to local input (Hertzum & Ellingsen, 2019, pp. 316).

Fourth, Epic must adapt to the Norwegian healthcare system (Hertzum & Ellingsen, 2019, pp. 315–316). The authors argue that this requires recruiting a significant number of clinicians, called "physician builders," who are dedicated to this task. In Denmark, a team of 70 physician builders was deemed insufficient. Physician builders are designated clinicians heavily engaged in the design of functionality for their practice. They are supposed to partake in the initial Epic setup, as well as in a subsequent regional organization, continuing to work on optimizing and streamlining key work processes. These activities will be the full-time work of the physician builders. A key challenge here is that clinicians traditionally follow a fixed career path, not including IT work. Historically, physicians have had limited involvement in large-scale EHR projects. However, the rise of chief medical informatics officers may increase the prestige of such involvement (Hertzum & Ellingsen, 2019, pp. 315–316).

Fifth, the experiences from the UK and Denmark demonstrate the need for continuous configurations and adaptations after going live (Hertzum & Ellingsen, 2019, pp. 316). However, before implementation, complex decisions about the standardization of routines and processes must be made in a complex decision structure and configured before going live. It remains uncertain how feasible significant changes will be once these decisions are finalized. Although Epic is promoted as a flexible platform, the extensive initial regional standardization efforts may "freeze" practices and technology, making future configurations and adaptations difficult. This can be seen in the case of Denmark, where physician builders experienced less freedom and limitations when trying to configure Epic due to overarching standardization strategies (Hertzum & Ellingsen, 2019, pp. 316).

Lastly, the Danish case was subject to sharp criticism from Rigsrevisionen, an independent auditing institution under the Danish Parliament, regarding benefit estimations (Hertzum & Ellingsen, 2019, pp. 316). Seemingly affected by this, the Health Platform program has taken a cautious approach, avoiding claims about measurable economic and efficiency gains in its initial stages. They have rather emphasized the benefits of improved treatment quality and better coordination between hospital and municipal care (Hertzum & Ellingsen, 2019, pp. 316). Still, the costly outcomes of the implementation have received criticism from Norway's own governmental auditing institution, Riksrevisjonen (2024).

2.3.3. Large-Scale Electronic Health Records Are Not Impossible

Though the idea of a large-scale EHR might seem to pose exorbitant challenges and outcomes, it is not impossible. Since the end of 2008, the nationwide Estonian Health Information System (EHIS) has been the country's operating e-health system (Metsallik et al., 2018). EHIS contains the health data for all Estonian residents. In 2018, this equated to 1.54 million people. It is based on a modular model, integrating different healthcare databases and services. EHIS facilitates access to medical data, prescriptions, and medical images through an online browser. The aim is to "develop patient-friendly, efficient and high-quality healthcare services" (p. 1), making time-sensitive medical information accessible for physicians and decreasing the bureaucratic practices in the physicians' daily routines. A leading concept in the implementation of EHIS is that new e-services can complement ordinary services to increase efficiency and affordability for the whole society, but they cannot replace them. This entails that patients still have the possibility and right to receive services in conventional ways (Metsallik et al., 2018).

The story of EHIS can be traced back to the first years of Estonian independence (Metsallik et al., 2018, p. 2-4). It is closely related to the influence of the first Prime Minister, Mart Laar, who served as Prime Minister of Estonia from 1992-1994 and 1999-2002. During this time, information technology was considered an opportunity for the Estonian economy and politics to progress, as part of a small developing country. At the time, Estonia lacked legacy software. As information technology was underdeveloped in the Soviet period, the advancements and deployment of such technologies rapidly evolved during the first independent years. Between 1990 and 2000, healthcare institutions and general practitioners began developing information systems and introduced the use of EHRs. This resulted in a large number of small and medium-sized software companies with a focus on the development of healthcare systems. During the same decade, the first ideas of a nationwide e-health system emerged, and informal planning was initiated. The government authorities began the active preparation of the Estonian e-health project between 2003 and 2005. The concept for EHIS was launched in 2005. The concept included four main projects: EHRs, digital images, digital registration, and digital prescriptions. Shortly thereafter, the e-Health Foundation was established. The e-Health Foundation is the official body responsible for the development, financing, and management of EHIS. Further, EHIS was funded by the EU and Estonia, respectively, €1,196,206 and €398,735. The system was launched at the end of 2008 and continues to add new functionalities and services (Metsallik et al., 2018, p. 2-4).

In contrast to the monolithic architecture of the Health Platform (Hertzum & Ellingsen, 2019), EHIS is "a federated system of mutually independent yet integrated healthcare-related software services" (Metsallik et al., 2018, p. 4). The most diffused e-health project in Estonia is their nationwide

EHR system, a health information exchange platform. The system is based on widely accepted international standards, enabling the exchange of digital health documents in a standardized manner. E-prescription is another widely accepted healthcare service provided by EHIS. After its launch in 2010, it was quickly accepted. In 2018, 99 percent of medical prescriptions were issued electronically (Metsallik et al., 2018, p. 4-5).

Another key difference when comparing the case of Estonia to the case of Norway is the history of development and the approach taken by the two nations. Estonia's e-health system has roots dating back to the early years after independence, driven by an early belief in IT as a tool for development (Metsallik et al., 2018, p. 2-4). Its evolution has been gradual, starting with the introduction of electronic billing, a mandatory electronic transfer of prescription information, and, eventually, a national platform (Metsallik et al., 2018). Norway, meanwhile, is taking a different approach by procuring and implementing Epic as a pre-existing large-scale system (Hertzum & Ellingsen, 2019). Even though developing digital infrastructures is an integral part of the political objectives in Norway, the progression is different. In Estonia, EHIS can be interpreted almost as a symbol of, or at least closely connected to, their independence. It emerged when the nation was undergoing a significant process of establishing itself and its independent systems. In Norway, on the other hand, the Health Platform can be considered a technological development. There was already an EHR in place, making it necessary for the government to argue the necessity of this "upgrade."

The key to success in Estonia has been clear governance, a mature ecosystem, legal clarity, agreement about access rights, and standardization of medical data and data exchange rules (Metsallik et al., 2018). In contrast to Estonia, the Health Platform has faced criticism for poor management, particularly given the high implementation risks associated with the platform (Riksrevisjonen, 2024, p. 19). The legal environment was a central aspect of the e-health infrastructure in Estonia (Metsallik et al., 2018). The Estonian Health Services Organization Act, which governs healthcare service provision, was extended to include a new chapter dedicated to EHIS. This chapter outlines the responsibilities of patients and healthcare providers while establishing requirements for document standards. For instance, all healthcare providers are legally required to submit specific health data to EHIS with the exact set of documents defined by law. Additionally, the Act stipulates that access to patient data is restricted to licensed medical professionals, legal representatives, or designated patient trustees (Metsallik et al., 2018, p. 7). In Norway, the focus on establishing a strong decision-making structure reflects a direct effort to ensure similar clarity in governance (Hertzum & Ellingsen, 2019). A well-functioning decision-making framework is essential for managing the complex challenges involved in adopting a large-scale system like Epic (Hertzum & Ellingsen, 2019).

Digitalization usually brings significant change management challenges when applied to healthcare (Metsallik et al., 2018, p. 8). It is important to note that the transition to the current e-health services did not happen seamlessly in the case of Estonia. Physicians and other professionals had to change their practices of filling out medical files to some extent by using more uniform language.

However, the semantic interoperability of medical data is difficult to achieve, and the quality of data, as well as secondary usage of data, poses a challenge (Metsallik et al., 2018, p. 8). Norway appears to be focusing on key success factors that contributed to Estonia's effective e-health system, particularly through extensive user involvement and the establishment of a robust decision-making structure. User involvement ensures that the system is functional, adapted to local conditions, and thus more likely to be accepted. In turn, this can lay the foundation for a more mature ecosystem and agreement on important issues such as access rights and standardization. A robust decision-making structure is crucial to ensure the clear governance that Estonia identified as a key factor in its success. Still, the benefits of these efforts have seemingly not yet been achieved (Riksrevisjonen, 2024).

2.4. Healthcare Professionals' Experiences with Electronic Health Records

With the transition from paper-based medical records, EHRs have become a global reality (Forde-Johnston et al., 2023). Consequently, EHRs play a crucial role in nurse-patient interactions across various healthcare settings, including in-person and remote consultations. However, nursing is widely regarded as more than a transactional process, and the relationship between nurses and patients holds significant value (Forde-Johnston et al., 2023). With the rise of EHRs and the shift towards more digitally driven healthcare, there is a growing concern about the checklist-driven approach to nursing (Hämäläinen & Hirvonen, 2020). This mirrors the findings of Hoeyer and Wadmann (2020), who demonstrate that EHRs can impose administrative burdens that divert attention from direct patient interaction and relational aspects of care. As professionals are required to document their work in particular ways, their practical knowledge and tacit skills may be overlooked or undervalued within the EHR (Hämäläinen & Hirvonen, 2020). Quality nursing care is built on meaningful nurse-patient interactions (Forde-Johnston et al., 2023). Their interactions are characterized by a compassionate presence, shared decision-making, and a person-centered approach to care. Thus, tensions can arise when task-driven nursing care interferes with these interactions, ultimately undermining holistic and person-centered care (Forde-Johnston et al., 2023).

Several studies explored nurses' perceptions of nurse-patient communication in the context of EHR use (Coats et al., 2020; Forde-Johnston et al., 2023; Hämäläinen & Hirvonen, 2020; Wisner et al., 2021). However, the findings were mixed. Coats et al. (2020) found that nurses had a positive perception of using person-centered EHR narratives, as they enhanced communication and fostered a stronger connection with patients. The patient narrative intervention involves a written narrative document co-created by a principal investigator and the patient or family. Integrating patient narratives into the EHR provides an opportunity to include the values and beliefs of the patient in their care (Coats et al., 2020). Hämäläinen and Hirvonen (2020), on the other hand, demonstrate how EHRs can produce asymmetries in access and authority, where certain roles have more control over documentation than others. This creates friction in interdisciplinary teamwork and may lead to the marginalization of some professional voices, particularly in the context of long-term care, where nursing assistants and other frontline workers play a key role (Hämäläinen & Hirvonen, 2020). Another study highlighted the negative impact on the nurse-patient relationship, as nurses often had to document care with their backs turned to patients (Forde-Johnston et al., 2023). Similarly, Wisner et al. (2021, p. 825) reported a "tension between caring and charting" when integrating EHRs that were not tailored for certain specialized medical practices, such as perinatal medicine. Nurses perceived interacting with patients and families as essential to quality care, viewing EHRs as a potential threat to this critical aspect of their work (Wisner et al., 2021). These findings reflect the point raised by Hoeyer and Wadmann (2020), arguing that certain technologies can decrease the core relational aspects of care.

Additionally, studies exploring the impact of physicians' use of EHR suggest that it can influence interactions and communication in both a positive and negative manner (Greatbatch et al., 1995; Makoul et al., 2001). For instance, EHR use has been shown to positively encourage patient questions during doctor consultations (Makoul et al., 2001). However, it can also disrupt physician-patient communication, with long pauses during conversations and patients refraining from speaking while doctors focus on typing (Greatbatch et al., 1995). Additionally, EHR use may divert the doctor's attention away from the patient, creating a "dilemma of attention" between the computer and the patient and leading to gaze aversion as physicians become preoccupied with the computer. This divided attention may seem to compromise doctors' ability to engage in conversations with patients about topics unrelated to the process of writing a prescription (Greatbatch et al., 1995, p. 33).

As demonstrated by Vos et al. (2020), the issues connected to workflow efficiency, increased documentation burden, and disrupted decision-making processes are likely due to prevalent technical faults. Still, the authors also highlight how the social and relational aspects of medical work are altered by the EHR. Verbal communication between collaborating disciplines can often vanish because of the EHR pushing healthcare professionals to use an integrated messaging affordance. Though the EHR advocates for a more efficient way of performing healthcare, it does have some unintended drawbacks that are seen to negatively affect care. The EHR studied by Vos et al. (p. 9) encompasses an orchestrating affordance, ensuring that "the right person is doing the right thing at the right time for the patient." All business managers and medical administrators involved in the research argued that the use of the orchestrating affordance increased efficiency compared to previous practices. However, a majority of medical specialists argued that the orchestrating affordance resulted in time-consuming digitalized processes and marginalized verbal communication with patients, colleagues, and medical administration. One interviewee argued that the "interactions between people are often more useful than the parametric recording of data" (p. 8). Other clinics also reported that the natural workflow was hindered because all processes were now based on digital orders (Vos et al., 2020, p. 8). Hämäläinen and Hirvonen (2020) point to a related argument, arguing that EHRs are shaping individual practices as well as the broader culture of care. As documentation becomes more central, care work is increasingly evaluated through what can be recorded and audited, rather than what is relationally or contextually appropriate. Thus, healthcare is moving towards data-driven governance, where professional discretion is constrained by digital systems designed to standardize and control care (Hämäläinen & Hirvonen, 2020). These findings illustrate how digital healthcare poses a more fundamental sociotechnical shift: the digital infrastructures of the EHR reshape interpersonal dynamics and professional relationships.

3. Theoretical Approach and Sensitizing Concepts

The following chapter presents the theoretical approach and sensitizing concepts guiding this study. I start by diving into the concept of co-production to highlight the interdependencies between technological and social existence and development. The constitutive and interactional approach presents different ways of analyzing how the Health Platform represents a sociotechnical shift in the healthcare sector, as well as its structural entanglements. The concept of sociotechnical imaginaries is then introduced to provide the analysis with a deeper understanding of how new technological ideas carry different moral meanings in different societies, as well as why science and technology hold distinct roles within political systems. As different roles may hold different opinions and worldviews, collaboration across them may not prove harmonious. Therefore, I dive into the concept of friction and care frictions to explain the complex entanglements and interactions of different values, logics, and practices within the healthcare sector. The chapter then moves to the concepts of technopolitics and technopolitical regimes, where technology and politics are seen as co-dependent entities creating a structured system of politically, economically, and socially embedded decisions. Lastly, I narrow down my approach to the scope of healthcare and the different logics behind providing care.

3.1. Co-Production

Technologies actively shape and interfere with our identities and ways of being (Mol, 2008, pp. 50). Rather than merely reflecting our intentions, technologies transform how we interact with the world and, in turn, how we perceive and understand it (Mol, 2008, pp. 50). Similarly, Sheila Jasanoff (2004, p. 2) describes the concept of *co-production* as “the ways in which we know and represent the world (both nature and society) are inseparable from the ways in which we choose to live in it.” Co-production emphasizes how technology is developed in interaction with its users (Jasanoff, 2004). In the case of the Health Platform, healthcare professionals can have specific needs, preferences, and practices, all of which will also interact with the platform. Thus, the Health Platform will go through another process of innovation when applied to practice. Healthcare professionals may also resist the platform if they do not experience it to align with their needs, creating workarounds or adapting practices to handle challenges. Bruno Latour (1993; Laurent, 2024) also addresses the interplay between different actors and how they affect each other. From his perspective, co-production involves *purification* and *mediation*. Purification is the modern attempt to draw boundaries between nature and society. Mediation speaks to the act of intertwining humans and non-humans in hybrid forms. These dynamics structure the “modern constitution.” Within this constitution, science represents non-humans and politics represent humans, while denying the entanglement of the two parties. Latour argues that one cannot defend such a separation in a world increasingly characterized by hybrids. For instance, climate change, genetically modified organisms, or pandemics. Thus, for Latour (1993; Laurent, 2024), co-production is a foundational principle that reveals how the categories of science and society are themselves historically and politically constructed.

Michel Callon (2007) also speaks about a similar notion, connecting economic activities and social processes. At the center of Callon's theory is the concept of "framing and overflowing." Framing refers to the process where actors, such as organizations, scientists, and policy-makers, define the boundaries of a market transaction. This framing isolates economic exchanges from the broader social, political, and environmental consequences that might otherwise complicate or interrupt them. It allows actors to focus on calculability, like assessing value and costs, and making decisions within a neatly defined frame. From this perspective, markets are not naturally occurring, but are rather performed through networks and devices that create a specific way of knowing and organizing the world. Still, framing is never total. There are always overflows. For instance, unintended effects, externalities, or contestations that escape the original boundaries and call the market's legitimacy or functioning into question. This is where concerned groups enter the picture. These groups may include activists, local communities, or affected stakeholders who experience or observe the negative consequences of a market's framing. Through mobilization and the production of alternative knowledge, they challenge the market's assumptions and seek to reframe its logic. Callon emphasizes that these groups are not merely reactive, but actively shape markets by forcing them to account for broader considerations such as ethical implications, environmental damage, or social justice. This dynamic interplay reveals the interdependence of knowledge and society. Markets do not just allocate goods and services. They also shape what is known, by whom, and how that knowledge is validated or contested. Therefore, the actions of concerned groups often aim to inject neglected forms of knowledge into economic calculations (Callon, 2007).

A central argument made by Jasanoff is that the character of any historical period, including cultural and political formations, can only be fully understood when taking co-production into account (Jasanoff, 2004). This applies to modernity in particular. Thus, scientific knowledge is not a neutral or sublime reflection of our reality. It is, rather, as earlier mentioned, shaped by basic social elements (Callon, 2007). Technology exemplifies this dynamic even more clearly. Within the co-productionist framework, science is neither a mere reflection of objective truths about nature nor simply a byproduct of cultural and political interests (Jasanoff, 2004). Instead, co-production simultaneously highlights the social dimensions of knowledge frameworks and understandings while also emphasizing the material and epistemological foundations of social structures. As such, co-production steps away from the notion that nature, facts, objectivity, reason, and policy are separated from culture, values, subjectivity, emotion, and politics. However, it is important to mention that co-production should not be regarded as a fully developed theory but rather an interpretive "idiom" (Jasanoff, 2004, p. 3). It is a conceptual approach seeking to account for complex phenomena (Jasanoff, 2004).

Co-production has four particular focal areas: emergence and stabilization, framing and resolution of controversy, intelligibility and portability, and cultural practices (Jasanoff, 2004, p. 5-6). The emergence and stabilization of new objects or phenomena investigate how people recognize and add meaning to them. This separates them from existing entities and shapes new practices. Framing and resolution of controversy look at how certain ideas gain supremacy over other competing (and potentially "better") ideas (Callon, 2007; Jasanoff, 2004). The focus on intelligibility and portability highlights how products of science and technology can be transported and still keep their value across time, place, and institutional contexts (Jasanoff, 2004), moving from the standardization of aims to the formation of new communities of practice. Lastly, it examines the cultural practices of science and technology and how the assumed universality of facts and artifacts remains in political and cultural contexts (Jasanoff, 2004). Work along the idea of co-production stresses the constant intertwining of the cognitive, material, social, and normative (Callon, 2007; Latour, 1993). According to Jasanoff (2004), there are two distinct streams of thought when using a co-productionist perspective: the constitutive and the interactional.

The constitutive approach refers to the structural entanglements where scientific knowledge and social order are mutually shaped (Jasanoff, 2004). It highlights how norms, institutions, identities, and forms of authority evolve together (Jasanoff, 2004). For instance, the Health Platform is built on the understanding of "efficient healthcare management." The healthcare professionals are considered data collectors, and decisions are made based on data flows. This can be perceived to reflect a broader societal logic of digitalization, governance, and control. Interactional co-production, on the other hand, refers to concrete encounters and exchanges between actors (Jasanoff, 2004). For instance, when healthcare professionals organize demonstrations advocating for the abandonment of the Health Platform, or when the Office of the Auditor General conducts an official analysis of the implementation process. These interactions can lead to adjustments in the system, but rarely challenge the underlying assumptions it is based on (Jasanoff, 2004). The difference lies in depth: while interactional co-production shows how actors engage around the Health Platform in specific situations, constitutive co-production reveals how both the technology and our understanding of healthcare are shaped together at a more foundational level (Jasanoff, 2004).

3.1.1. Constitutive Co-Production

The constitutive approach primarily concerns how "stability is created and maintained," particularly with new phenomena (Jasanoff, 2004, p. 18). This may occur within specific sites of knowledge production, such as hospitals, or around technoscientific entities (Jasanoff, 2004, p. 18-19), like digital healthcare technology. The constitutive approach explores how people understand nature and society and how some experiences and observations come to be seen as objective facts, separate from politics and culture (Jasanoff, 2004, p. 18-19). This aligns with how Latour's (1993) argument about how purification is an attempt to separate society and nature, or humans and non-humans. Co-productionist accounts aim to examine the processes where specific states of knowledge are constructed, maintained, or discarded (Jasanoff, 2004, p. 18-19).

Jasanoff (2004, p. 28) suggests that there are some significant parallels between the actor-network perspective on power in constitutive co-productionist terms and contemporary approaches in state theory. Latour (1993) highlights the role of both material objects and human institutions in categorizing hybrids with the two constitutional domains: the "natural" and the "social." Latour's framework attributed agency to both human and non-human actors. However, he argues that mechanical agents often appear as extensions of human actors. In other words, mechanical agents can function as proxies to whom humans have purposely transferred some of their own agency (Latour, 1993). The power and stability of actor-networks depend on the size of the network (Jasanoff, 2004, p. 23). The greater the objective, the greater the challenge to constitute a network in its regard. Correspondingly, it requires more resources to destabilize larger networks compared to smaller ones. The Health Platform illustrates the challenge of implementing a large system in terms of the number of healthcare professionals, entire hospitals, clinics, and other healthcare services. The greater the complexity of the system, the greater the challenge is to ensure its stability and acceptance. Resistance from healthcare professionals can lead to instability during the implementation, which in turn might affect how successfully the system is integrated into the everyday life of healthcare professionals (Jasanoff, 2004, p. 23).

Power is unequally distributed across a network. It tends to concentrate on "centers of calculation," controlling the tools that turn dominant perceptions into conveniently transportable representations (Jasanoff, 2004, p. 23). Still, "trials of strength" might occur between certain adjacent actors or elements within the network while the structure is being shaped (Jasanoff, 2004, p. 23). Concerning the Health Platform, this may manifest as resistance from healthcare professionals across various regions of Central Norway, especially if they perceive that the system fails to align with their established workflows or specific needs. Such resistance may emerge from different professional groups or local leaders who feel their interests are insufficiently represented, potentially giving rise to conflicts and posing challenges to the stability of the implementation of the platform.

However, Jasanoff (2004, p. 23) also critiques Latour's approach as it pays little attention to the moral and political conflicts that may arise during the creation and maintenance of governance systems. Jasanoff exemplifies this by arguing that he does not explore why technological practices or scientific credibility differ across cultures, why some networks stabilize quickly while others remain unstable for long periods of time, or why certain points within a network are more effective at stabilizing it than others. He also avoids addressing the role of beliefs, values, memories, and ideologies in sustaining certain representations of nature and society over others. Actor-network theory often downplays key political questions regarding institutions, people, ideas, and preferences. Despite its valuable insights into the non-human and material aspects of power, it comes with the risk of overlooking human agency and human values (Jasanoff, 2004, p. 23).

Similarly to Latour (1993), James Scott (2020) is also concerned with modernity and how power operates through authoritative representations. Scott argues that the modern planning state views the world in simplified and recurring categories and that they imposes these views on people's lives. The goal was to align citizens' existence in a more rigid and "grid-like" structure (Jasanoff, 2004, p. 26; Scott, 2020, p. 94). Scott uses the planning and building of the city of Brasília as an example, illustrating how "high modernist" planners create idealized, simplified images of social order and then forcibly reshape millions of lives to fit these reductive models. The plans aimed to make citizens and their economic activities more "legible," meaning easier to measure and control. The diverse, small-scale, and flexible patterns of human life were replaced with large, controlled spaces and rigid arrangements of homes, farmland, and forests. This illustrated how the planners distorted and shaped their citizens to meet the demands of legibility and centralized control. However, these rigid structures were not all-powerful. Even though "real" life was omitted from the planning process and result, it found ways of reemerging through small changes and adjustments made by the less powerful (Scott, 2020, p. 25-33). In an earlier study, Scott explores how an entire unplanned part of Brasília developed alongside the planned city, housing construction workers and their families (Jasanoff, 2004, p. 27). These were marginalized citizens left out of the monumental center built for the bureaucratic elite. In the end, neither part of Brasília, which was now sharply divided by wealth and class, conformed to the original vision of a modern and ideal city (Jasanoff, 2004, p. 27).

Scott's (2020) critique of modern planning is mirrored in Annemarie Mol's (2008) logic of choice, where standardized, centralized, and legible approaches to healthcare delivery are emphasized. Complex realities are reduced to simplified, controlled models for ease of measurement and control (Mol, 2008; Scott, 2020). The Health Platform, as designed by central authorities, aims to streamline processes and create uniform data representations, effectively imposing a "grid-like" structure on healthcare practices.

3.1.2. Interactional Co-Production

The interactional approach, on the other hand, is more concerned with epistemology, shifting the focus from what exists to how we come to know it (Jasanoff, 2004, p. 19). This perspective assumes that science and society do not exist separately but always operate within an established system where people already have practical ideas about what counts as nature, science, society, and culture. Callon (2007) addresses these boundary conflicts through his analysis of framing and overflowing. In this light, framing is an attempt to stabilize and isolate certain elements of reality, to produce a clean boundary between economic transactions and the messy reality of social and environmental consequences. However, overflows inevitably occur when reality pushes back. For instance, when actors or phenomena that were excluded from the frame refuse to remain silent. These overflows require renegotiation of boundaries between areas such as economics and politics, technical solutions and ethical concerns, or expert knowledge and lay expertise. However, conflict often arises concerning the boundaries of these realms, which require negotiation (Callon, 2007). Additionally, the recognition of new phenomena often leads to friction between competing ways of knowing (Jasanoff, 2004, p. 19). Research within the interactional approach explores how individuals and institutions organize and reshape their understandings of reality during such disputes. It aims to highlight the complex interdependencies between scientific and social practices. Particular emphasis is put on instances where these interdependencies adapt within established socio-technical systems during periods of conflict and transformation. While constitutive analysis primarily explores the emergence of new entities, interactional analysis is more concerned with disputes over knowledge within pre-existing distinctions between the natural and the social (Jasanoff, 2004, p. 19).

The Health Platform represents a significant sociotechnical shift in the healthcare sector, and the conflicts that arise can provide insight into the complex and mutual dependencies between technology and social practices. For instance, concerning user-friendliness, adaptation to clinical routines, or the balance of power between different actors. In line with the interactional perspective, healthcare professionals are not passively accepting the platform but actively perceive, negotiate, and potentially reshape both the system and their practices. During this transformation, some groups may attempt to adapt the system to their needs, while others may oppose the changes if they experience the system as restricting their autonomy or disrupting established practices. Thus, the implementation of the Health Platform is not just a technical task but a social process where understandings of work, technology, and power are continuously negotiated and restructured.

Interactional co-production can be exemplified through the debate between Hobbes and Boyle (Jasanoff, 2004; Laurent, 2024; Shapin & Schaffer, 2011). Hobbes challenged the validity of Boyle's air pump experiments. He argued that the experimenter's authority played a crucial role in establishing the credibility of scientific findings, echoing the arguments of contemporary sociologists of scientific knowledge and highlighting the socially constructed nature of scientific authority. In response, Boyle developed a systematic approach to validating experimental results, including depersonalized rhetoric to emphasize objectivity and reliability. Still, this dispute was not solely about the scientific method, but rather about the intertwinement of the broader political conflicts of the time. The struggle to define credible scientific knowledge was simultaneously a struggle over who could claim authority and power in the emerging political order (Jasanoff, 2004, p. 29). Thus, solving problems of knowledge also means solving problems of social order and authority (Shapin & Schaffer, 2011, p. 332). This perspective underscores the co-productionist argument that the development of scientific knowledge cannot be separated from the social and political structures within which it takes place (Jasanoff, 2004, p. 29).

However, there is not a unidirectional causal relationship between science and politics; they rather occur entangled (Jasanoff, 2004, p. 30; Shapin & Schaffer, 2011, p. 332). Shapin and Schaffer identify three "senses" of co-production. First, scientists create and maintain a system that guides their work and knowledge production. Second, the knowledge produced within this system becomes part of political activity in the state. Third, there is a connection between the type of system scientists operate within and the broader system of governance. Robert Merton's CUDOS-norms are an example of this, reflecting ideals suited to a more democratic discourse. Shapin and Schaffer, however, question the assumption that these norms are inherent. Instead, they argue that the credibility of experimental science had to be actively maintained through specific social practices (Jasanoff, 2004, p. 30; Shapin & Schaffer, 2011, p. 332).

Further, interactional co-production explores how technology can contribute to maintaining a particular set of social conditions and structures of power (Jasanoff, 2004, p. 31). Langdon Winner (1986, p. 130) argued that technology has an "inherently political nature." He speaks of two ways of recognizing this. First, the adoption of a specific technical system requires the creation and maintenance of certain social conditions to function properly. Second, a particular type of technology is highly compatible with but does not strictly require specific social and political relationships (Winner, 1986, p. 130). In this context, technology is seen as a "solution" to political order because it helps maintain existing power structures (Jasanoff, 2004, p. 31). Complex technologies, for instance, nuclear power, can require opaque and authoritarian political systems. However, this view differs from co-production in the sense that it assumes certain social "facts." For instance, the organization of society around fixed interests. Consequently, concepts like capital and class are seen as repeatedly reinforcing themselves through technoscientific products (Jasanoff, 2004, p. 31).

A related area of co-production explores the concepts of objectivity, reliability, and expertise (Jasanoff, 2004, p. 34). It applies to legitimizing science and technology, as well as to establishing democratically accountable political systems. The idea of objectivity suggests the existence of a shared reality that allows people to assess the performance of their government representatives. Perspectives on objectivity and reliability influence how science and technology are adopted by state institutions. They affect how research results are interpreted in the public domain, how they are incorporated into public policy decisions, and how new technical discourses are used to justify policies (Jasanoff, 2004, p. 34).

3.2. Sociotechnical Imaginaries

The notion of co-production is an effective way of understanding how things fit together subjectively (Jasanoff, 2015, pp. 3–4). However, it lacks the precision needed to address key challenges in the modern scientific world. For instance, it does not fully explain why ambitious efforts to reshape the world sometimes fail despite significant resources and coordination. It also does not account for differences in technological development across nations and cultures that natural, economic, or social factors cannot easily explain. In an era of globalization, it is crucial to understand why new scientific and technological ideas carry different moral meanings in different societies, as well as why science and technology hold distinct roles within political systems globally (Jasanoff, 2015, pp. 3–4).

The concept of sociotechnical imaginaries directly addresses some of these challenges (Jasanoff, 2015, pp. 3–4). They build on the idea that social and political groups can imagine their futures, a crucial element in constructing the world they partake in (Jasanoff & Kim, 2009). In their article "Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea," Jasanoff and Kim define sociotechnical imaginaries as shared visions of social life and order, expressed through the design and implementation of scientific and technological projects within a nation. In this context, imaginaries describe achievable futures as well as prescribe the futures that states aim to realize (Jasanoff, 2015, pp. 3–4).

The Health Platform can be understood through the lens of sociotechnical imaginaries as it represents a collectively envisioned future for healthcare in Central Norway. Here, digitalization, standardization, and centralized data management are expected to improve efficiency, coordination, and patient care. This vision reflects a broader belief in the transformative potential of digital health systems to create a more integrated and effective healthcare system. As Jasanoff (2015) argues, sociotechnical imaginaries are institutionally stabilized and publicly performed. Thus, they become embedded in policies, professional norms, and technological infrastructures. The Health Platform can be considered to demonstrate this through its large-scale implementation, working to solidify a particular vision of the future. However, the process of establishing a dominant imaginary does not come without resistance. The vision can be challenged by healthcare professionals who find that the system disrupts established workflows or fails to align with the logic of care (Mol, 2008). For instance, by advocating for decommissioning or by resisting adoption.

Sociotechnical imaginaries are grounded in material reality. They are not just abstract concepts but also directly related to technological systems, infrastructures, and practices. For instance, during his first U.S. presidential campaign, Barack Obama frequently referred to the Apollo mission as the inspiration for an ambitious plan to attain energy independence within a decade. The Apollo mission symbolized the perceived American ability to accomplish extraordinary technological achievements. These visions and the policies built upon them can shape technological development, direct public funding, and determine who is included or excluded from the benefits of technological advancement. Imaginations can also be utilized for governing purposes by simplifying and standardizing the human subjects within the political community, thus acting as a key element in creating social order. In this context, imagination can be viewed as "an organized field of social practices" (Jasanoff & Kim, 2009, p. 122).

Jasanoff and Kim (2009, p. 122) argue that imagination is not merely a fantasy but an "important cultural resource." A group can enable new realities by envisioning positive goals and striving to achieve them. Imagination helps create systems of meaning that shape collective understanding and social reality. Further, it can provide a shared sense of belonging and affinity to a political community. Imaginaries enable collective understandings of social reality to develop. Following its establishment, a social reality might form distinct norms, social cues, values, morals, and relations. By becoming familiar with navigating social reality, one might also develop an experience of belonging to it. This might lead to further consensus within the community. Consequently, by defining an "us," it also constructs a view and representation of "the Other" (Jasanoff & Kim, 2009, p. 122).

Jasanoff (2015, pp. 3–4) later refined sociotechnical imaginaries as "collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology" (Jasanoff, 2015, pp. 4). She argues that this further captures the many ways scientific and technological visions shape material, social, and moral structures. Sociotechnical imaginaries are not limited to nation-states. They can also be created and promoted by corporations, social movements, and professional organizations. As they are collectively held, sociotechnical imaginaries often originate from individuals or small groups, gaining influence through either direct power or gradual coalition-building. However, an idea only becomes an established imagination when it is widely accepted by a community. This process can involve institutions like legislatures, courts, and the media, which elevate certain visions over others in shaping policy. Further, imaginaries also reflect societal beliefs about how life should or should not be lived. In this way, they embody a society's shared notions of good and evil (Jasanoff, 2015, pp. 3–4).

The implementation of the Health Platform exemplifies how sociotechnical imaginaries are also shaped by coalitions of actors. The ongoing negotiation over its adoption and adaptation can be seen to demonstrate how imaginaries gain traction, either through institutional power or gradual alignment with professional and societal expectations. Ultimately, the extent to which the Health Platform succeeds in reshaping healthcare practices may depend on whether its underlying imaginary becomes widely accepted by the broader healthcare community and its discourse.

3.3. Frictions of Innovation

Not every collaboration is harmonious (Tsing, 2012, p.13). Collaboration is more than the sharing of information, and there is no guarantee that collaborators share the same goals. Participants may have overlapping yet differing worldviews. This allows them to communicate from different perspectives. Focusing on collaboration helps move beyond the usual divisions between opposing groups. There is no guarantee of a compromise between the parties, but collaboration creates new interests and identities, though not always equally. For instance, when global knowledge is standardized, conflicting truths may be silenced. As knowledge circulates globally, it grows through the frictions of its encounters. However, this also produces new gaps and exclusions. As Anna Tsing (2012) illustrates, friction can function as a catalyst for innovation and change. Regarding the Health Platform, such frictions become apparent when different actors within the healthcare sector face the standardized and centralized strategies of digitalization. Characterized by heterogeneous and uneven interactions, these interactions can result in new cultural and power dynamics, which may trigger resistance and stimulate adaptations. Thus, the Health Platform illustrates that implementing a large-scale electronic health record system is an active and dynamic process. Local actors continuously negotiate and shape how global digitalization visions are integrated into practical clinical realities.

Tsing explores (2012) the tension between global systems and local practices and how frictions emerge when they encounter one another. She argues that global systems, like capitalism, science, and politics, aspire to reach universality. Universals can be thought of as static and absolute truths. However, according to Tsing, they are dynamic ideas that gain meaning through their interactions with specific local contexts. The implementation of such systems is always shaped by local conditions and practices. This challenges the idea that universal claims automatically create equality everywhere. Universals must be engaged in real-world conditions to become practically effective. Thus, it is important to explore how aspirations of universality manifest in particular contexts. Contrary to popular stories about equal global integration, Tsing demonstrates how globalization is often characterized by disagreements, fragmentations, and regional inequalities. The author argues that global connections are shaped by random encounters and provisional connections across distance and diversity (Tsing, 2012, p. 2).

The term *frictions* describes encounters between differing forces and ideas, creating both unity and conflict (Tsing, 2012). Friction occurs when different actors meet. It entails that the encounters are unequal, unstable, awkward, and even cause unforeseen and messy conflicts. It is a dissonant process where differing perspectives and agendas collide and affect each other. Such encounters can present surprising features that affect how we perceive cultural production. Despite potentially being uncomfortable and difficult, friction is a source of creativity and innovation. Further, friction can hinder free movement, as well as be the reason for the direction and meaning of the movement. They create roads for easier movement, but also limit the range of motion (Tsing, 2012).

Håkan Håkansson and Alexandra Waluszewski (2001) repurpose the theory of friction from physics, conceptualizing it not as a barrier to innovation, but as a necessary condition for technological co-evolution. In their view, friction emerges from the complex interdependencies between existing structures, practices, and relationships. Change does not happen in a vacuum; it must work through these frictions (Håkansson & Waluszewski, 2001). As such, friction can be an obstacle but also a productive force that shapes how new technologies are developed, adapted, and embedded over time (Håkansson & Waluszewski, 2001; Tsing, 2012).

The concept of friction was developed in the context of globalization processes (Tsing, 2012). Still, the concept describes some more general topics: the interaction between different worlds, logics, and practices. Tsing's case studies illustrate the differences in movement, resistance, and mutual transformation when parties meet. In that sense, one could argue that the concept of friction is scalable, thus being a relevant tool for both micro and macro cases, provided that there is an interaction between disparate actors and values. In their text "Care Frictions: A Critical Reframing of Patient Noncompliance in Health Technology Design," Burgess et al. (2022) introduce the concept of *care frictions*. The concept is used as a sensitizing term to explore what Tsing refers to as "sticky engagements." While investigating the practices of patients with chronic illnesses, the authors acknowledge that providing them with suitable care may involve rejecting established medical best practices. Care frictions describe the specific, and often complicated, tensions in care situations. Especially when patients, healthcare workers, and technologies have different goals, values, or needs. Instead of seeing these tensions as dysfunctions, the concept encourages us to view care as something that is shaped through ongoing negotiation, relationship dynamics, and context (Burgess et al., 2022). Inspired by the notion of care frictions (Burgess et al., 2022), we can understand the frictions between healthcare professionals and institutional systems not merely as problems or inefficiencies but as complex entanglements where different values, logics, and practices collide yet remain inseparably linked. These engagements are “sticky” in the sense that professionals cannot easily detach from system demands, nor fully comply without compromising core aspects of their care practices. These internal tensions can offer valuable insight into how care is shaped, negotiated, and contested in everyday practice.

When looking at the Health Platform, this perspective helps us see that resistance is not simply a sign that they are unwilling to adopt the new system. Instead, it can be a valuable part of the process when new technologies are introduced. For instance, when a new EHR enters the healthcare system, it can conflict with existing routines, professional roles, and institutional structures. This friction can slow things down, but it can also create opportunities for people to adapt the technology, rethink their work, and find solutions that fit their context. In line with Håkansson and Waluszewski (2001), we can consider healthcare professionals as active participants who help shape how technology works in practice, rather than passive recipients of change.

Tsing (2012, p. 5) uses two metaphorical images to illustrate the point of how frictions foster innovation and change: “A wheel turns because of its encounter with the surface of the road; spinning in the air, it goes nowhere. Rubbing two sticks together produces heat and light; one stick alone is just a stick.” The concept of friction can sensitize us to consider how heterogeneous and unequal encounters give rise to new cultural and power dynamics. Local societies and individuals react to global powers differently, often in unexpected and creative ways. This friction can lead to both resistance and adaptation as individuals seek to navigate and negotiate the impact of global forces on their lives. Tsing emphasizes that cultural adaptation is not a passive process in which local communities simply absorb global forces. Instead, it is an active and dynamic process in which cultures are shaped and transformed through interactions with regional to global networks of power, trade, and meaning. Further, it is important to recognize the diversity of perspectives and experiences within local communities. There is no single “local” response to global forces, and Tsing emphasizes the need to consider how different individuals and groups experience and react to these forces in various ways. Tsing implies that resistance and adaptation are not necessarily contradictions. People may resist certain aspects of global forces while adapting to others, and these processes can be intertwined in complex ways (Tsing, 2012, p. 5-6). “Friction is not a synonym for resistance” (Tsing, 2012, p. 6).

Focusing on patient-centered care, Vassilakopoulou et al. (2019) use the concept of frictions to analyze how the relational dynamics of infrastructures influence the implementation of e-health solutions. Even though the authors derive the concept from innovation studies, it is similar to Tsing's (2012) conceptualization: "friction shifts attention to forces created through the interaction of different established arrangements that need to change in relation to each other" (Vassilakopoulou et al., 2019, p. 362). In their studies, Vassilakopoulou et al. (2019) found that friction operates as a relational force that can both enable and hinder change processes, often reinforcing historically embedded values and practices. When applied to the case of the Health Platform, the need to balance the system's demands with the practical realities clinicians face becomes crucial. This friction highlights the role of time as a critical resource, with clinicians often needing time to adjust, adapt, and integrate new technologies or procedures into their established practices. The authors argue the necessity of stepwise strategies in transforming the healthcare sector, particularly when dealing with complex, entrenched systems. Healthcare professionals, as the primary agents of care delivery, are often the ones who must navigate these structural changes, and this process cannot be rushed. Instead, systemic change must respect the time it takes for clinicians to adjust to new methods, tools, or protocols, without overwhelming them. The gradual nature of these changes creates a form of "mindful deviation," where clinicians slowly shift their practices while remaining anchored in the familiar structures of the healthcare system. Thus, the friction between the healthcare system and clinicians highlights that transforming healthcare is not an immediate or linear process but involves careful, incremental shifts. The tension between established practices and new directives may take time to resolve, and this friction itself is central to how change happens in healthcare settings.

3.4. The Political Dimensions of Technological Innovation

The Health Platform is not just a technical development. It is a reorganization of healthcare data flows, patient management, and institutional responsibilities. Deciding on a centralized platform can be seen as a reflection of a political decision about how healthcare should be managed and which values will prevail (Winner, 1986). For instance, ideals of standardization, interoperability, and cost efficiency. The platform serves as a vehicle for state-led modernization, fostering trust in digital governance. As Gabrielle Hecht (Allen & Hecht, 2001; Hecht, 2009) describes, states may use technological systems to exert control, unify fragmented systems, and project modernity. The implementation of the Health Platform has faced resistance and criticism from healthcare professionals across different municipalities. From a technopolitical perspective, this can be considered to reveal tensions between the top-down implementation of technology and localized professional autonomy. This echoes the idea that technopolitical regimes are contested and not monolithic (Allen & Hecht, 2001; Hecht, 2009). The differences in phases of implementation across various municipalities and institutions also highlight the temporal nature of politics. Decisions about when and where technology is deployed reflect political priorities and resource allocation (Winner, 1986).

An example of this is presented by Ulrike Felt (2015), who explores how the resistance to adopting nanotechnologies in Austria can be a deliberate and value-driven act. It reflects a broader political and social concern, rather than mere technophobia. Felt challenges the dominant narrative that technological progress is always inevitable and desirable, emphasizing that choosing not to adopt a technology is often grounded in critical reflection, values, and concerns about how the technology might reshape practices, relationships, or institutions. A central argument in the study is that technologies are not neutral tools. Instead, they carry embedded assumptions about how the world should be organized. When individuals reject a technology, they are often reacting to the social, cultural, or ethical implications it brings with it. Felt highlights how non-adoption can become a form of agency, particularly when communities seek to protect local practices, identities, or modes of working that conflict with standardized or externally imposed technological solutions (Felt, 2015).

Further, Felt (2015) underscores the importance of context. The decision to keep a technology out is often tied to specific cultural, institutional, and historical circumstances. She cautions against interpreting resistance as irrational or anti-modern, advocating instead for a more nuanced understanding of the motivations behind it. Ultimately, Felt calls for a greater attentiveness to the politics of technological implementation and for respecting the voices of those who question or resist dominant innovation narratives. From this perspective, non-adoption becomes a legitimate and often necessary part of democratic engagement with technology (Felt, 2015).

Technology and politics shape each other, influencing power structures, governance, and societal outcomes (Hecht, 2009). Hecht argues that technological systems are not neutral, but rather shaped by power struggles, ideologies, and institutional interests (Hecht, 2009). She introduces the concepts of *technopolitics* and *technopolitical regimes* (Allen & Hecht, 2001, pp. 256–259). Technopolitics refers to the strategic practice of designing, using, or organizing technology to advance explicit political goals. It emphasizes how technical choices are intentionally shaped by political considerations and how technologies are used as instruments for political action. Technopolitics differs from politics in the sense that it highlights the material agency of technology in shaping authority, policy, and power. "The effectiveness of technologies as objects designed to accomplish real material purposes matters – among many other reasons, because the material effectiveness of technologies can affect their political effectiveness" (Allen & Hecht, 2001, p. 257). Further, technopolitics is driven by technologists rather than elected officials, and it derives power from its foundation in expert knowledge and its manifestation in physical technologies or practices (Hecht, 2009, p. 89).

The term *technopolitical regime* refers to how technology and politics become co-dependent, creating a structured system where technical decisions are embedded in political, economic, and social conditions (Hecht, 2009). The regimes are constituted of "linked sets of people, engineering and industrial practices, technological artifacts, political programs, and institutional ideologies which act together to govern technological development and pursue technopolitics" (Allen & Hecht, 2001, p. 257). The concept ties into the notion of technological systems. A technological system is a network of artifacts, knowledge, and institutions that work together in a coordinated way to achieve specific material objectives. There are three main reasons Hecht utilizes the metaphor of a “regime.” First, a regime refers to those in power, their ideologies, and the methods through which they exert authority. By comparison, “technopolitical regime” encompasses the institution, its leaders, guiding beliefs, the technologies they produce, and the technopolitics they follow. Second, it conveys an idea of a regimen. Technopolitical regimes seek to shape broader visions of social and political order through the pursuit of technopolitics. Third, the term “regime” captures the contested nature of power. Like political regimes, technopolitical regimes face opposition and resistance, both from within the institutions they govern and from external actors. These regimes are not stable or permanent; they can be more easily challenged or overthrown than the technological systems they manage, which are often more entrenched (Allen & Hecht, 2001).

Technopolitical regimes, such as the Health Platform, are more vulnerable to internal resistance from healthcare personnel than to the technological system itself (Allen & Hecht, 2001). While it might pose a challenge to conduct rapid modifications in the platform due to its established technological infrastructure, the political decisions surrounding its implementation are more flexible. Therefore, decision-makers and political actors can adjust how the system is rolled out, provide additional support to healthcare professionals, or modify the Health Platform’s functionality to address concerns.

Langdon Winner argues that many large-scale technological systems are compatible with centralized, hierarchical managerial control (Winner, 1986, p. 132). However, the important question is whether such organizational structures are necessary for the operation of these systems. This question requires critical reflection on what kinds of social arrangements are assumed to be indispensable for particular technologies to function effectively. Regarding the Health Platform, its implementation has been justified through appeals to technical necessity. For instance, a need for interoperability, standardization, and efficient information flow across healthcare institutions. These practical imperatives are used to legitimize top-down decision-making and override concerns raised by frontline healthcare professionals. Winner suggests that in modern society, arguments based on technical or managerial necessity have come to dominate political discourse, often at the expense of deeper moral and democratic considerations. Appeals to values like liberty, justice, or equality are frequently dismissed as impractical or unrealistic. Especially when they conflict with the perceived operational requirements of complex systems, such as the Health Platform (Winner, 1986).

This tendency reveals a key feature of contemporary thinking about technology and politics (Winner, 1986). There is a widespread belief that certain technologies impose fixed demands on how society must be organized. Referring to a technology as “inherently political” means acknowledging that its continued operation tends to suppress alternative forms of political reasoning based on the argument of necessity. Winner (1986) challenges this view by questioning whether such necessities are dictated by the technology itself or whether they reflect historically contingent decisions. Similarly, technopolitical regimes refer to the deeply intertwined relationship between technological systems and political structures, where technologies are not merely tools but active components in shaping social order, authority, and governance (Allen & Hecht, 2001). This is also shown through the act of resistance to certain technologies, demonstrated by Felt (2015). Both Winner's (1986) framework and the notion of technopolitical regimes (Allen & Hecht, 2001) underscore the idea that technical decisions are never isolated from political values.

3.5. The Logic of Care

Annemarie Mol (2008) argues that there are two predominant approaches to how care should be organized and practiced. In her book "The Logic of Care: Health and the Problem of Patient Choice," she presents two fundamentally different logics shaping how healthcare professionals and patients interact: the *logic of choice* and the *logic of care*. These logics represent different organizational principles as well as different understandings of what "good care" entails. Mol also differentiates between activities categorized as "care" and "cure." "Care" often refers to activities done to make life more bearable for the patient, such as feeding, bathing, and dressing wounds. "Cure" is more relevant in terms of healing and is usually applied when speaking of interventions in the course of a disease. However, Mol notes that these two categories overlap, as one may emphasize the effect of the other (Mol, 2008, p. 1). Further, Mol et al. (2010, p. 13) argue that the *ethics of care* never sought to answer what is good, particularly not to do so from the "outside." In a way, it stands in opposition to other forms of ethics, such as ethics of justice, that emphasize the application of general principles derived through rational argumentation. While such approaches prioritize universality and consistency, the ethics of care emphasizes the limitations of abstract principles in practice. Instead, it advocates for context-specific and situated responses to particular problems. Here, "justice" may be important, but other norms like compassion and fairness may be equally or more important. Not in a foundational way, but as orientations among others. Thus, in care practices, it is taken as inevitable that different "goods" have to be dealt with together, as they reflect different values and different ways of ordering reality (Mol et al., 2010, p. 13).

The logic of choice builds on the idea that patients are autonomous decision-makers who can choose between different treatment options based on information provided by healthcare professionals (Mol, 2008, pp. 6–7). This perspective emphasizes standardization, documentation, and transparency. Technology is often used to accommodate informed decisions to secure control and responsibility within healthcare services. The logic of care, on the other hand, emphasizes a continuous, relational, and situational approach to care. The aim is not to provide the patient with a selection of treatment options but to adapt the treatment through a continuous process. Here, both the patient's needs and the experiences of the healthcare professionals play important roles. The logic of care recognizes that health is unstable and dynamic, and that "good care" demands flexibility and adjustments over time. Thus, the difference between the two logics does not merely lie in the way decisions are made but also in how health, care, and technology are understood and conceptualized. The logic of choice views health as a product that can be decided, while the logic of care views it as a process in need of maintenance (Mol, 2008, pp. 6–7). In instances where technology plays a central role, such as the case of the Health Platform, the tensions between these two logics become a source of friction and barriers to the implementation of said technology. The Health Platform is built for standardization and efficiency, thus relating more to the logic of choice. Understanding the difference between the two logics is crucial when analyzing how healthcare professionals experience and adjust to new digital systems.

3.5.1. Managing Versus Doctoring – Standardization versus Situated Care

Within the healthcare system, tensions between administrative management and practical care may arise (Mol, 2008, pp. 42). These tensions emerge as a result of differing values, goals, and practices. Administrative management, or "managing," aims to achieve efficiency, control, and measurable results. Managing is characterized by standardized procedures, checklists, and documentation requirements. Here, technology is used to report performance and ensure accountability. However, the problem emerges when healthcare professionals have to prioritize the completion of forms and documentation at the expense of time with the patient. The administration's focus on measurable outcomes often disregards the complex and unpredictable needs of patients. Contrastingly, practical care, or "doctoring," emphasizes the adaptations and continuous care of the patient's health. Similar to the logic of care, doctoring builds on relational care, flexibility, and professional discretion. From a doctoring perspective, health is a process in need of continuous adaptations. Healthcare professionals can experience that standardized rules and procedures do not fit into unpredictable situations, which can create friction between them and the administration. Thus, the need to deviate from regulations to provide "better care" can be difficult to unite with administrative demands (Mol, 2008, pp. 46-50).

Through the logic of choice, one tries to separate facts and values by presenting decisions as neutral and objective and allowing the patient to decide based on facts alone (Mol, 2008, pp. 43-46). This builds on a rational model assuming that facts are "pure" information, where values are detached and viewed as personal preferences. Medical knowledge is presented as something universal and measurable, and technology is utilized to structure and provide this information. Technologies are instruments, and the more effective they are, the better. The patient possesses the role of an autonomous decision-maker who should use facts to choose based on their values, while healthcare professionals primarily take on the role of information providers. However, Mol argues that this separation rarely works in practice, as facts and values are always intertwined entities. Choosing a course of treatment is not just based on neutral facts concerning risks and benefits. It is also based on the patient's life situation, how they experience their illness, their social contexts, and what the healthcare professional deems feasible. Trying to separate facts from values can thus create an artificial division that overlooks the complexity of care practices (Mol, 2008, pp. 43-46).

In her book, Mol (2008) paints a picture of the logic of choice as a process where the patient makes an autonomous and individual decision, where healthcare professionals remain neutral and sources of objective information. However, one could argue that the alternatives presented by the healthcare system are not neutral. They can rather be seen as socially and institutionally constructed. For instance, political, economic, and professional values can affect what is offered as an alternative treatment and how it is framed and presented. Further, those who can afford to choose, understand the choice, and have the capacity to make the decision can also reflect underlying structures and value distributions. Thus, even though the logic of choice presents a situation where the patient is “carrying” the values, the situation as a whole is deeply value-laden. Mol describes how, within the logic of choice, the healthcare system shifts the responsibility of decision-making onto the patient. However, this can be considered a value-based action in itself. This expresses an ideal of autonomy, where being a “good” patient means being a decision-maker rather than a rational participant. If the desired outcome is not reached, it can potentially cause stress and guilt within the patient. The responsibility for making the “right decision” becomes individualized. When the logic of choice is presented as neutral and objective, it hides the fact that it can represent specific political and economic priorities. For instance, streamlining and market orientation within the healthcare sector. Therefore, the “lack of value” within the logic of choice can be considered as misleading, as it is ideologically charged.

As for the role of technology, they are unruly and rarely subordinate themselves to their official ends (Mol, 2008, pp. 46-50). “Once introduced into a world where they interfere in unexpected ways with lots of other erratic entities and configurations, they change much more than they were intended to, and are ultimately transformed themselves as well” (pp. 50). By assuming that technologies are as unpredictable as humans, the logic of care considers “good care” to involve a continuous attempt to domesticate persistently wild technologies. Therefore, we must remain critically aware of the technologies we use, ensuring they serve our needs rather than passively accepting their influence. Either we shape our tools to fit our practices, or we adjust ourselves to align with their constraints. Technologies are not neutral instruments that simply follow our intentions. They actively shape our behaviors, decisions, and identities (Mol, 2008, pp. 46-50).

According to Mol (2008, pp. 46-50), this is the point of collision for the two logics. Managing is anchored in the logic of choice, believing that care can be standardized and measured. On the other hand, doctoring is based on the logic of care, underscoring situational adjustments. Digital systems, such as the Health Platform, often reinforce administrative demands by emphasizing registration and reporting. This can, in turn, cause healthcare professionals to experience that the technology does not support their actual care work. Mol argues that it is not a matter of choosing between managing or doctoring but rather finding a balance. Administrative systems overlooking the complex reality of care work can cause frustration and reduced quality in healthcare services (Mol, 2008). This perspective can be useful for analyzing why technological solutions like the Health Platform can create barriers in the everyday practices of healthcare professionals.

3.5.2. Navigating Between the Individual and the Collective

The welfare state, characterized by its "all for one" approach, faces increasing challenges related to budget restraints and a growing public (Hoyer, 2019). While trying to maintain their interest in collective care, public authorities turn to technology with the idea that technological advancements will result in a greater capacity within these welfare services. Such is the case with the Health Platform. It can be perceived as balancing individual needs with the collective good, where the impression is that the Health Platform will aid healthcare by helping more people in less time. According to Mol (2008, pp. 57-72), healthcare professionals must continuously balance individual needs with collective solutions within healthcare services. This is a challenge, as standardization and collective solutions often conflict with the necessary practices required for providing personalized care. Mol explores how healthcare professionals have to navigate the tension between accommodating unique needs and following the systems and procedures established to ensure efficiency and equality within the healthcare sector. This dilemma is underscored by technological solutions that are not neutral tools but influence the way care is practiced (Mol, 2008, pp. 57–72; Winner, 1986).

The Healthcare sector is both an individual and a collective service (Mol, 2008, pp. 66-70). On the one hand, we have healthcare professionals and their daily interactions with patients' different medical needs, histories, and preferences. Here, the need for flexibility, empathy, and the ability to adapt care and treatment to each specific situation is expressed. On the other hand, the healthcare sector is a system demanding standardization and uniformity to ensure equal access to equal quality of care, regardless of their background or where in the system they are located. This is where the collective logic of the healthcare sector becomes relevant. The collective logic is tied to measurable outcomes, efficiency, and administrative management – in other words, the logic of choice. Collective logic emphasizes creating solutions that can be used across many patients to ensure that the system as a whole operates efficiently. In this context, healthcare professionals must balance the aim to adapt and personalize care with the demand to adhere to collective solutions that can appear rigid. Mol describes how standardization can be difficult to unite with the rational and individual nature of care. While standardization in the healthcare sector is central when ensuring safe, just, and cost-efficient care, it can also limit the flexibility needed to provide customized care (Mol, 2008, pp. 66-70).

Technologies and administrative management are tools implemented to reach the aims of the collective logic. Collective logic can serve as a significant barrier to the daily practice of healthcare professionals, and technologies designed to support this logic often introduce friction into their workflows (Mol, 2008, pp. 62-66). For instance, EHRs and other digital systems focusing on documentation and information exchange lead to an increased administrative burden, ultimately reducing the time healthcare professionals can spend with their patients. Thus, the technology can appear as a double-edged sword: it enables efficiency and communication while simultaneously reducing the flexibility needed to provide holistic and individual care. As technologies are not neutral instruments within the healthcare sector, they can interfere with and shape how healthcare professionals perform their work (Mol, 2008, pp. 50). When they are forced to adapt their work to technological solutions designed with collective goals in mind, it can lead them to feel trapped in a system that does not adequately reflect patients' individual needs. This can, in turn, create an experience of friction and frustration where healthcare professionals are bound by system requirements while simultaneously wanting to provide more adapted and rational care. Though standardization and collective logic can be necessary means to ensure efficiency and equality, they can also hinder the flexibility and adaptability that are essential in the care of each patient (Mol, 2008, pp. 62-66). Here, the role of technology is split; it can both support and constrain healthcare professionals' ability to provide care. There is no simple solution to this tension within the healthcare sector. Instead, healthcare professionals must continually navigate between the system's demands for efficiency and the necessity of providing individual, relational care. To resolve this dilemma, it is important to recognize that both individual and collective logic play a role and that it is in the encounter between these two that good care can emerge (Mol, 2008, pp. 62-66).

3.5.3. The Risks and Discomfort of Medical Innovation

The Health Platform can be considered an example of how innovation can both create possibilities and challenges. The system is developed to collect patient data and standardize healthcare services across institutions. Reportedly, this should lead to better patient care continuity and more efficient resource management. Kathleen Lynch (2022, p. 85) argues that this intensification and acceleration of work, as part of neoliberal capitalism, has created growing pressure to do more in less time. This speeding up of life reduces the overall quality of life, as well as clashes with the unpredictable and cyclical nature of care responsibilities. Although such pressures have long existed under capitalism, new digital technologies have further increased the pace of both thinking and working, reinforcing the expectation of constant speed and efficiency. In this context, anything that slows down productivity is seen as a liability. For example, taking time to care for a sick child or an elderly person with dementia becomes problematic, as such care cannot be predicted or neatly scheduled. Urgent care needs do not align with the linear and tightly controlled structure of clock time, and are poorly suited to systems that prioritize speed and profit (2022, p. 85). As the practical implementation of the Health Platform has also resulted in frustration, one might argue that it is an example of how innovation is often attached to certain expectations, while actual innovation happens when healthcare professionals find ways to work with or against the system to provide the best care possible. It is within the small adjustments, informal solutions, and rational adaptations that innovation becomes a part of the care practice.

Mol challenges the dominant understanding of innovation within the healthcare sector by arguing that innovation is not just about developing new technologies or implementing effective systems (Mol, 2008, pp. 83-89). Innovation is often portrayed as a linear process where new solutions are introduced to improve healthcare systems, increase efficiency, and provide patients with more choices. However, healthcare innovation should be understood through the logic of care, where "good" solutions do not necessarily mean new technologies but rather how practices and relationships change when faced with new instruments and structures. Healthcare cannot be reduced to creating more effective solutions because care is a rational practice demanding continuous adaptations. New technologies and procedures can provide new opportunities, but they change the way care is practiced, often in unforeseen ways (Mol, 2008, pp. 83-89). For instance, a new EHR system meant to streamline documentation and reduce errors might lead to healthcare professionals spending more time in front of the computer than with the patient. One could argue that innovation can also happen when healthcare professionals actively adapt, adjust, and use the system according to the logic of care (Mol, 2008).

Innovations are often the product of an ideal of universal standardization (Mol, 2008, pp. 83-89). However, in practice, healthcare professionals have to adapt these innovations to the different situations they face. Technologies are rarely as seamless or purely functional as they are designed to look (Mol et al., 2010, p. 14). Nor can they be easily classified as either straightforwardly successful or complete failures. Instead, technologies produce a range of outcomes, both anticipated and unanticipated. Importantly, technologies do not fail in and of themselves. Their effectiveness depends on ongoing care work: on individuals who continuously adjust technologies to fit particular situations, while simultaneously modifying those situations to accommodate the tools (Jasanoff, 2004; Mol et al., 2010, p. 14). This process involves ongoing, often improvisational, forms of engagement, an iterative practice of adaptation and tinkering that sustains technological functioning over time (Mol et al., 2010, p. 14).

Thus, innovation does not just occur at a system level but also in the small adjustments and improvisations that healthcare professionals make in their everyday lives. These technological innovations can also alter the way patients and healthcare professionals interact (Mol, 2008, pp. 83-89). For instance, the implementation of EHRs can seem like an objective improvement. However, one might argue that this can affect how healthcare professionals exercise their discretion. When healthcare professionals become dependent on standardizations and checklists to make diagnoses or decide on a treatment plan, it can change their role from active decision-makers to system operators. This shows that innovation always has a transformative effect on how treatments are delivered and the relationships and practices within healthcare.

Still, Mol (2008, pp. 77-78) is careful not to underplay the role of technical innovation in healthcare. The strive to improve healthcare does not come without risks. This is demonstrated through examples related to the treatment of diabetes. Researchers once removed dogs' pancreas to study diabetes, risking both their careers and the dogs' lives. Later, a volunteer became the first human to receive an insulin injection, uncertain whether it would save her or be fatal. While Mol's argument is more related to morality within the two logics, saying that moral values shape the way we perceive health and care, a point is made regarding the potential drawbacks of medical innovation. Within the logic of choice, deciding what is "good" is a matter of weighing the checks and balances. To decide which action to take, one has to gather as much information as possible related to the potential action and then weigh it against each other. A balanced and moral judgment precedes action. Still, a new argument might emerge after the initial decision, causing one to change their mind. Within the logic of care, however, the action does not come after the moral decision has been made. Action is itself moral, as we healthcare professionals have made a moral commitment to take care of patients. Still, these actions are not necessarily comfortable since the outcome of an attempt to do good cannot be predicted with certainty in practice. For example, in the case of the first human insulin injection, one did not know for sure that it would help the patient. While insulin saves lives, it is not a cure. Introducing insulin as a medical treatment was "good enough." However, one could argue that the innovation that insulin once was can have hindered potential future innovations related to treating or curing diabetes that would have been "better" than insulin (2008, pp. 77-78). "Good" innovations do not necessarily come without risks and discomfort, regardless of which logic one follows.

4. Methodology

This chapter outlines the methodological approach taken in this thesis and reflects on the processes through which the data were handled and interpreted. The research design is inspired by the stepwise-deductive-inductive method (Tjora, 2021). This allowed me to move back and forth between the empirical material and emerging theoretical insights, enabling patterns to be identified inductively while ensuring that my interpretations remain grounded and systematically developed. Accordingly, this chapter details what was done, as well as how, why, and with what consequences. I begin by describing the research design and the rationale for the chosen methodological approach. I then describe the empirical settings of the study and the methods of data collection, which included semi-structured interviews of healthcare professionals in Central Norway. The chapter also addresses issues of positionality, reflexivity, and ethical considerations that arose during the research process, including the utilization of artificial intelligence. Finally, I demonstrate the strategies used for analyzing the material and the conceptual orientations that guided my research.

4.1. Research Design

The analysis is inspired by the stepwise-deductive-inductive method (SDI) (Tjora, 2021, pp. 20–26). It is a systematic approach to qualitative analysis combining deductive and inductive reasoning in a constant process. It is beneficial when analyzing semi-structured in-depth interviews, as it provides a structured and flexible method for developing theoretical insights from empirical data. The method consists of piecemeal coding and categorization, which allows the researcher to move between theoretically based expectations and data-driven discoveries (Tjora, 2021, pp. 20–26). As I plan on conducting the interviews in Norwegian to ensure that my informants are comfortable and can speak freely about their experiences, I must carefully translate key terms accurately while maintaining the meaning of the original statements. When necessary, I will explain the cultural contexts and tacit understandings of certain words used. I conducted the coding and categorization in Norwegian and translated the contents afterwards.

The first step involves applying an initial coding scheme based on pre-existing theoretical concepts, research questions, or prior knowledge to the transcripts (Tjora, 2021, pp. 20–26). This deductive process allows me to organize the data according to the topics I am specifically interested in. The next step moves to an inductive phase. Here, the data is examined without being constrained by predefined categories. The aim is to identify new patterns, concepts, or themes emerging from the data itself. This ensures that the analysis remains open to empirical realities rather than being overly confined by theoretical assumptions. When a broad set of codes has been established, I can organize them into superior categories. This entails comparing and merging similar codes, identifying relationships, and refining the conceptual structure of the data. After clustering the data, I can revisit the relevant literature and theoretical frameworks. Here, the findings are contextualized within the scope of existing research while also allowing for new insights. Additionally, this approach allows for continuous comparison, highlighting specificities and similarities in the statements of the interviewees. If an unexpected topic emerges, I have the opportunity to explore related concepts in the literature or broaden my framework. Finally, the findings are synthesized into a coherent analytical narrative. This involves explaining how the identified topics contribute to answering the research questions and situating them within a broader theoretical discussion. The interplay between deductive and inductive reasoning strengthens the validity of the analysis by demonstrating how theory and empirical data reciprocally inform each other. By systematically moving between deductive and inductive reasoning, the SDI approach allows me to maintain theoretical accuracy while also being open to unexpected findings. This method ensures a deep and contextually aware understanding of complex social phenomena (Tjora, 2021, pp. 20–26).

4.2. Data Collection

4.2.1. Participant Selection

When collecting data for the thesis project, I started by contacting my network in Trøndelag and Møre og Romsdal counties. I asked for help to come into contact with healthcare professionals in Trøndelag and Møre og Romsdal, a method that proved efficient. Utilizing my personal network did come with the possibility of being presented with interviewees with whom I had a prior relationship with. However, this issue did not arise. I aimed to come in contact with healthcare professionals in the respective counties, as they have been at the heart of the controversy. As Trøndelag was the first county to implement the Health Platform, choosing interviewees from both counties, as well as from both somatic and psychiatry, presented me with the opportunity of adding a comparative element to my analysis. I have chosen to utilize a diverse selection of healthcare professionals to bring to light the spectrum of dealings with the digital transformation of work and care.

The data for this project is based on nine semi-structured interviews, with participants from two different counties and six different municipalities. Many of the interviewees are employed at more than one institution, or have formerly been employed at a different municipality than where they are currently employed. This allowed them to compare and contrast their experiences during their interview. It also provided data based on experiences from the same municipality, as well as different ones. Further, the participants are employed within two different categories of healthcare services within the Norwegian healthcare sector: somatic and psychiatric care. As the controversy surrounding the Health Platform has been mainly centered around the somatic practices, this was my main interest. However, the insight from the psychiatric healthcare professionals has enriched the analysis, enhancing its comparative dimensions. Some of the interviewees were recently employed within the Central Norway healthcare sector, but not at the time of the interviews. The limitations of the participant selection will be addressed further down.

The following tables present the healthcare professionals interviewed for this project. In Table 1, they are organized based on the counties in which they are employed, and their respective vocational roles are also highlighted. Table 2 organizes the healthcare professionals based on two areas of healthcare, somatic and psychiatric healthcare. To keep their identities anonymous, I have assigned each person a pseudonym. I have chosen to use human names instead of less personal labels for several reasons. Using pseudonymized names enhances the flow of the text, making it easier to follow and engage with the narrative. It also supports a more human-centered tone by emphasizing that the data comes from real people with distinct voices and experiences. Additionally, it has been helpful during the analysis and writing to more easily differentiate between the interviewees, likely reducing confusion and improving comprehension for the reader. Lastly, names allow for a smoother integration of participant quotes into the text, resulting in more fluid and coherent writing. Pseudonyms maintain the anonymity of the interviewees while still providing each with a unique identity, balancing between ethical responsibility and narrative clarity.

Table 1: Overview of the interviewees, their general occupational group, and their respective county.

Pseudonym	**Job Title**	**County**
Benjamin	Bioengineer	Trøndelag
Lucas	Nurse	Trøndelag
Maria	Nurse	Trøndelag
Julia	(Former) Social Worker	Trøndelag
Sara	Doctor	Trøndelag
Emma	Section Head at Psychiatry Department	Møre og Romsdal
Isabell	Nurse	Møre og Romsdal
Jenny	(Former) Section Head at Psychiatry Department	Møre og Romsdal

Noah	Doctor	Møre og Romsdal

Table 2: Overview of the participants' relation to somatics or psychiatry within the Central Norway healthcare sector. (Bioengineers are considered a part of the somatic practices, but they are not engaged with direct patient care in their usual procedures.)

Somatics	**Psychiatry**
Lucas	Jenny
Maria	Emma
Sara	Julia
Isabell	
Noah	
Benjamin	

4.2.2. Conducting the Interviews in Norwegian

The interviews were conducted in Norwegian. This decision was made for several reasons, particularly in terms of communication clarity, cultural relevance, and the accuracy of the data gathered. The primary advantage of conducting interviews in Norwegian was the ability to ensure clarity and precision when discussing complex topics related to the Health Platform. All the participants spoke Norwegian well. Healthcare professionals often deal with specialized terminology and detailed descriptions of their workflows, which can be difficult to express accurately in a second language. While many professionals in Norway are proficient in English, technical terms and context-specific nuances might not always be conveyed as clearly or accurately in English. By interviewing in Norwegian, respondents were able to articulate their experiences, frustrations, and suggestions in their native language, leading to more authentic and accurate responses.

My persuasion was that allowing the interviewees to speak in the local language would lead to a higher level of comfort during interviews. Healthcare professionals in Central Norway would likely feel more at ease expressing their thoughts and concerns about a system they interact with regularly in Norwegian, rather than in a second language. This comfort fosters a more open and honest dialogue, where the interviewees could be less likely to censor themselves or feel constrained by linguistic barriers. In turn, this openness can lead to richer, more detailed data that better reflects their true experiences and opinions.

The Health Platform operates within a specific cultural and professional context. Using Norwegian as the interview language allowed the participants to engage more deeply with questions related to local healthcare practices, regulations, and workflows that may not have straightforward English equivalents. This is especially important when dealing with systems like the Health Platform, where understanding local healthcare dynamics, such as organizational structure, regional healthcare policies, patient-care protocols, and *how* they speak about it, is essential. Conducting interviews in Norwegian allowed the participants to express these region-specific issues with greater ease, providing more valuable insights.

Interviews often involve the exploration of complex emotions, opinions, and reflections. When respondents are asked to discuss frustrations with a system like the Health Platform, the subtleties of their responses are better captured in their native language. There are emotional or contextual nuances that could be lost or misunderstood if the conversation were held in English, as certain expressions or cultural references may not translate as effectively. In Norwegian, the healthcare professionals were able to describe specific challenges, such as user interface difficulties, communication barriers, or the platform's integration with existing workflows, with a level of detail that could have been harder to achieve in English.

The interview data, when collected in Norwegian, allowed for a more straightforward and accurate analysis. The translation of responses from Norwegian to English for subsequent analysis could introduce errors or misinterpretations, especially in complex technical discussions. Conducting the interviews in Norwegian minimized this risk, ensuring that the data analyzed was as close to the original expression of the participants' thoughts as possible. This not only made the data analysis process more efficient but also ensured that the findings were grounded in the actual language and terms used by the healthcare professionals. Still, I had the responsibility of ensuring that the translations were as close to the original dataset as possible. This did not come without challenges. In some instances, I needed to include Norwegian terms in my analysis to underscore the point presented and to keep the argument of the interviewee intact.

Although this thesis is written in English, the inclusion of key Norwegian terms is intentional and necessary. The Health Platform is shaped by cultural, institutional, and linguistic contexts that do not always have equivalent meanings in English. Certain institutional terms or expressions carry meanings that are specific to the Norwegian healthcare sector. Using these terms in their original form preserves the situated character of the controversy being studied. Finally, the selective use of Norwegian terms is representative of the thesis itself, being situated in a Norwegian field site, grounded in international academic discourse, including different national actors, namely Norwegian and American. It demonstrates the importance of the interviewees being able to participate in their native language, and my commitment to accuracy, reflexivity, and respect for the complexity of the research setting.

In summary, conducting interviews in Norwegian with healthcare professionals in Central Norway regarding the Health Platform was crucial for ensuring the accuracy, depth, and cultural relevance of the findings. It allowed for more precise communication, encouraged openness, and provided richer, more contextually accurate data that could be analyzed without the potential complications of translation. Conducting the interviews in Norwegian ultimately ensured that the voices of the participants were fully captured and reflected in the research.

4.3. Reflexivity and Positionality

Coming from a background in sociology and being a native Norwegian, I recognized how my familiarity with the welfare state shaped my expectations around public health IT systems. This likely influenced how I interpreted stakeholder narratives about accountability and transparency in the Health Platform. I have also been aware of the Health Platform as a controversy in Norwegian media. This did initially shape my interest in the case, and might also have influenced my expectations and positionality starting this project. As a native Norwegian, I entered this project with a set of assumptions about digitalization, public health, and the role of the welfare state in Norway. These assumptions inevitably influenced how I approached the field, what questions I found meaningful, and how I interpreted the complex dynamics surrounding this large-scale health IT initiative.

As I am familiar with the values and expectations tied to the Nordic societal model, I was attuned to certain narratives, particularly those regarding transparency, equity, and public accountability. For this project, I had to remain cautious about not reproducing normative assumptions about technological progress or administrative rationality, especially in a project deeply intertwined with visions of modernization and efficiency.

My role as a researcher was not neutral. In constructing the research narrative, I had to make choices about which voices to highlight, which controversies to foreground, and which concepts to utilize. I became increasingly aware of how my interpretations could reinforce or disrupt dominant framings of the platform, as either a necessary modernization effort or a flawed top-down implementation. This is also related to how I present the statements of healthcare professionals, as this might reinforce how others perceive their positionality in the controversy. Thus, it was important to me to emphasize that the resistance from healthcare professionals was not merely disdain or skepticism toward new technologies or disruptions in their workflows, but that the dynamics behind their resistance are multifaceted.

Lastly, my position as a researcher consisted of both proximity and distance. I was close enough to recognize and know the cultural and institutional logics at play, but distant enough to ask critical questions about how the healthcare professionals and their positionality play a role in the implementation of the platform.

4.4. Ethical Considerations

As with any research involving human participants, informed consent, confidentiality, and data protection were fundamental ethical considerations for this project. Additionally, my ethical responsibility extended to how I represented actors, framed controversies, and navigated my positionality in the research process. Managing the confidentiality and anonymity of participants was central to the project, particularly when interviewing individuals employed at institutions where critique could have consequences. Given the relatively small and interconnected health sector in Norway, ensuring anonymity was not simply a matter of removing names. It required careful judgment in how I described roles, institutions, and events to avoid unintentional identification. This was especially important when interviewees voiced perspectives on the implementation of the Health Platform, as these insights often revealed tensions within the system that were politically sensitive.

In addition, I encountered ethical tensions in balancing critical analysis with fairness. I wished to approach the dominant technological narratives with skepticism and to surface the messy and contested realities beneath the controversy that the Health Platform has become in Norway. Yet I also felt responsibility not to portray the project or its actors in overly reductive terms. Many of those involved in the development of the platform were deeply committed to improving healthcare, working under complex and constrained conditions. Respecting the multiplicity of motivations and positions became an essential aim in my writing.

Finally, I wish to address the use of artificial intelligence (AI) in my work. I have used tools such as ChatGPT, DeepL, and Grammarly. The following table explains how they were involved in my work, as well as how I have interacted with their outputs.

Table 3: AI usage in academic work. Based on the AI Usage Table provided by the Department of Science and Technology Studies at the University of Vienna summer of 2025.

AI Tool	Work Phase	Prompts/How was the AI used?	Reason for Usage	Comment and Reflection on the Results
Chat GPT (v.4)	Structuring, writing, refinement, analysis	I asked it to outline potential structures for my chapters. In some instances, I used it to write an introductory paragraph to help me get started on the writing process. Sometimes I used it to help me communicate an argument within a sentence more clearly. I also asked it to outline some potential categories based on sets of codes from the analysis.	In these cases, I wished to help myself get started on the writing process, as well as create an outline of what I wished to discuss, keeping a red thread in my writing. English is not my first language; thus, I used it to be able to communicate my point more clearly in instances where I struggled with translation.	The output was generally good but lacked the particularities of my research. Thus, I used the outputs more as inspiration and an aid when I met challenges in writing. I was very aware of the contents of the outputs and aimed to use them more as an outline and guide of how to frame and structurally present my arguments and writing.
DeepL Translator	Analysis	Translation of quotes and categories made during the analysis.	This helped me save time translating quotes and names of categories, as the data for the project was collected and analyzed in Norwegian.	It was important to keep the integrity of the data when translating the data. I was aware that DeepL would not be able to do this on it own. Thus, I made sure to use its outputs as a starting point for the translation, altering it to fit the cultural contexts inherent in the quotes and analysis.
Grammarly (free version)	Writing	Continuous revision of grammar, sentence structure, and spelling.	Grammarly helped me ensure the correct use of grammar and writing in English. I used this because English is not my first language.	This software did not change the contents of my writing but helped me increase the clarity of my arguments.
Whisper	Transcription	Transcribe interviews.	This helped me save time transcribing the interviews.	The transcription was relatively good, but I had to go over the output and correct some mistakes due to the different dialects of the interviewees. I was very careful to omit personal information.

4.5. Limitations

4.5.1. Diversity of Healthcare Occupations

Though I consider my approach as an effective way of contacting interviewees, it did result in little consistency of occupational groups. Including participants from different healthcare professions offers a broad perspective on how the Health Platform is experienced across the healthcare system. However, this diversity also presents certain limitations that must be acknowledged, as it could limit the generalizability of the analysis.

The variation in professional roles means that participants likely interact with the Health Platform in different ways, as they have different needs, expectations, and levels of system dependency. For instance, a nurse may focus on documentation and patient monitoring tools, while a physician may prioritize diagnostic support and clinical decision-making features. These functional differences can lead to heterogeneous experiences, making it more challenging to identify clear, overarching patterns in barriers to acceptance. What constitutes a barrier for one professional group may not be perceived as a problem or relevant for another. Further, the professional diversity of the study can limit the depth of analysis within each group. As nine participants can be considered a relatively small sample, the inclusion of multiple professions entails that only a few individuals represent each role. This reduces the ability to generalize findings within each group and may hinder the identification of profession-specific challenges or acceptance strategies. Without a sufficient number of participants from each profession, the study may struggle to capture the internal variability and contextual nuances within each role. Additionally, the diverse selection can increase the complexity of the analysis. Emerging themes may conflict or appear inconsistent as they reflect different work realities. This requires careful thematic analysis to avoid merging distinct professional experiences or overgeneralizing findings across groups that may not be directly comparable.

Thus, while the inclusion of participants from diverse healthcare professions provides a more comprehensive view of the implementation of the Health Platform, it also introduces analytical challenges. It can limit the depth of insight within individual professional groups and complicate cross-professional comparisons. Still, my evaluation is that the diversity of the occupations contributed to a wider understanding of the dynamics at play within the controversy surrounding the Health Platform.

4.5.2. Including Formerly Employed Healthcare Professionals

Including two former employees among a total of nine interview participants presents certain methodological and interpretive limitations that are important to acknowledge when exploring barriers to acceptance of the Health platform. Firstly, former employees may not fully reflect the ongoing experiences of healthcare professionals who continue to work with the Health Platform. Acceptance is often a dynamic and evolving process, influenced by exposure, adaptation, organizational support, and updates to the system. Since the two participants no longer work within the organization, their insights are limited to a specific point in time. Therefore, their insight may not capture the changes, improvements, or coping strategies that have developed since their departure. This temporal distance can reduce the relevance of their feedback to the present-day realities of the use of the Health Platform. Secondly, there is a potential for exit bias. Former employees may have left their positions due in part to dissatisfaction with the Health Platform or related working conditions. As such, their perspectives could be disproportionately negative and may not accurately represent the broader spectrum of acceptance among current staff. Their narratives, while authentic and important, risk skewing the overall findings if not interpreted in context and balanced against the experiences of current employees who have remained in their roles and potentially adapted to the platform over time. However, none of the former employees admitted to having left their position in reaction to the Health Platform.

Additionally, the small sample size of the study amplifies the impact of each participant. With only nine interviewees in total, the views of two former employees comprise over 20% of the dataset. This increases the weight of their perspectives in the analysis and could unduly influence the thematic outcomes if not carefully contextualized. Therefore, while the inclusion of former employees enriches the dataset by highlighting potential consequences of resistance and dissatisfaction, their contributions must be understood as historically situated and possibly biased. Their perspectives should be considered as complementary to those of current staff rather than representative of the broader healthcare workforce's engagement with the Health Platform today.

4.6. Data Analysis

As previously mentioned, the study is inspired by the SDI approach (Tjora, 2021, pp. 20–26). I started by familiarizing myself with the contents of the interviews. After each one, I noted down the emerging themes of the conversation – my first impressions, thoughts, and possible topics that stood out. After conducting almost every interview (except one), I started the open coding. As I read through the transcripts, I highlighted relevant statements and renamed them as simpler codes when possible, capturing the essence of the statement. Some were also coded with two different codes. For instance, every participant mentioned how the age of their colleagues would influence the likelihood of them handling the Health Platform. As it was, older colleagues often struggled more. This was then coded as "Generational differences." Still, the underlying topic of these generational differences was not a direct causal relationship between age and resistance, as the interviewees also emphasized. It was rather the technological expertise among the younger generation. However, as there is not necessarily a direct causal relationship between age and technological expertise, these statements were coded as "Generational differences" and "(Lack of) technological expertise."

After completing the initial coding of the transcripts, I started categorizing them into larger and overarching topics. I looked for patterns and reemerging themes across the interviews. As I moved down the list of codes, new patterns stood out, constituting new categories. The codes I was not immediately certain belonged to a specific category were placed in a category named "Other." I revisited this category several times to review its contents and see if any previously unnoticed patterns emerged. Still, these categories were largely descriptive, directly describing the content of the statements coded. Therefore, my next step was to analyze these categories. The following categories emerged from the data analysis:

1. Individual prerequisites or experiences
2. System structure and logic

3. Professional role and professional identity
4. Care, closeness, and practice
5. Cultural and social response
6. Management and power dynamics
7. Learning and collective adaptations
8. Future visions and legitimizing change

4.7. Conclusion

To summarize, this chapter has outlined the methodological approach of the study, with particular emphasis on the use of semi-structured in-depth interviews as the method of data collection, and the inspiration of the SDI-method (Tjora, 2021). This approach has enabled a flexible yet systematic exploration of the healthcare professionals' experiences and perspectives, which has been essential for gaining a deeper understanding of the dynamics behind the implementation of the Health Platform. Through deliberate methodological choices related to sampling, the interview guide, and analysis, efforts have been made to ensure both ethical integrity and data quality. These choices have been explained above to increase the transparency of the study. This chapter thus provides a foundation for the subsequent presentation and interpretation of the study's findings.

5. Empirical findings

The Health Platform represents a major initiative in digital health reform in Norway. It is aiming to unify patient records and standardize healthcare workflows across hospitals and municipalities in Central Norway, and is one of the country's largest health IT implementations. Therefore, it serves as a key case for examining the challenges and implications of large-scale digital transformations in the public healthcare sector. This study explores how healthcare professionals engage with, resist, and reinterpret the Health Platform in their everyday practice. By examining their experiences, adaptations, and critiques, the aim is to understand how large-scale digital health reforms are negotiated and how they can reshape professional identities, care practices, and institutional logics. Among the interviewees are doctors, nurses, section heads of the psychiatry department, a bioengineer, and a social worker. They are all of different ages and with varying years of experience.

The following chapter examines the complex interplay between healthcare professionals and the implementation of the Health Platform. Firstly, I will consider the understanding of the terms *adoption* and *acceptance*, situating the discussion of the terms through the understandings within the TAM and the UTAUT (Ammenwerth, 2019; Lee et al., 2025). Notably, TAM and UTAUT are not grounded in STS. Still, because of their rapport in the field of technology adoption research, I would argue that they are relevant to bridge the findings of this analysis to the wider field of technology adoption and health IT. Because of their influence, these models warrant attention from an STS perspective. Drawing on TAM and UTAUT allows for situating this analysis within a dominant discourse of technology adoption, while also opening space for critical engagement. The analysis then moves to the perceived misalignments and adaptations made by healthcare professionals in their everyday practices. Further, the analysis examines how the Health Platform, as a comprehensive digital system, constitutes a significant sociotechnical shift that transforms care practices, as well as reconfigures professional identities within the healthcare sector. The chapter analyzes how the Health Platform disrupts established routines, redefines roles, and necessitates new forms of collaboration and professional negotiation. Finally, the chapter delves into the participation dynamics and narratives of digital advancements in the Norwegian healthcare sector.

5.1. Adoption and Acceptance

As previously mentioned, the TAM and the UTAUT models have been criticized for their inconsistent predictions of medical technology acceptance and use (Lee et al., 2025). This is due to the notable limitations that emerge when applied to healthcare contexts. Adding to this line of critique is the fact that they portray *adoption* as a linear process, contingent on the *acceptance* of the technology. The case of the Health Platform can be considered an example of this. If adoption is the "actual use" (Ammenwerth, 2019, p. 66) of the platform, one may think that the Health Platform is also widely accepted among healthcare professionals in Central Norway. However, it becomes clear that this is not necessarily the case for everyone, which is also showcased through numerous media articles.

> "There's been a lot in the media about everything that has gone wrong. [The Office of the Auditor General] is investigating, and most of what you hear is about the negative stuff." (Sara, doctor)

> "[…] But it's really the whole process of introducing a system that nobody wants. The original idea was to have a shared medical record. But when that goal isn't achieved, and you go ahead with a system that is so large, extensive, and complex for a healthcare organization... there's just so little logic in that decision, in a way." (Noah, doctor)

> "It's a crappy system. If I had known how poorly it would work, I would have been much more critical of introducing it in the first place. Before it was implemented. And I, along with many others, also feel like we've been misled." (Lucas, nurse)

These expressions highlight an important contrast in the relationship between adoption and acceptance. Healthcare professionals have to utilize the Health Platform as it has been implemented at their workplaces. However, what can be understood from their expressions is that a significant number of healthcare professionals consider the Health Platform to be overly complex, confusing, and counterintuitive. Though not every participant expressed a similar perspective on the Health Platform as Lucas, he presents an example of how the Health Platform has been adopted within an organization – it has been implemented – without the support of the actors' acceptance.

Some interviewees expressed that they approached the digital transformation with a different attitude.

> "A lot of people agree that it wasn't the best measure, […] but now that it's here, [I focus on] figuring out how to do it in the best way possible, without compromising patients and colleagues. […] There are major discrepancies. Things have gotten better, as I understand it, but yes. It was a bit of an exhausting storm to weather, but I had a positive attitude, and I've made it work. I just have to figure out what to prioritize and what is important to document." (Maria, nurse)

> "No one is praising the Health Platform to the skies. But it's more a case of 'okay, this is how we're going to have to deal with it, we can't get away from it.' So, there has been a pretty big shift [in people's attitude], I think." (Emma, psychiatry)

Maria and Emma express that they consider the Health Platform and its imposing structures as unavoidable. They underscore that there is a wide consensus considering the dissatisfaction with the performance and usability of the platform. Still, they show what can be interpreted as a form of acceptance in the sense that they have to operate within its framework anyway. In this case, the inevitability of the platform surpasses factors such as perceived ease of use and performance expectancy (Ammenwerth, 2019). While some demonstrate their resistance to the platform, others portray a form of acceptance under the impression that their circumstances are immutable. Notably, this acceptance came after the introduction of the platform. Thus, from the perspective of healthcare professionals, adoption is not contingent on acceptance.

However, adoption and acceptance are not dichotomies, and acceptance is not a question of yes or no. In practice, these two processes are intertwined and continuously shape each other. Adoption is not a neutral act. In the case of the Health Platform, professionals adopt the system because they are mandated to do so. This does not guarantee their acceptance of the platform or that they integrate it meaningfully into their practice. Simultaneously, acceptance frequently develops through experience and adaptation in daily work. As healthcare professionals interact with digital systems, they engage in ongoing negotiations between system expectations and their professional values and practices. These encounters influence their attitudes. Positive experiences may foster growing acceptance, while frustrations can reinforce skepticism. Thus, acceptance can be considered to evolve through the act of using the platform. In turn, acceptance also shapes how adoption is performed, whether through superficial compliance, workarounds, or meaningful integration.

Furthermore, neither adoption nor acceptance is usually total. Healthcare professionals may find certain functions of the Health Platform useful and align them with their work practices. At the same time, they may reject or bypass other functions they perceive as irrelevant, burdensome, or misaligned with patient care. Even some of the most skeptical interviewees highlighted certain functionalities, such as the chat function, as a particularly useful aspect of the Health Platform. This selective acceptance reflects the complexity of digital system integration in clinical work. Healthcare professionals constantly evaluate what adds value and what detracts from their core responsibilities, and different actors may accept different elements, which makes implementing a fully functioning system a complex process. Thus, rather than viewing adoption and acceptance as dichotomies, it is more accurate to consider them as part of a dynamic relationship, where practical experience, professional meaning-making, and organizational demands intersect. Understanding this relationship reveals why new system implementation depends on fostering meaningful engagement, allowing professionals to negotiate and shape the technology in ways that resonate with their work. This ties in with Lee et al.'s (2025) critiques of TAM and UTAUT, which oversimplify acceptance as a rational individual choice, ignoring complex contextual and collective processes through which technology becomes part of everyday work. Resistance, adaptations, and workarounds are not failures, but active strategies for reconciling system demands with professional identities and patient care.

Initially, the rollout of the Health Platform was met with significant resistance from healthcare professionals. Concerns emerged around usability challenges, increased administrative burden, workflow disruptions, and potential threats to patient safety. Still, many healthcare professionals comply with the system's demands out of necessity or obligation, even as they express dissatisfaction, voice concerns, or develop informal workarounds. Thus, compliance often coexists with resistance in forms of what might be perceived as reluctant adoption. Acceptance and adoption, therefore, do not occur in a linear process. Instead, they unfold unevenly and are shaped by the extent to which the system aligned with or disrupted existing professional practices. Where the technology supports clinical work, it is more likely to be accepted. Where it imposes rigid structures or fails to accommodate local needs, it has triggered contestation.

Discussing the dynamics of adoption, acceptance, resistance, and compliance becomes highly relevant in the case of the Health Platform because it highlights the complex nature of implementing large-scale digital systems in healthcare. The project was framed as a solution to fragmented patient data, inefficiencies, and coordination problems. However, its practical implementation has revealed significant challenges regarding the organizational, cultural, professional, as well as technical dimensions of healthcare. In this context, it is important to distinguish between adoption and acceptance, as they reflect different dimensions of how healthcare professionals engage with new digital systems. Here, adoption refers to the practical uptake and use of the Health Platform, whether and how it is integrated into daily routines and institutional workflows. It can occur out of necessity, professional obligation, or institutional pressure, even when users do not fully agree with or support the system. In other words, adoption is about the behavioral aspect. The system is used, tasks are completed, and the technology becomes part of the infrastructure, regardless of how users feel about it. On the other hand, acceptance refers to the attitudinal dimension. The extent to which users perceive the system as valuable, helpful, and aligned with their professional goals and values. Acceptance implies a degree of internal endorsement and trust in the technology. It goes beyond using the system because one has to, and reflects a sense that the system improves care, supports clinical judgment, or makes work more meaningful or efficient.

This distinction is important when analyzing the Health Platform because many healthcare professionals adopted the system in practice, while still resisting it on a symbolic or normative level. Healthcare professionals express dissatisfaction with how the system disrupts workflows, adds administrative burdens, or constrains clinical flexibility. Thus, adoption occurred without full acceptance. Recognizing this gap between adoption and acceptance helps explain why technical implementation alone is insufficient. It highlights that successful digitalization requires more than compliance. It depends on building trust, aligning system design with clinical practice, and addressing the values and concerns of users. In the case of the Health Platform, this insight is essential for understanding the system's mixed reception and for informing more responsive and sustainable digital health strategies.

5.2. Misalignments and Adaptations

The implementation of the Health Platform has revealed a series of misalignments between the system's expectations and the realities of clinical practice. While designed to streamline information flow, ensure standardization, and support large-scale coordination across institutions, the platform often clashes with the internal logics, values, and everyday workflows of the healthcare institutions it seeks to unify. The following is an analysis of how these tensions manifest through three interrelated dimensions: the friction between system-generated expectations and embedded professional routines, national discrepancies between healthcare systems, and the collective adaptations healthcare professionals mobilize when dealing with the platform in practice. Together, these themes illustrate that the success or failure of large-scale digital interventions is not merely of technical performance but hinges on how well new systems can align with local knowledge, institutional rhythms, and cultural sensibilities.

5.2.1. Tensions Between System Expectations and Internal Logic

A key topic emerging from the interviews was the Health Platform's structure and logic. There were some discrepancies between the interviewees in their perceptions of how their work fit within the framework of the platform. Participants who experienced greater alignment between their work and the platform described their work as well-suited to its structure and functions. In contrast, those who reported misalignment emphasized how the platform failed to accommodate the nature or demands of their work. When participants experienced alignment, they described their work as fitting the platform, suggesting they had adapted to its structure. In cases of misalignment, they described the platform as failing to support their work, implying that the platform should have adapted instead. Most interviewees mentioned how flexibility and time during the workday were important factors for dealing with the Health Platform. The participants working in psychiatry, as well as the bioengineer, admitted to having flexible schedules, allowing them to allocate time for the documentation that the platform demands. Still, the participants working in psychiatry did underscore that their workload had increased following the Health Platform's demand for documentation and registration, resulting in overtime work.

> "[…] my impression is that the work here is structured in such a way that everything is very much geared towards being streamlined, regardless. There's so much flexibility in our working day that if an obstacle arises, it doesn't slow down our work. We don't get stressed about not finishing or about someone waiting for us. Everything takes its course, regardless. You still move forward." (Benjamin, bioengineer)

> "[...] there have been greater strains in somatic care than there have been with us. I think many people [here] feel that things are going reasonably smoothly. [...] I think that for [somatic care], without knowing it very well, they are running treatments where things have to be registered quickly and continuously. They may have a different layout, the Health Platform layout looks different, and they may deal with more things than we do. In a way, we can sit down and write what we need to write in peace and quiet after the conversation." (Emma, psychiatry)

On the other hand, healthcare professionals in somatic care were more skeptical of the dynamics between their work and the platform. When asked to talk about their workday, they often described it as highly varied, time-sensitive, and containing important interpersonal approaches. However, with the introduction of the Health Platform, their tasks have moved to include more "secretary" work. This bears a resemblance to the growing concern about the checklist-driven approach to nursing highlighted by Hoeyer and Wadmann (2020) and Forde-Johnston et al. (2023). High-quality nursing is grounded in meaningful interactions between nurses and patients, characterized by compassionate presence, collaborative decision-making, and a person-centered approach. Therefore, tensions may arise when task-driven nursing interferes with these interactions, undermining holistic and person-centered care (Forde-Johnston et al., 2023; Hoeyer & Wadmann, 2020). According to Maria, due to the inherent time-sensitivity of the job, they often handle what happens in the moment and document their actions later. This then leads to a feeling of constantly being behind.

In acute situations, the Health Platform does allow for the documentation to be done afterwards. Still, this leads to an increasing pile of documentation that needs to be addressed at the end of each day. Maria describes that the system is quite rigid and "overly detailed," contributing to making their work inefficient. She explains how she experienced that the logic of the system added a dimension of review that they were previously unfamiliar with.

> "There was supposed to be so much documentation, […] so much control, that the Health Platform itself should be like a nurse who oversees you." (Maria, nurse)

This view was echoed by Noah, who draws on one of the main critiques observed in media: excessive "clicks" to complete your actions in the system.

> "This makes you feel that there is a lot of clicking to complete tasks. Obviously, it's just so that it can be registered in the system. You feel like it's no longer up to the kind of sensible thinking that you do as a doctor. You have to follow a certain structure [within the system] in order to do your job. Then you might feel that […] you're always being monitored in what you do. You always have to take responsibility for every choice you make, even small choices. Usually, you think that when you're trained as a doctor, […] it is very unnecessary that you have to alert everything you click. It feels a bit like a monitoring program, more than a journal program to help doctors." (Noah, doctor)

Several of the interviewees speak about "unnecessary" documentation, which can be understood as going against what they consider to be a part of the rationale and internal logic of their job. As Noah touches on, it can be experienced to invalidate the educated skills, knowledge, and judgment of their occupation. Further, the additional dimension of control that the Health Platform provides may challenge the healthcare professionals' autonomy in their professional roles. By increasing the visibility of clinical actions through detailed documentation, the system creates an extensive sense of surveillance. This can be recognized in Hoeyer et al. (2019), Hoeyer and Wadmann (2020), as well as in Dencik and Kaun (2020), who argue that the evolving nature of professional expertise may be undermined by a shift towards the rationalization of public administration. The increase in surveillance solutions in public sector services like healthcare shifts the accountability of the service away from the state's institutions to the individual service provider. In this case, the responsibility can be seen as shifted from the healthcare institution onto the individual doctor or nurse through the extensive documentation demands posed by the Health Platform, decreasing the value of professional expertise in the process. While the intention was to improve the quality and accountability of care, this transparency can be perceived as mistrust, shifting the professional experience of discretion and judgment to compliance and control. Structured fields and standardized workflows further limit the ability to document complex or ambiguous clinical situations, replacing narrative reasoning with task-oriented "clickwork."

> "There's not much room for free text. There's a lot that needs to be clickable. Black or white. Is the patient's skin pale, or is the patient's skin not pale? But it's not always easy to explain it with a yes or no, if the patient is a little pale, for example. What do you write then? So, it can

> be a bit difficult to get a completely objective assessment, for example, because we need to click. Was the patient in pain, or was the patient not in pain? No, the patient was in some pain." (Lucas, nurse)

Thus, some healthcare professionals may experience that their roles are redefined as administrative rather than relational or diagnostic. The platform also recentralizes authority, as decisions about the system design lie largely with administrative or technical actors, reinforcing a sense of top-down governance. Over time, the system's built-in review mechanisms can foster a form of anticipatory self-discipline, where healthcare professionals begin to adapt their behavior to what appears acceptable within the system, rather than what care requires. In this way, the Health Platform can be seen to subtly reconfigure autonomy and embed new forms of surveillance, standardization, and internalized control into everyday care work.

5.2.2. Cultural Misfits and Structures of Healthcare

However, the healthcare professionals do not express their dissatisfaction as merely a result of a change in their everyday practices, or a disdain towards (new) digital tools. As Felt (2015) underscores, resistance to specific technologies can be a conscious act, grounded in critical reflection, values, and concerns about how the technology might reshape practices, relationships, or institutions. When individuals reject a technology, they are often reacting to the social, cultural, or ethical implications it brings with it (Felt, 2015). Through the interviews, it becomes clear that the participants have certain reservations related to the fact that Epic is an American developer. They express clear skepticism towards the cultural differences between the American and Norwegian healthcare systems. Arguing that they are fundamentally different. This relates to the fourth pitfall identified by Hertzum and Ellingsen (2019), saying that Epic must adapt to the Norwegian healthcare system. As the analysis demonstrates, this has been a key challenge with the implementation of the Health Platform. The Norwegian and American healthcare systems represent two different models of organizing and financing health services. In Norway, the healthcare system is largely publicly funded, and all residents have the right to necessary health services. This is achieved through tax funding and relatively low personal costs for patients. In contrast, the American healthcare system is largely based on private insurance and market-based solutions. Access to healthcare is often tied to private health insurance or public programs. Americans who remain uninsured have to handle high personal costs and financial strain in the event of illness. The Norwegian healthcare system is characterized by solidarity, while the American system places more responsibility on the individual. These differences reflect contrasting political and societal values regarding welfare, equity, and the state's role in citizens' lives. The interviewees echo this. Interviewees across somatic care and psychiatry highlight the inherent concerns in the system regarding institutional structure, the understanding of responsibility, and leaving digital traces.

> "I think it has set a general attitude before you saw the program as well, unfortunately. Because there's so much talk in the media, things you hear from the American healthcare system, and things like that. One of the first sentences you hear is that we're going to have an American system in Norway. You hear in politics that Americans look up to Nordic healthcare systems and things like that." (Maria, nurse)

> "[…] what they did in the construction of the Health Platform for Norway was that they sent out a lot of Americans. It wasn't possible to talk to them because we couldn't find words to understand each other, and I think it was very complicated when you had to do that and find the Norwegian word for [something]. It must have been complicated, and you might have discovered something wrong with [the outcome]." (Jenny, psychiatry)

The skepticism towards Epic as American developers emerged already in the early stages of the Health Platform's development. Though Maria claims that one can read about how the US looks up to the Nordic healthcare system, the nations have significantly different societal structures. This, in turn, affects how healthcare institutions are understood, ultimately affecting how digital systems are modelled (Winner, 1986).

> "Well, the healthcare services in the US and Norway are radically different in terms of structure. And I think the Health Platform is built more around the American healthcare system in terms of insurance and billing, and things like that. That's very much in conflict with the Norwegian system. […]. And there are no [*legevakter*] in the US. So, I think they've struggled a bit to create a module that fits. Because there were some similar departments as in [Norway] in the US at the hospital, but they don't have a [*legevakt*] in that sense. So, [the Health Platform] was rebuilt, and it turned out very badly." (Lucas, nurse)

The most significant difference between an American emergency room and a Norwegian *legevakt* is that while the emergency room covers all emergencies, the *legevakt* handles minor urgent care. An American emergency room handles everything from minor to life-threatening emergencies. It is hospital-based and equipped for advanced treatment. A *legevakt*, on the other hand, treats non-life-threatening urgent cases outside the hours of general practitioners, serving as a gatekeeper to ensure that hospitals are free to handle serious emergencies.

Lucas highlights what he perceives as structural incompatibilities between the US and Norwegian healthcare systems. He suggests that the Health Platform reflects design principles and institutional logics aligned with the American system, which stands in tension with the values and practices of the Norwegian welfare state. Especially related to patients' insurance and billing. This underscores the notion that technologies are not neutral tools but rather are shaped by specific political and economic contexts (Felt, 2015; Hecht, 2009; Winner, 1986). Further, Lucas and Jenny point to practical difficulties of adapting the system to fit Norwegian healthcare institutions, such as language barriers and the lack of clear institutional equivalents, such as the *legevakt*. This perceived misalignment has put the Health Platform at the risk of being seen as foreign or insufficient within its new context.

Further discontent regarding the fact that Epic is an American developer was expressed regarding their attempts to improve the functionality of the system. Following the troublesome course of events during the implementation of the Health Platform, representatives from Epic were flown to Norway to aid with the transition and healthcare practices.

> "There was a lot of talk about it when a bunch of Americans flew here in business class and stayed here for a very long time, staying in hotels and so on, and people were very upset about that. It was like, 'Okay, we can afford to have lots of Americans visit us.' There was a lot of talk about whether we too were going to do that in connection with the introduction and so on, and we thought it was completely pointless for the health authority to spend money on that." (Emma, psychiatry)

This reflects the widespread frustration over the perceived extravagance of flying American consultants in business class and housing them in hotels for an extended period. It raises questions about the priorities and values guiding the project, as it can be considered a representation of the misprioritization of public resources. The visible involvement of foreign consultants may have reinforced the perception of the Health Platform as a foreign system imposed on a domestic healthcare context. This ties in with Lucas' perception that Epic is "an American company that has tricked Norway" into spending significant funds on their product. Still, not every interviewee can be said to share this specific opinion.

The differences between the American and the Norwegian healthcare systems seem to have had extensive effects on the development and implementation of the Health Platform. A core concept of the training and implementation of the platform was the utilization of *super-users*. Super-users are healthcare professionals who receive advanced training in the system and serve as local experts within their departments. Their role is considered central to the everyday integration of the Health Platform into clinical practice. Super-users should assist colleagues with system navigation, resolve technical issues, and provide ongoing support during and after implementation. Further, their task is to act as intermediaries between users and technical staff, help translate clinical needs into actionable feedback for system developers, and explain system changes or limitations to their peers in understandable terms. Beyond technical guidance, super-users can also be considered as critical agents of change management. By promoting system adoption and encouraging new routines, they can help mediate the tension between established work practices and the demands of a newly introduced digital infrastructure. This might resemble "physician builders," as mentioned by Hertzum and Ellingsen (2019), but, conversely, they are not part of the platform's developmental process.

However, some healthcare professionals described that the training was characterized by a lack of cultural and practical understanding of the Norwegian healthcare system. Once again, this touches on the point made by Hertzum and Ellingsen (2019), where the Health Platform potentially has not overcome the fourth pitfall. This results in different understandings of how the Health Platform functions within the healthcare system.

> "Those who were going to train us had to be trained themselves. And in the instances where we received help from abroad, and people from the United States, they used the program completely differently from what we would have used it, for example." (Maria, nurse)

> "It doesn't help much to get training from someone who is from the US, who works with IT, for example, because it becomes too distant in a way." (Sara, doctor)

The participants recognize the frictions between the two national cultures, particularly in the sense of responsibilization for individual healthcare professionals. Though both systems have strict routines regarding access to patients' journals and information, the Norwegian healthcare system is more rooted in trust. For instance, there is a need to be able to easily share access with a colleague or substitute if someone is away from work. Reflecting its emphasis on responsibilization, the American system places greater importance on documenting digital traces than what Norwegian healthcare professionals are accustomed to. According to Isabell, this might be due to their "tendency to lawsuits." Maria and Julia also underpin this.

> "In the US, there have been lawsuits and claims for damages and things like that when things are not documented. But in Norway, it's been a bit different. There is a slightly different policy on this. It's more a case of human error. There are different attitudes in society. Not everything is sued so much. But of course, it can quickly become so. But it's good that things are documented, and that you can find them again in the system." (Isabell, nurse)

> "[…] We don't have that... If I put it in a very informal way, it's a bit of a suing system in America, perhaps. It feels like there are a lot of things that feel unnecessary for us to document and spend time on, that haven't even been an issue before." (Maria, nurse)

Both interviewees highlight a key distinction between the American and Norwegian healthcare systems. In the US, documentation practices are seemingly influenced by a litigation culture, where extensive digital record-keeping functions as a form of legal protection. In contrast, the Norwegian system has traditionally operated within a framework that treats clinical errors as human rather than legal failings, with a less punitive and more trust-based societal approach to accountability. The system is seemingly concerned with the healthcare professionals leaving digital traces, to be able to allocate responsibility correctly.

An example of this turn to more responsibilization is the technical barrier of "breaking the glass," where the Health Platform now ensures digital traces of healthcare professionals accessing journals that the system thinks they should not have access to. For instance, if a social worker wishes to access medical information that is not considered necessary for their position, an alert emerges, and they have to press a button called "break the glass" to gain access. They can then access the medical record, but they will leave a digital trace of themselves having done so. This is information the system deems outside the healthcare professional's immediate responsibility and, therefore, requires additional accountability measures to access the relevant medical record. Before the Health Platform, accessing such journals did not leave behind a digital trace. The system can thus be considered as based on the trust that only the rightful medical personnel would access the journal. "Breaking the glass" has emerged as a way for the Healthcare authorities to know who has accessed certain journals, potentially holding the individual healthcare professional accountable for this action. Two interviewees express differing opinions on this functionality, highlighting different ways of reacting to increased monitoring of their actions as healthcare professionals.

> "It's initially a good function, but it can also pop up in really strange places. [...] you become unsure because you have to break a lot of glasses, and that feels wrong, but then you know that 'I've assessed that this is a patient I'm following up'. I know that this patient is a patient I'm allowed to look at, but it also means that you become a little desensitized to the glass breaking. […] I think once I broke a glass, and then I went in and just, this is not my patient, I entered the wrong name." (Julia, social worker)

> "It's very focused on the fact that if you're going to actually [access] this information, you have to break the glass. And then people choose not to do that because they don't want to leave more traces than they have to. You can always justify it with health care, but how far does that line go?" (Lucas, nurse)

In the first instance, Julia describes how the frequency of breaking the glass desensitizes her understanding of the action. Though initially perceived as a useful safeguard, it quickly becomes routine and even confusing in practice. This ultimately devalues the intention of the function, as it plays more of a role as a speed bump rather than a mechanism ensuring the security of patient information. This normalization of an exceptional action blurs the boundary between appropriate and inappropriate access, resulting in moments where errors occur, such as unintentionally accessing the wrong patient's record. Lucas adds another layer of concern. While healthcare professionals can justify access on clinical grounds, the presence of audit trails leads some to avoid accessing information altogether out of fear of scrutiny. The balance between responsible use of information and the effect of heightened surveillance on clinical judgment illustrates an ethical nexus of medical practice. These accounts highlight how a well-intentioned privacy mechanism may inadvertently introduce doubt, hinder access, and negatively affect trust in professional discretion. This can, in turn, complicate the user experience and the delivery of care. Further, this illustrates how there is a shift in the acceptability of certain human errors. Emphasis on responsibilization and accountability for all actions leads to increased monitoring, which can be considered to clash with the professional trust-based culture in Norwegian healthcare.

5.2.3. Training and Collective Adaptations

Regarding their training in the Health Platform, the interviewees account for significant variations. While some have the experience of traveling to aid other hospitals or institutions, others claim to have received virtually no training. A common denominator among the different institutions is the unofficial user manuals created by the healthcare professionals themselves. In the absence of sufficient training, handwritten tip sheets, user-generated manuals, and peer-based coaching have become vital tools for navigating digital workflows. These practices are not part of official implementation plans, yet they emerge as critical infrastructures of care and coordination, sustaining daily operations and enabling professional functionality where formal systems fall short.

The implementation of the Health Platform has surfaced a series of misalignments between the system's design logic and the everyday practices of healthcare professionals. Across different roles, the participants report encountering fragmented interfaces, unclear workflows, and constant updates that undermine continuity and confidence in use. The system's rigid structure conflicts with the need for efficiency, flexibility, and intuitive access to information, particularly for those in somatic care. Routine tasks, such as documentation and accessing patient records, are often slowed down by extensive clickwork, unclear categories, or overlapping functionalities. While the platform is designed to streamline care through standardization, this very goal can generate friction when it clashes with the locally developed routines and tacit knowledge that shape how care is delivered. A lack of tailored training and inconsistent guidance across roles may make the challenge greater, as healthcare professionals can feel unprepared, unsupported, and unsure of how to use the system safely and effectively.

Not surprisingly, the super-users are shown to be a key actor implementing the platform throughout the region. Though they may not be physician builders, as referenced by Hertzum and Ellingsen (2019), they have the opportunity to aid their colleagues in the transition to the Health Platform. Jenny and Emma highlight their designated super-user as particularly central to their adjustment process. In their case, they argue that the particular super-user possesses some important personal prerequisites, making them especially suitable for the role.

> “[...] there was one in particular, it was of course a secretary and an office professional, she was brilliant, she made sure we achieved our goals, she knew everything and understood everything [...]. I think she thinks in boxes and flow. I think she’s a very flow-oriented person, and she realized where things could get messy and where they actually got messy. [...] it was that she had an interest, knowledge, was systematic, and that from the time she took on the role of super user, she set aside time to follow and watch all information videos and attend meetings. She stepped in where she felt left out and was somehow very forward-looking.” (Jenny, psychiatry)

Jenny, Emma, and Maria highlight the need for an inherent interest among central persons in the implementation phase. Especially since, according to Maria, e-health is a field going through constant development. Jenny further argues that it is important to “choose the right people,” in the sense that she believes some people are better suited for learning the system of the Health Platform. The secretary mentioned above takes on a bottom-up approach to learning, and due to her system-oriented mindset, practical engagement, and willingness to take initiative, she is perceived as successful in the handling of the system. Her success and pivotal role in her environment underscore the value of tacit knowledge, motivation, and initiative in large-scale reforms. It also reflects how care for the system itself and colleagues navigating it can emerge from unexpected places, offering a counterbalance to challenges posed by top-down implementation strategies.

Receiving help from peers has also emerged as a central factor when handling the Health Platform in everyday practices. As healthcare professionals have encountered steep learning curves and frustrations with an unfamiliar digital system, peer-driven initiatives have offered important practical support. Colleagues have organized informal sessions, shared tips and workarounds, created user manuals, and supported one another across professions.

> “It was kind of like we felt like we were all in this together, facing the scary things that were to come, or what we were going to get into. [...]. It was something that, in a way, welded the group together because we had to roll up our sleeves and solve things shoulder to shoulder. […] we practiced the flow, sitting with different occupational groups and things like that.” (Jenny, psychiatry)

This grassroots form of collaboration has not only helped to fill gaps left by formal training and system documentation but has also fostered a sense of solidarity and community. When users turn to each other rather than relying solely on distant technical support, they reinforce professional networks and create localized knowledge tailored to everyday practice. In this way, peer assistance has functioned as both a coping mechanism and a bottom-up strategy for system adaptation, softening the impact of implementation and potentially strengthening resilience across healthcare teams.

Jenny further highlights an instance where a doctor was a super-user, which she perceived as having a positive impact on the attitude among the other doctors, a group that had previously expressed high dissatisfaction.

> "[…] she was incredibly good at training the doctors. Even though I've said a lot about the doctors being the worst, there's something about the fact that she, who was a super-user, was extremely good at showing the possibilities and solutions and highlighting what was positive, and they believed her, and that was very good." (Jenny, psychiatry)

> "I think it's very important [to show that you] understand people's frustrations, but still be willing to learn and continue learning. When I was in [City X], I also had a lot of understanding for the frustration they felt, because that was us two years ago. But I also tried not to get caught up in that wave, but rather show what we've learned, and show shortcuts, and try to simplify what we've done, and pass on the message that you don't have to relate to everything on the health platform, you have to find what works for you […]." (Maria, nurse)

Here, the senior physician seems to have a particularly influential role. She is respected by her peers, which contributes to fostering acceptance and constructive engagement with the Health Platform. The senior physician and the nurse can be considered to act as a bridge between resistance and compliance by shifting attitudes among their peers. They act both as competent users and as credible people among their peers. Thus, they can legitimize the system by demonstrating its potential and framing it in a positive light. Their dual role as a relatable actor and a super-user enabled them to encourage efforts among other healthcare professionals and physicians, otherwise described as the most resistant group. By expressing confidence, offering practical training, and emphasizing benefits, they contributed to shifting attitudes from within the professional groups. This underscores how trust, authority, and peer-led advocacy can significantly shape digital transitions in healthcare settings.

Though the utilization of peers as super-users proved successful to a certain extent, challenges still emerged. The participants highlight frequent updates and fragmented interfaces as hindering their learning and familiarization with the platform. What can be understood from the interviewees is that it disrupts continuity, undermines their user confidence, and complicates collaboration across different roles. When different professional roles encounter distinct interface designs, it can hinder cross-role collaboration and mutual support. For instance, the interviewees explain that it is difficult for a nurse to help a doctor navigate the system, as they are used to different interfaces and are unfamiliar with others. This can, in turn, make it harder to coordinate care and assist one another. Further, the fragmentation can impair workflow efficiency as well as limit the effectiveness of peer learning.

Additionally, frequent updates were described as a significant challenge among several participants. The interviewees argued that they did not receive adequate information about changes following the updates, causing them to spend more time relearning practices they were previously familiar with. When updates are rolled out too often or without adequate communication and training, users may struggle to keep up, leading to confusion, frustration, and a sense that hard-earned system knowledge quickly becomes obsolete. This can challenge the sense of achievement or domestication of the system and contribute to a broader feeling of instability in the digital environment. This resembles the "alert fatigue" described by Vos et al. (2020). With the implementation of a new EHR, healthcare professionals experienced excessive alerts through the system, causing them to feel exhausted by the interruptions (Vos et al., 2020). Together, these issues challenge the overall coherence of the digital infrastructure and risk reinforcing perceptions that the system is misaligned with internal logics, clinical realities, and work in practice (Hoeyer et al., 2019; Hoeyer & Wadmann, 2020). Still, Noah highlighted the advantage of having each department modify their interfaces, adapting them to their needs and practices. He argues that this has proven successful in Denmark. In such an instance, the platform would allow for collaboration and coordination across occupational roles, while remaining close to practice and the needs of each department and healthcare professional.

5.2.4. Summary

To summarize, tensions between system expectations and internal logic, national and cultural discrepancies, as well as training and collective adaptations, together illustrate key sources of misalignment between the Health Platform and healthcare institutions in Central Norway. The system introduces standardized workflows and documentation demands that often conflict with the established practices, priorities, and time-sensitive realities of clinical work. Skepticism towards perceived American influence and differing values around professional autonomy and care further complicate acceptance of the platform among healthcare professionals. As a response, healthcare professionals have developed collective strategies like peer coaching (beyond the support of super-users) and unofficial user manuals to bridge gaps in training and understanding. This highlights certain shortcomings of the top-down approach to implementation, underscoring the importance of local, practice-based knowledge in sustaining change.

5.3. Reconfiguration of Professional Identities and Care Practices

The Health Platform has not only altered technical routines of healthcare work but also reshaped how professionals relate to their roles, responsibilities, and the very meaning of care. As digital systems increasingly mediate patient interactions, many healthcare professionals report a growing sense of distance from their patients and their identities. The following chapter will analyze how the Health Platform contributes to a reconfiguration of care practices, marked by a perceived decline in clinical attention, increased task fragmentation, and a subtle erosion of the foundations of healthcare. Skepticism toward what is experienced as distancing between the patient and the healthcare professional reflects more than resistance to change; it reveals deeper tensions between the logic of standardization and the ethos of personal, attentive caregiving.

5.3.1. From Caring Subject to System Navigator

As previously mentioned, some healthcare professionals acknowledge that their tasks have shifted to include more administrative or "secretarial" work. According to Sara, this means that the system wants doctors to schedule their appointments, send the medical history sheet, and other information. Sara highlights specific tasks that usually belong to medical secretaries at the doctor's office, which have now been reassigned to another professional. Still, the term "secretary work" can be understood in a wider sense. Rather than supporting clinical practice in the background, the digital system brings clerical tasks to the foreground. Doctors, nurses, and other healthcare professionals now spend considerable time navigating the interface, entering standardized data, and fulfilling system requirements that were previously handled by medical secretaries or administrative staff.

This shift is not simply about growing accustomed to a new tool. It reconfigures what it means to do clinical work. Somatic professionals report that they spend less time in direct interaction with patients and more time ensuring that documentation is completed according to system logic. This could also be seen in Wisner et al. (2021) and Greatbatch et al. (1995). Here, the healthcare professionals experienced a tension between caring and charting (Wisner et al., 2021) and a dilemma of attention between the computer and the patient (Greatbatch et al., 1995). As a result, they feel a growing disconnect between their core competencies and the tasks they perform. This is further echoed by Hoeyer and Wadmann (2020), as well as by Hoeyer et al. (2019). Recording information, searching for the correct codes, and making sure that every step is digitally traceable begins to feel like bureaucratic labor rather than healthcare.

> "What I feel most is that there's an increased use of screens, an increased focus on mobile phones and screens, which takes me away from the patient, and that there's a greater responsibility to document everything. [...] And that when you come in to see the patient you come in with your phone, and you just have to scan the "receipt," identify the patients, scan all the medicines, and then give the medicines, and in those five minutes, there can be many observations you miss as a nurse, if you don't know what to look for. [...] in the beginning, I found it very overwhelming that I could spend almost two hours on a shift and get to know half of the patient, so it can feel a little unsafe." (Maria, nurse)

Here, Maria describes how the clerical burden of the system disrupts the flow of clinical care. Notably, the use of the word "receipt" (*handlelapp*) hints toward the increased distance to care by framing the nurse-patient interaction as a task of verification rather than a moment of human connection. However, Maria later corrected herself, saying that she had misspoken. The receipt is instead an ID band around the patient's wrist connected to the Health Platform. When entering the room of a patient, the nurse scans the wrist band and receives an overview of who the patient is and what medications they need. It also ensures that the nurse follows this plan. What was once perceived as a holistic encounter with a patient becomes interrupted by the need to fulfill digital documentation tasks, which often must be completed during or immediately after patient interactions. This is experienced to interrupt the clinical moment and creates a perception of doing clickwork, rather than exercising professional judgment.

Further, this ties in with Noah's account of how professional discretion is less trusted within the Health Platform. The reallocation of tasks diminishes the sense of autonomy associated with their work. The rigid structures and mandatory fields within the Health Platform constrain the flexibility traditionally afforded to clinicians, leaving little room for narrative descriptions or individualized judgment. In this context, the work feels less like professional care and more like ticking boxes, an activity closely associated with secretarial routines. In addition to shifting the focus of their work, it can also be seen to affect their sense of identity as caregivers, as the interface demands pull them away from direct patient interaction towards what they perceive as administrative chores. Thus, the documentation requirements embedded in the Health Platform can be interpreted as a symbolic and practical reconfiguration of professional roles. Clinicians are increasingly performing tasks associated with office work, altering the texture of their work and their relationship to it. This redefinition of roles highlights a misalignment between system expectations and the lived realities of healthcare practice, where digital infrastructures blur the lines between clinical expertise and clerical responsibility.

A previous study by Coats et al. (2020) shows that EHRs can have positive impacts on care when they are person-centered, meaning that they enhance communication and foster a stronger connection with patients. However, other studies point to the negative effects, saying that documentation demands lead to caregivers having their backs to their patients, with a tension between caring and charting (Forde-Johnston et al., 2023; Wisner et al., 2021). Being a healthcare professional can be seen as deeply tied to providing direct, relational, and attentive care. This close interaction with patients is not only seen as a core task but as a source of meaning, pride, and ethical responsibility in their work. When digital systems introduce more screen time and documentation requirements, healthcare professionals can feel distanced from both their patients and their expertise as medical professionals (Hoeyer et al., 2019; Hoeyer & Wadmann, 2020). Their attention is split between providing care and managing digital workflows. Further, Benjamin argues that the Health Platform promotes aspects of healthcare that understate the inherent meaning of working in healthcare:

> "Being a healthcare professional is already very unattractive. No one becomes a healthcare professional for the money. People do it because it's rewarding work, and what you want is to be part of something important, to provide care to someone, and do something that matters. If you get to do less of that, then being a healthcare professional will be even less rewarding. When you have neither rewarding work nor profitable work, there's no point in being one." (Benjamin, bioengineer)

Over time, this disconnect can lead to frustration and a diminished sense of purpose. It challenges their self-image as caregivers whose primary role is to tend to human needs, not merely to operate within a digital system. The distance created by the Health Platform raises questions about what kind of work healthcare professionals are expected to perform, what is considered valuable in their practice, and whether the profession still aligns with their core motivations and values.

The platform illustrates how digital infrastructures can inadvertently distance healthcare professionals from the core aspects of their work that provide meaning and professional satisfaction. As Dencik and Kaun (2020) explain, when we become dependent on technologies like the Health Platform, they assume a regulatory role and establish themselves as a dominant force in delivering public services. Involving private companies in public administration can cause frictions between the underlying values of the private company and the public administration (Jørgensen, 2023; Kamp et al., 2019). Here, between the Health Platform and the Central Norwegian public healthcare sector. The values prescribed in the Health Platform may not align with the values that define the professional identity of the healthcare professionals. Public administrations usually serve as an intermediary between the state and its citizens. Changes in the structure of these institutions, for instance, the introduction of the Health Platform, may have significant implications for the relationship between the state and its citizens. These shifts not only reshape citizen-state interactions but also affect public trust in governmental and public-sector institutions, particularly when algorithms and autonomous systems increasingly drive decision-making (Dencik & Kaun, 2020; Jørgensen, 2023). If the values of these structural changes conflict with the actors within the institution, here, the healthcare professionals, one can assume that the trust will decrease from within the institution as well.

Maria explains that the previous system supported patient-focused tasks, streamlining what needed to be done in direct care situations. In contrast, the Health Platform imposes layers of alerts, overrides, and documentation demands, redirecting attention from patients to the screen. This can also be recognized in the study by Vos et al. (2020), where alert fatigue, workflow mismatches, and time-consuming system demands were identified as unexpected challenges emerging from the implementation of EHRs. Instead of facilitating care, these processes often feel like administrative exercises in accountability, forcing staff to navigate system requirements rather than respond intuitively to patients' needs. This shift disrupts the flow of clinical work, as well as diminishes the relational and emotional dimensions that many healthcare workers find important, and can be considered central to the concept of *care*.

Maria further addresses this challenge and how she has chosen to cope with it. She agrees that certain functionalities in the Health Platform are unnecessary and create complicated workflows in practice. Still, she emphasizes that there is much that works well. For her, it has been key to approach the digital shift with a positive attitude, focusing on the positive effects of the platform. She is one of the participants who express acceptance through the perceived immutability of the Health Platform. Though she acknowledges that the platform is not ideal, she underscores that the lack of familiarity and knowledge of how to use the platform plays a role in the frictions that have occurred. She also hints that there is already much frustration among healthcare professionals, and that, from her perspective, the Health Platform might be an outlet for much of the general frustration within the healthcare sector. For instance, the overall lack of professionals and staffing issues when facing a growing demographic in need of healthcare.

> "I do experience some frustration, but maybe it's more to do with the fact that we haven't learned it, or that the systems we have are cumbersome. I think it's a recurring theme that it takes some time for us to click into various things, and that you have to actively find out what is superfluous information and what is not. There is a certain frustration that is always there, but [...] there are lots of other things that come before the Health Platform. That's not where the frustration lies." (Maria, nurse)

An important strategy for Maria has been to sensitize herself to what is superfluous information and task demands provided by the Health Platform, lessening the tension between caring and charting (Wisner et al., 2021). This is a strategy she has tried to communicate to her colleagues as well, allowing them to regain a sense of control over their work and remain in touch with what they perceive to be core values in their work. The filtering of superfluous information can thus become a part of collective adaptation practices. Over time, this can contribute to a localized expertise that compensates for misalignments between the system's design and the healthcare professionals' practical needs. Thus, learning what is excessive becomes a tactical skill that enables healthcare professionals to reassert their professional judgment and maintain care quality despite the complexities of the Health Platform.

The tension between caring and charting (Wisner et al., 2021) is not only experienced by the healthcare professionals. Maria and Isabell describe that they notice a difference among their patients following the implementation of the Health Platform as well.

> "I notice that with the patients too, that when you look more busy, you don't have your full attention on the patient, and it stops many conversations, it stops many things that they might want to bring up, but then you're busy documenting everything, so that it goes through the Health Platform and is double checked, before you can give the medicines." (Maria, nurse)

> "For the patients, it can be perceived that they are very preoccupied with the computer. They sit and watch us working on the computer. […]. But I do feel that it takes away some of the time to observe the patients. There are so many clicks to enter various observations and measurements that you need to enter. But as I said, I've found that patients are understanding. The patients we have on the day shift have heard about the Health Platform and know that we have it." (Isabell, nurse)

This shift in focus interrupts the natural flow of patient interactions, limiting opportunities for meaningful conversations and making it harder to pick up on subtle cues or concerns patients might wish to express. The presence of the computer in the clinical encounter becomes a barrier as patients observe how their caregivers are preoccupied with digital tasks rather than direct care. While some patients understand the necessity of this approach, the relational aspect of care is weakened. Healthcare professionals feel caught between meeting system expectations and providing attentive, human-centered care. They express concerns about the quality and safety of the care they are able to deliver under these conditions. Their experience contrasts with the study by Makoul et al. (2001), who show that EHRs can positively encourage patient questions during doctor consultations. Maria and Isabell's experiences align more with the study by Greatbatch et al. (1995), who demonstrate that EHRs can disrupt the communication between a physician and the patient, due to long pauses during conversations and patients refraining from speaking while doctors are typing. Though Isabell describes the patients as understanding of their situation, dealing with the Health Platform, she still acknowledges how it affects her attention and the care she provides.

5.3.2. Role Drift and Task Redistribution

Among the interviewees who feel that the documentation tasks in the Health Platform are unnecessary for doctors and nurses, many emphasize the need for restructuring within healthcare institutions. A lack of healthcare personnel has long been a challenge, and reallocating tasks according to the level of medical expertise needed emerges as a larger potential strategy for coping with the lack of workforce.

The increased demand for documentation and the introduction of new routines have led to an increased workload among healthcare workers in both psychiatry and somatic care. Additionally, every interviewee mentioned that there are staffing issues in the Norwegian healthcare sector, with more people to care for than there are people to provide care. Emma describes how the relatively recent "latency promise" has caused additional pressure on healthcare workers to increase efficiency. The latency promise was introduced by the Minister of Health, Jan Christian Vestre. Emma explains that this means that by the end of June, waiting time for patients should be no more than 45 days. Emma estimates that referrals to her psychiatry department currently have a waiting time of 65 days. Several of the interviewees express concerns that the added workload following the Health Platform will decrease efficiency and the quality of care provided, which in turn may make the latency promise increasingly challenging to keep. Thus, they reflect on the potential of role drift and restructuring of occupational roles in the health care sector, to relieve some of the workload off of healthcare professionals.

> "[…] in the old, old days before you were born, several unskilled employees were working in hospitals. And then they started a very conscious process where everyone who worked on a

ward had to at least be a nurse, so that you were sure when you were in the hospital that you met at least a nurse. Out with auxiliary nurses, [*heslefagarbeidere*], and things like that." (Jenny, psychiatry)

"I have faith in the idea of task shifting, even though it's a bit of a difficult topic, because many people are afraid of losing tasks in their profession. But I do believe that in the future, nurses will have to be given more responsibility and [*helsefagarbidere*] will have to be given more responsibility and unprofessional workers will also have to play their part in the healthcare system, because there is a shortage of staff, and there will be more people in need of healthcare in the years to come." (Lucas, nurse)

A *helsefagarbeider* is a healthcare worker in the Norwegian healthcare sector who provides basic care, assistance, and practical support to patients and service users. The profession is based on vocational training, which includes upper secondary education in health and social care, followed by specialization in healthcare work and passing a certification exam. The role of a *helsefagarbeider* involves addressing the physical, psychological, and social needs of patients, with a focus on promoting safety and dignity in everyday life. They often work closely with patients in home care services, nursing homes, assisted living facilities, or hospitals. Their tasks include personal hygiene assistance, nutrition support, help with daily activities, observing health conditions, and reporting to nurses or other healthcare professionals.

5.3.3. Digital Competence and Generational Differences

Generational differences in digital competence emerged as a significant theme across the interviews, shaping how healthcare professionals experienced and adapted to the Health Platform. Among the nine interviewees participating in this study, every one highlighted age as a significant factor influencing how successfully individuals manage the platform. Some showed more frustration and astonishment concerning the digital competence among their older peers than others, regardless of the interviewees' own age group.

"My impression is that younger people are very comfortable with change when it comes to technology, while the state of technology skills among older people in the workplace is absolutely miserable. It's shockingly bad. Navigating a regular Office package is challenging. […] I take it for granted that everyone has [experience with Office]. But when I see some of the older people in the department here struggling with Office, their technological skills are so poor. That's why much of the criticism of the Health Platform is simply that people don't have technical skills. Not because the Health Platform is bad, but because they are unable to learn it or lack an intuitive understanding of computer systems." (Benjamin, bioengineer)

Jenny underscores this, arguing that she could predict which colleagues would struggle with the Health Platform based on their ability to navigate their smartphones. She also adds that a person's inherent interest in digital technology plays a significant role in how well they handle the platform. While generational differences in digital competence clearly emerge in the experiences of healthcare professionals, the issue has been largely absent, or only briefly touched upon, in the public debate surrounding the Health Platform.

> "[The generational differences] were silenced, because […] there were some things that we got from St. Olavs, and then someone was offended, so you weren't allowed to say that anymore, that it had something to do with age. But I definitely think it had something to do with it, and it's also about an interest in and an understanding of simply how things work." (Jenny, psychiatry)

Though age plays a role in the implementation process, framing the issue as a generational struggle might risk reinforcing stereotypes or diverting attention from system-level shortcomings, leading to an oversimplified understanding of the challenges healthcare professionals face. Lucas highlights this, arguing that even though younger professionals are better equipped for managing the platform, it is not an intuitive system, and emphasizing the necessity of data and IT competence. While age alone does not determine digital skills, the interviewees consistently associated younger professionals with greater ease and flexibility in navigating new digital systems. These perceptions were often linked to assumptions about digital nativeness, where those who have grown up with digital technologies are seen as more adept at learning and managing such tools.

> "It has a lot to do with the fact that we've grown up with the technical world and somehow manage to adapt quite easily, so we take things more easily. And then of those who put themselves very much on their hind legs, it's perhaps those who are in the older generations who find it more demanding with such a new technological system." (Maria, nurse)

In contrast to young professionals, older colleagues were frequently described as struggling more with the demands of the system, leading to both frustration and feelings of inadequacy. These generational dynamics were perceived as affecting individual performance and influencing perceptions of professional identity in a digitalizing healthcare sector. Some interviewees described how the introduction of the Health Platform had led some older, highly knowledgeable healthcare professionals to resign from their positions. For these individuals, the transition to a complex and demanding digital system may have felt overwhelming or insurmountable.

> "You lose a lot of expertise, then. I know a lot of knowledgeable people who have quit, or moved, or retired before they should have, or had to, because of the Health Platform." (Lucas, nurse)

> "A lot of people have left because of the Health Platform, especially experienced senior consultants, who have gone to the private sector. We have lost a lot of expertise because of it. And it's become busier for those who have been left behind. So it has acquired a very negative association. I think it will be very difficult to turn that around for people." (Sara, doctor)

The frustration with the platform has been primarily due to technical difficulties, but could also stem from a perceived misalignment between the platform's demands and their professional values and ways of working. This wave of resignations, while often framed as a personal choice, has wider implications for healthcare institutions. Additionally, it creates a vicious circle, increasing the workload for those who are "left behind." This may, in turn, reinforce the negative associations with the Health Platform. The departure of seasoned professionals also creates a significant gap, as well as results in the loss of crucial clinical experience, tacit knowledge, and mentoring capacity that are difficult to replace. Thus, the implementation of the Health Platform accelerates generational turnover, leaving teams with fewer experienced hands to guide newer staff in both clinical practice and patient care.

5.3.4. Summary

The implementation of the Health Platform has contributed to a noticeable shift in how healthcare professionals perceive and perform their roles. Clinicians report a loss of clinical attention, as time once spent on direct patient interaction is now redirected towards navigating digital interfaces and fulfilling extensive dimensions of care. This can be considered central to their professional identity and job satisfaction.

Simultaneously, many experience a decline in the quality of care provided, as the increased focus on digital tasks reduces opportunities for observing subtle patient cues or engaging in meaningful conversations. The introduction of digital systems has also led to role drift and task redistribution, where doctors and nurses find themselves performing what they consider "secretary work," blurring vocational boundaries and diminishing their sense of expertise. In response, there is growing support for restructuring healthcare institutions to address this misalignment. Some professionals advocate for delegating non-clinical administrative tasks to new occupational groups, consisting of "unprofessional" workers (*helsefagarbeidere*), thereby allowing clinicians to refocus on patient care. Lastly, the participants describe clear generational differences among their colleagues. Younger healthcare professionals are more successful in handling the system. This is likely due to their lifelong exposure, while older professionals must adapt practices formed before widespread digitalization. These dynamics illustrate how the core of healthcare work is being renegotiated, as professionals adapt to the pressures of digital infrastructures that prioritize standardization, control, and data over human connection and clinical judgment.

5.4. Participant Dynamics and Narratives of Digitalization

Though the Health Platform has received significant pushback from several healthcare professionals, one should not simply perceive this as a reluctance to new digital technologies. With the larger digital shift that the Health Platform marks, the dynamics between decision-makers and healthcare professionals who have direct contact with patients become an important factor. One might think that the resistance among healthcare professionals is simply due to the opposition towards standardized and streamlined healthcare. However, among healthcare professionals, there is widespread agreement that the future of the healthcare sector in Norway is largely dependent on streamlining processes. This chapter explores how healthcare professionals perceive their relationship with the Central Norway Regional Health Authority, particularly in light of what is seen as an overly rapid push for streamlining healthcare processes. Further, it highlights how the narrative of the necessity of efficient healthcare has led to digital optimism among healthcare professionals.

5.4.1. Perceived Involvement and Narratives of Technological Advancements

The Health Platform is constituted of ideas of efficiency through standardization, framed by demographic necessity. This has shaped both policy narratives and organizational strategies. The visions frame the platform as both a technical solution and a necessary response to systemic challenges, such as an aging population, workforce shortages, and fragmented patient information. Efficiency and standardization are presented as inevitable and desirable outcomes, promising streamlined workflows, improved patient safety, and better resource allocation. Like other Nordic countries, being a leading nation regarding digitalization has become a dominant narrative and strategy for Norway (Andreassen et al., 2024; Hoeyer, 2019). However, these imaginaries often overlook the lived realities of clinical practice, where the complexity of care, relational work, and professional judgment do not easily align with standardized templates. Thus, the promise of demographic necessity becomes a legitimizing discourse, even as healthcare professionals experience a growing misalignment between the platform's logic and their care practices.

The interviewees all express that they experience a significant distance between them and the management of the Central Norway Regional Health Authority. They describe them as "far away," like a "wall," disconnected from working practices, and, in some instances, invisible. Some participants describe their perception of the Central Norway Regional Health Authority as an actor that only becomes visible when they act against the wishes of healthcare professionals.

> "I think that as a healthcare professional and hospital employee, you're not very concerned about Central Norway Health as an organization and decision-maker unless they make extremely bad decisions." (Jenny, psychiatry)

> "I think there's quite a big distance there. I think people see 'us' and 'them' in a way that it's not very close. It's a very large healthcare company […]. So I think there's a bit of a distance." (Sara, doctor)

The interviewees highlight a perceived distance between healthcare professionals and the overarching administrative actors responsible for implementing the Health Platform. The speakers emphasize a lack of interest in the decisions made at the organizational level, unless those decisions directly or negatively affect their work. This reflects a broader "us versus them" dynamic, where healthcare professionals feel disconnected from the institutional actors driving digital reforms. When professionals view the platform as a top-down initiative imposed by distant decision-makers, rather than a tool designed in collaboration with clinical practice, it can foster skepticism, resistance, and low engagement. This organizational distance emphasizes experiences of misalignment between system expectations and local practices, making it difficult to cultivate ownership and trust in the system. Consequently, successful implementation becomes a technical challenge as well as a matter of bridging relational and cultural gaps within the healthcare sector.

Hertzum and Ellingsen (2019) identified the use of physician builders as a key factor for adapting Epic's EHR to the Norwegian healthcare system. Physician builders are designated clinicians heavily engaged in the design of functionality for their practice. In Denmark, a team of 70 such physician builders was deemed insufficient. Among the interviewees, there are some fragmented experiences regarding the influence of healthcare professionals in the development of the Health Platform. While some say that they believe that healthcare professionals have played a significant role in shaping the platform, others disagree.

> "I think there's been quite a lot of involvement from different healthcare professionals from the start […]. I just think it's going to be very, very many cooks, so many different opinions, they're trying to bring it together a bit, and I think people have very different needs for the platform. But all in all, I think a lot of healthcare professionals have been involved in shaping the design." (Sara, doctor)

> "No, actually [the influence has been] very minimal. It was said from the start that there have been representatives from doctors, all occupational groups, and all different specialties who have been involved. It seems like everything is in the system. But the Health Platform and the management can say that doctors who have been involved in the start-up phase. Everything is in the system, but it's just that the system as a whole becomes far too complex." (Noah, doctor)

These fragmented experiences reveal contrasting perceptions of professional involvement in the development of the Health Platform. On the one hand, Sara acknowledges that many healthcare professionals were invited to contribute. Still, she highlights the challenge of reconciling diverse needs and opinions, which complicates the design process. On the other hand, Noah expresses skepticism toward the extent and impact of this involvement. He suggests that while representatives were technically included, their input may not have had a meaningful influence on the platform's final design. Noah emphasizes the disconnect between the formal inclusion of professional voices and the practical outcome, where the system remains overly complex and insufficiently adapted to clinical practices.

This relates to the third pitfall predicted by Hertzum and Ellingsen (2019). They underscore that the Norwegian approach to the implementation of Epic's system relies on establishing a comprehensive formal decision structure with strong clinician involvement (Hertzum & Ellingsen, 2019). The perspectives of Sara and Noah demonstrate the tensions between symbolic participation and actual influence in the large-scale digital transformation. They suggest that while professional involvement is highlighted in official narratives about the Health Platform, its effectiveness is questioned by end-users. This perceived gap can contribute to frustration and disengagement, undermining trust both in the platform and the Central Norway Regional Health Authority. This can, in turn, pose a barrier to adoption and integration in everyday practices.

The urgency of digital transformation and the realities of complex healthcare practices create further tension concerning the Health Platform. Successful implementation requires time, attention to context, and continuous learning. By being too concerned about quick implementation, the project risks missing crucial feedback loops that could enhance the platform's relevance and usability. Benjamin illustrates his perception of the development and implementation process as follows:

> "Perhaps it seems a bit like a snowball rolling down the hill – getting bigger and bigger, gaining more and more speed. And then perhaps it has started to go a little too fast. [...] It has begun to go so fast that when the snowball starts to bounce, it jumps over quite a few meters of snow that it could have collected to build itself up and get better. They are so focused on quickly moving forward that they don't manage to build themselves bigger in every centimeter of the hill." (Benjamin, bioengineer)

Benjamin's critique reflects concerns that top-down pressures for efficiency and progress may undermine the platform's ability to effectively serve its users, contributing to the misalignment between system expectations and clinical practice. Through his snowball metaphor, one can understand that a quick implementation has been highly valued, to the extent that potential feedback that ultimately could have improved the functionality of the platform. It further emphasizes the disconnect between decision-makers and the practical field of healthcare work, framing the implementation as an immutable event where healthcare professionals have had little opportunity for involvement and participation. Further, Benjamin echoes Dencik and Kaun (2020), Jørgensen (2023), and Kamp et al. (2019), who argue that the adoption of data-driven systems in public services is not merely about improving efficiency or expanding information-sharing capabilities. Rather, it represents a deeper shift in the foundations of the welfare state. The move toward datafication must be understood as a form of policy intervention, one that reprioritizes values and redefines how power is distributed. This transformation is inherently political, as it reshapes the frameworks through which health and welfare are conceptualized and managed, signaling a process of "politicization through technology" (Dencik & Kaun, 2020; Winner, 1986). These perspectives underscore that the speed of digital innovation in healthcare must be matched with deliberate consideration of its societal and political implications. Without this balance, the Health Platform risks becoming a large snowball, shaped more by momentum than thoughtful design.

5.4.2. Digital Optimism in the Healthcare Sector

Once again, I wish to emphasize that the perceived misalignment between the Health Platform and the healthcare professionals is not a result of disdain toward digital developments in the healthcare sector. On the contrary, there are seemingly significant optimistic views concerning the possibilities that lie within digital tools in the healthcare sector. Following the research of Hoeyer (2019) and Andreassen et al. (2024), this is no surprise. They highlight that the Nordic welfare states are defined by a strong public trust in institutions, which plays a crucial role in fostering broad acceptance of extensive data collection. This presents significant potential for large-scale digitalization. Additionally, the Nordic welfare states are actively pursuing digitalization as a means to enhance public administration and welfare services (Andreassen et al., 2024; Hoeyer, 2019). When the healthcare professionals were asked how they imagined the future of healthcare and their jobs to look, many emphasized the necessity of digital tools and technological advancements.

> "I think it's going to take up a lot more space in the future. I think that more services will be digitized. I think that patients, to a greater extent, will have to take treatment through e-services. I think it will also be much more linked to AI, which I think will be a revolution." (Jenny, psychiatry)

> "I think we're somewhat dependent on digital solutions, because we don't have enough hands compared to how many old and sick people there will be." (Sara, doctor)

> "I was more positive before than after we introduced the Health Platform, but I've become quite skeptical, because how much further will we really get with it? [...] I do believe that technology plays a role now and in the future. But you have to be very humble about the fact that it has to be very well adapted […] for it to manage to make everyday life more efficient. But I absolutely believe there is a place for it in healthcare and the future." (Lucas, nurse)

The healthcare professionals recognize an inevitability of further digitalization in healthcare, driven by demographic pressures, resource constraints, and technological advancements like artificial intelligence (AI). Though most of the participants express optimism, Lucas' vision of the role of digitalization in the healthcare sector bears a hint of skepticism as well. While digital solutions are seen as necessary to address workforce shortages and increasing care demands, experiences with the Health Platform have made him more cautious. The interviewees reflect tensions between idealized futures of efficiency and the practical challenges of implementation, emphasizing the need for careful adaptation to clinical realities. This ambivalence can be considered to impact how digital reforms are perceived and integrated into professional identities and care practices.

Some interviewees describe that *ideal* care is highly personalized. Still, they acknowledge that due to the demographic pressures and workforce shortages, more efficient care practices are necessary. Benjamin describes ideal care as patient-centered, where the individual is recognized as unique rather than one among thousands. Care should be delivered by dedicated healthcare staff who feel a specific responsibility for each patient, making them feel seen and holistically cared for. However, he recognizes that the future of healthcare will likely become increasingly standardized, impersonal, and driven by efficiency metrics and budgetary constraints.

> "So I imagine that things will develop in such a way that you feel less cared for as an individual. Things may be more efficient when they can, but then it's the small deviations that go wrong. This will happen more frequently and take extra time. If you are one of these cases, you will probably have a negative experience with the healthcare system." (Benjamin, bioengineer)

Though Benjamin expresses skepticism, he acknowledges the potential importance of technology and digitalization in the healthcare sector. This ties in with Maria's experiences of how the documentation demands and the presence of screens detract from important aspects of care through direct interaction with the patient. Still, she emphasizes the importance of digital technologies in the healthcare sector, particularly facing the increasing demographic pressure.

> "It's hugely important. Hugely important. Very, very important. There are few nurses, few doctors. There are a lot of illnesses. You always need to focus on how you can make everyday life more efficient. There will be a lot of treatment in the future. People are living longer. You need a strong healthcare system. You need digitalization. You need new tools that make everyday life easier. It's very important. Just from working for two years, I've been involved in many things that have streamlined or improved everyday life. You can have a tool that reduces the need for nurses from three to one. We are different healthcare services. The communication becomes fluid. I view it as important." (Maria, nurse)

Though many of the interviewees can be considered to agree with the notion that streamlining healthcare can detract from core aspects of "good" care, they also agree with the need for increased efficiency. Maria acknowledges the challenges of resource scarcity, such as too few nurses and doctors relative to an aging population. She validates the need for efficiency and digitalization as unavoidable and essential to sustain the healthcare system, framing new digital tools and processes as necessary adaptations to manage the growing demand for services. While recognizing the risks of reducing the human aspect of care, she emphasizes that efficiency is crucial for system survival, even if it may compromise certain aspects of ideal care. This suggests a pragmatic acceptance of efficiency-driven reforms while implicitly acknowledging that these changes might challenge the more relational, patient-centered ideals of care that many healthcare professionals still value. It highlights an ongoing negotiation between professional values and systemic demands.

As explained by Vos et al. (2020), EHRs can help support coordination and collaboration and facilitate shared decision-making, and are considered a key factor in providing high-value care. Some interviewees echo this, mentioning the potential advantages of a national EHR system. They recognize that this would likely increase efficiency and would make communication between institutions across different regions easier, improving the overall care of people. However, they propose skepticism regarding the fact that the Health Platform is a regional, instead of a national, EHR system.

> "And many people have talked about why we can't have a common national system in Norway. It seems quite illogical that we should have different systems. If you live in [Central Norway] and are admitted to a hospital in Oslo, no one can go in and read your medical records. And that's... a bit strange." (Emma, psychiatry)

> "[…] What is the purpose of bringing in such an expensive and large system, which many people advise against in the first place and which the rest of Norway does not have?" (Noah, doctor)

Though related, Emma and Noah present two different perceptions of system logic and legitimacy among healthcare professionals regarding the Health Platform. Emma highlights the pragmatic, patient-centered argument for a unified national system, pointing to the fragmentation and inefficiency caused by multiple incompatible systems across Norway. This aligns with the argument presented by Vos et al. (2020), arguing the positive effects of EHRs. From her perspective, it appears illogical and counterproductive for patient care and safety that records cannot be easily accessed across regions, emphasizing the practical need for interoperability and consistency.

In contrast, Noah questions the legitimacy and rationale behind implementing such a costly and complex system in only one region. Particularly when it lacks alignment with national strategies and is introduced despite professional skepticism. His statement reflects a more critical and institution-focused concern, highlighting doubts about decision-making processes, the value of such investments, and the broader organizational coherence. This demonstrates the tensions between the imagined benefits of national standardization of healthcare and the perceived misalignment of local implementations with broader systemic logics and professional skepticism. From Noah's perspective, the positive effects, as presented by Vos et al. (2020), are relative, as they are constrained within the Central Norwegian region. Further, this illustrates how the lack of national coordination can fuel frustration and reduce acceptance of regionally implemented systems like the Health Platform.

5.4.3. Summary

Healthcare professionals collectively reflect tensions between system-level ambitions and healthcare professionals' realities in the implementation of the Health Platform. Benjamin's snowball metaphor highlights the haste of top-down efficiency efforts, which he feels have left little room for practical feedback or clinician involvement. This is echoed by other interviewees as well, who argue that the extent and impact of healthcare professionals' involvement in the development phase have been inadequate. This highlights a disconnect between decision-makers and everyday care work.

Despite the resistance among healthcare professionals, there is a clear sense of optimism regarding the potential of new digital technologies in the healthcare sector. This can be seen as rooted in the dominant narratives that frame technological innovation as essential for addressing demographic challenges, recognizable in the other Nordic countries as well. Faced with limited resources and workforce shortages, digital tools are viewed and promoted as necessary solutions to streamline processes, increase efficiency, and sustain the healthcare system. This optimism also reflects a broader belief that digital transformation is the most viable path forward under increasing systemic pressures. Still, regarding the Health Platform, there is a sense of lost purpose among the interviewees. They can be said to perceive it as illogical that they utilize a widespread EHR system that is limited to their region, and does not work on a national level.

6. Discussion

Drawing on interviews with healthcare professionals, the discussion is organized around three key themes: how users interact with the system's internal logic, how care and professional identities are co-produced in digital environments, and how narratives of digitalization frame the broader transformation of the healthcare sector. Through these themes, the discretion, the evolving role of technology in shaping care practices, and the cultural and political undercurrents that inform both resistance and adaptation. By engaging with theoretical frameworks such as Mol's (2008) logic of care and choice, Jasanoff's (2004, 2015) co-production and sociotechnical imaginaries, Tsing's (2012) notion of friction, and Hecht's (Allen & Hecht, 2001) technopolitical regimes, among others, the chapter aims to unpack the broader sociotechnical dynamics at play in this ongoing shift within the healthcare sector.

6.1. Interacting With Internal Logics: Navigating Systems, Protocols, and Automation

The implementation of the Health Platform has introduced a set of internal logics that structure how healthcare professionals are expected to document, communicate, and act. These logics are embedded in features such as predefined care pathways, standardized data fields, automated alerts, and rigid documentation protocols. While framed as tools for efficiency, safety, and interoperability, these design features are not neutral. Rather, they carry specific assumptions about what constitutes "good" clinical practice, what is valuable, and how care should be coordinated.

Based on the accounts of healthcare professionals, such as Lucas, Benjamin, Maria, and Noah, we can gather that the internal logic of the Health Platform reflects a specific vision of healthcare. It emphasizes standardization, documentation, efficiency, and data-driven decision-making. This can be recognized in several EHR systems globally (Forde-Johnston et al., 2023). For healthcare professionals, interacting with this logic involves learning a new digital tool, as well as adapting to workflows and priorities that may diverge from the routines and values of clinical practice. The logic of the Health Platform prioritizes uniform workflows, thorough documentation, and structured data entry, intended to promote interoperability, traceability, and centralized oversight. However, this clashes with the everyday logic of clinical practice, which is shaped by flexibility, autonomy, and context-sensitive decision-making. Healthcare professionals often rely on tacit knowledge, adaptive routines, and professional discretion, especially in high-pressure or unpredictable situations. The rigid workflows embedded in the Health Platform are experienced by many users as an obstacle rather than support.

Like Mol (2008) argues, tensions between administrative management and practical care may arise. Similar to her conceptualization of "managing," the Health platform is characterized by standardized procedures, checklists, and documentation requirements. Additionally, the Health Platform also ensures the accountability of each healthcare professional. This contrasts with Mol's understanding of "doctoring," which is more concerned with practical care, a perspective which is highlighted by healthcare professionals. Tensions between managing and doctoring can arise as a result of differing values, goals, and practices. The tensions emerging between healthcare professionals and the Health Platform can be understood as such (Mol, 2008). While the Health Platform values standardization and efficiency through rigid systems, healthcare professionals disagree that this idea of care is sufficient in practice.

The Health Platform is a system created by American developers that seemingly carries understandings and workflows that are heavily influenced by the American healthcare system. This is an important context clue for understanding the resistance that has emerged among healthcare professionals. As Felt (2015) underscores, cultural and institutional circumstances are tied to the decision to keep a technology out. Instead of signaling technophobia, resistance can be a meaningful and reflective act, grounded in values, experience, and a desire to protect core professional practices.

Regarding the Health Platform, resistance can be interpreted through this lens as a reaction to the cultural and systemic assumptions embedded within it. Epic, as an American developer, brings with it a particular logic shaped by the U.S. healthcare context, including a strong emphasis on documentation, billing, and standardized workflows. Norway is a country with a very different healthcare model and values. Therefore, when implemented in Central Norway, these assumptions clashed with local expectations around patient-centered care, professional autonomy, and trust-based governance. The resistance to the Health Platform thus reflects more than frustration with usability. It signals discomfort with how the system restructures care delivery, redistributes decision-making power, and imposes foreign administrative values on the Norwegian welfare model (Dencik & Kaun, 2020; Felt, 2015). Felt's (2015) framework helps us understand this resistance as a form of political and professional agency: an effort to preserve core principles of the Norwegian healthcare system against technology that carries with it a specific ideology of care.

An especially noticeable aspect for the healthcare professionals has been the agenda of responsibilization of individual healthcare professionals. This concern for accountability can also be recognized in Mol's (2008) management perspective. She challenged healthcare systems that aim to manage care through data-driven efficiency, centralized control, and cost-effectiveness. Mol emphasizes that such approaches often undermine the quality of care by ignoring the messiness and moral labor involved in responding to patients' needs. Her perspective calls for a healthcare management model that values flexibility, professional autonomy, and the cultivation of relationships, recognizing that good care cannot always be pre-designed or measured. It must be practiced, negotiated, and sustained (Mol, 2008).

Still, responsibilization of healthcare professionals is not a "bad" thing. Rather, it can be argued as necessary to increase trust in healthcare institutions and safety among civilians. However, friction emerges when the level of responsibilization overrides and challenges the professional discretion and autonomy of healthcare professionals (Mol, 2008; Tsing, 2012). Friction is not just resistance or dysfunction (Tsing, 2012). It is the productive tension that occurs when policies, technologies, and logics meet local practices and values (Tsing, 2012). Regarding the Health Platform, friction emerges when the top-down systems of responsibilization are introduced in ways that constrain the clinical judgment of professionals. These systems often frame healthcare work through the logic of efficiency, risk management, and quantifiable outcomes, shifting the responsibility from institutions to individuals. Thus, healthcare professionals are increasingly held accountable for their direct actions, as well as for meeting externally imposed standards that may not align with the realities of clinical care. This dynamic creates friction because it disrupts the discretionary space where healthcare professionals usually operate. Their capacity to adapt to care based on situational knowledge, patient relationships, and ethical considerations becomes limited by rigid systems and bureaucratic expectations. Tsing's framework highlights how these frictions are deeply rooted in the clash between different ways of valuing and organizing healthcare (Tsing, 2012). Importantly, friction can also generate reflection, negotiation, and even transformation, as professionals resist, adapt, or find workarounds to reclaim aspects of their autonomy (Tsing, 2012).

In the words of the interviewees, the American system is concerned with responsibilization as a result of legal liabilities and a tendency to lawsuits. Thus, they likely perceive the level of responsibilization as a precaution in case of a lawsuit, and a strategy for the larger healthcare institutions to protect themselves rather than the individual healthcare practitioner. This causes friction when interacting with the logics and practices of the Norwegian healthcare sector (Tsing, 2012). The Norwegian healthcare sector can be perceived as more united and a place where professional discretion is more trusted. Isabell argues that this aligns with neither the policies in Norwegian healthcare nor the attitudes in society.

The conflict between the internal logic of the Health platform and the established practices of healthcare professionals is not merely a technological mismatch. It can be understood as two distinct technopolitical regimes (Allen & Hecht, 2001), each with its own assumptions about how healthcare should be organized, who holds authority, and what constitutes value. Through its rigid workflows, structured data fields, and comprehensive documentation requirements, the Health Platform seeks to rationalize healthcare delivery, increase interoperability, and ensure accountability. The interviewees also link this to American politics and the societal model.

According to Hecht (Allen & Hecht, 2001) and Winner (1986), technologies are never purely technical objects. They are shaped by and shape the political and institutional contexts they are a part of (Allen & Hecht, 2001; Callon, 2007; Winner, 1986). As Hecht argues, a technopolitical regime refers to the integration of technological systems with political authority, national identity, and institutional practices. Within this framework, the Health Platform can be considered American by origin, as well as by the political logic and institutional structures it embodies. The Health Platform can also be *made* American when it is adapted to reflect and reinforce values, governance styles, and priorities of the American state or market systems. The interviewees reflect on this through their accounts of how the platform is particularly concerned with questions of billing and patients responsible for payment, which does not align with the structure of the Norwegian healthcare system.

On the one hand, the Health Platform is rooted in standardization and data-driven control. This regime reflects global trends in enterprise IT and managerial governance, where efficiency, uniformity, and auditability are prioritized (Allen & Hecht, 2001; Mol, 2008). Its internal logic prioritizes traceability, accountability, efficiency, and interoperability, often rooted in a broader agenda of digital governance. Within this regime, care is translated into data points, tasks, and measurable outcomes. Furthermore, professional responsibility is increasingly defined by compliance with system protocols and documentation standards.

On the other hand, the established practices of healthcare professionals embody a different technopolitical regime rooted in professional judgment, clinical discretion, and relational care. Here, knowledge is situated and embodied, and decisions are nuanced and responsive to the context. Care is shaped through interaction, adaptation, and ethical negotiation. These practices are embedded in professional cultures that value autonomy, trust, and the ability to act according to patients' individual needs rather than system-wide templates (Hoeyer et al., 2019; Hoeyer & Wadmann, 2020). The everyday practices of healthcare professionals in Norway operate within a technopolitical regime (Allen & Hecht, 2001) shaped by professional autonomy, contextual judgment, and relational care. Healthcare professionals rely on tacit knowledge, discretion, and adaptive routines to navigate the complexities of clinical work. Decision-making is deeply embedded in the local context and interpersonal trust rather than abstract metrics or centralized protocols. This regime aligns with the broader values of the Norwegian welfare state, which emphasizes equity, local responsiveness, and the state's accountability towards the individual. Thus, the implementation of the Health Platform represents a reconfiguration of authority and work. By embedding one techopolitical regime (Allen & Hecht, 2001) into the infrastructure of healthcare, the platform effectively reorders how decisions are made, how responsibilities are assigned, and how value is measured. Clinicians report that automated alerts and checklist-driven clickwork override their professional judgment. Patient care is increasingly subordinated to data entry tasks, eroding the time and space needed for meaningful interaction.

The regime underpinning the Health Platform assumes that healthcare can be optimized through uniform procedures, measurable outcomes, and centralized control. These assumptions align closely with what Mol (2008) refers to as the logic of choice. The logic of choice is a framework where healthcare is imagined as a series of decisions made by autonomous individuals, supported by clear options, transparent information, and rational processes. Within this logic, both patients and professionals are expected to navigate predefined pathways and adhere to standard protocols. Care becomes a matter of selecting the right option and documenting the process correctly (Mol, 2008). The Health Platform operationalizes this logic through its emphasis on comprehensive data entry, structured workflows, and system-wide transparency. Every action is made traceable, every step codified, and every decision embedded within a digital infrastructure designed to enforce consistency and accountability. In turn, this shifts the focus from the situated and responsive nature of care to one of compliance and documentation. The platform's internal logic assumes that more data and structure will yield better results, and that deviation from standardized routines signals inefficiency.

However, this logic diverges from the logic of care that underpins much of clinical practice (Mol, 2008). As Mol argues, the logic of care is not about making choices based on a list of options, but about engaging in an ongoing, responsive process shaped by the complexities of sickness, the uncertainties of treatment, and the relational nature of caregiving. Healthcare professionals often work in unpredictable conditions where they must adapt, improvise, and prioritize care over procedure. Their expertise lies in clinical knowledge, as well as in the ability to respond attentively to the needs of patients, often in ways that fall outside standardized workflows (Mol, 2008). Therefore, the implementation of the Health Platform can be considered a technological development that marks the introduction of a new technopolitical regime into the heart of healthcare practice. As Hecht (Allen &

Hecht, 2001) describes, infrastructure can be another way of mediating a political agenda. By embedding the logic of choice (Mol, 2008) into the digital architecture of healthcare, the Health Platform reconfigures authority, redistributes responsibility, and reshapes what counts as "good" care. Professional discretion becomes secondary to system requirements (Hoeyer & Wadmann, 2020), and clinical judgment can, in some instances, be second-guessed by automated alerts. However, some healthcare professionals perceive these automated alerts, such as "breaking the glass," as a speed bump in their everyday practices, rather than questioning their clinical judgment. Still, time usually spent with patients is displaced by time spent doing clickwork. The moral and relational dimensions of care are deprioritized in favor of auditable, traceable compliance.

According to the participants, important facets of care include attentiveness, individualization, and relational presence. This tension raises fundamental questions about what constitutes ideal care. Is it defined by careful, patient-centered interaction, or by the ability to serve more people with limited resources? These models are presented as mutually exclusive, rather than potentially complementary (Mol, 2008). While there is relative consensus among professionals that greater efficiency is necessary in light of demographic and systemic pressures, this recognition does not resolve the underlying conflict between managerial logic and clinical values.

6.2. Co-production of Care and Professional Roles

Healthcare work can be considered as inherently situated. It adapts to local conditions, the specific needs of patients, and the emerging realities of clinical interactions. The Health Platform disrupts this logic by introducing a new digital infrastructure that encodes specific assumptions about what healthcare should be. These assumptions are embedded in its design through standardized workflows and comprehensive traceability mechanisms. Tasks are redefined to fit the system's logic, documentation becomes a dominant activity, and interactions between professionals, particularly doctors and nurses, and patients are increasingly mediated by screens and technological actors.

The Health Platform can be considered to actively participate in constructing the institutions, practices, and norms that surround healthcare in Central Norway. We can understand these mechanisms through the lens of co-production (Jasanoff, 2004), which highlights how scientific and technological developments are intertwined with social, political, and institutional processes. Rather than viewing technology as something applied to a pre-existing healthcare system, the co-production framework emphasizes that technologies like the Health Platform are involved in mutually shaping both the structure of healthcare and how knowledge, responsibility, and authority are organized within it.

The development and implementation of the platform involved IT specialists, healthcare administrators, policy-makers, and clinical stakeholders. In this process, assumptions about efficiency, risk management, interoperability, and accountability were inscribed into the technical architecture. Simultaneously, healthcare professionals and institutions had to reconfigure their practices, identities, and routines to align with the platform's expectations. A new emerging sociotechnical order is the result.

Digital infrastructures are shaping new forms of labor, knowledge production, and interprofessional coordination. Nurses and doctors experience that they spend more time documenting than providing hands-on care. Semantic, as well as psychiatric, care providers must navigate pre-set treatment pathways and decision-support alerts. Administrators now have a greater opportunity to monitor and manage each healthcare professional and their work. These shifts are examples of how care work is reshaped together with the tools that are supposed to support it.

From the perspective of co-production (Jasanoff, 2004), the implementation of the Health Platform is a technological advancement, as well as a reordering of healthcare practices. For instance, it affects how decisions are made and documented, and how professionals interact with patients and each other. The system embeds certain assumptions about what constitutes legitimate knowledge (standardized data over tacit clinical judgment), how care should be delivered (protocol-driven processes), and who holds responsibility for outcomes (responsibilization of individual practitioners). In doing so, it contributes to the reshaping of professional roles, ethical norms, and institutional expectations. The lens of co-production (Jasanoff, 2004) highlights the Health Platform as a part of a broader sociotechnical transformation, where technological design and policy reform are co-evolving. It reveals how the platform is actively involved in producing the landscape of healthcare in Central Norway, influencing what is possible, valued, and visible in care delivery.

Similar to the findings of Forde-Johnston et al. (2023) and Wisner et al. (2021), the healthcare professionals working with the Health Platform pointed to a negative effect on the nurse-patient relationship, noting that the screen became a tangible barrier between the patient and nurses, as their interaction was disturbed by the documentation practices facing away from the patient (Greatbatch et al., 1995). This reinforced a tension between caring and charting (Forde-Johnston et al., 2023; Wisner et al., 2021), also referred to as a dilemma of attention (Greatbatch et al., 1995), when interacting with the Health Platform. The tension between caring and charting and the dilemma of attention evoke Mol's (2008) concern with how care practices are enacted in specific, embodied ways. When the screen becomes a physical and symbolic barrier between doctor, nurse, and patient, it disrupts the relational and responsive nature that Mol argues is essential. This reinforces her point that technologies not just support care, but participate in shaping what care is and how it can be done (Mol, 2008).

However, previous research has shown that EHRs can have a positive impact on doctors' consultations (Coats et al., 2020). In these instances, it was reported that the EHR allowed for the integration of patient narratives, facilitating the inclusion of the values and beliefs of the patient in their care (Coats et al., 2020), maintaining the relational aspect of care. Interestingly, this also aligns with Mol's (2008) perspective. It underscores that technologies are not inherently good or bad. Their effects are contextual and relational, depending on how they are integrated into practice. This echoes Mol's argument that good care emerges through a process of tinkering. The careful, situated adjustments that practitioners, like nurse Maria, make to balance the needs of patients, the constraints of the platform, and the tools at hand (Mol, 2008).

It becomes clear through the analysis that maintaining the relational aspects of care is important from the perspective of healthcare professionals. In relational care, healthcare professionals are treating a condition, as well as engaging with a person in a specific context. This relational engagement allows for a deeper understanding of patients' needs, values, and concerns. As some of the interviewees argue, these elements can be lost when care becomes task-oriented or overly mediated by the Health Platform. When relational aspects are diminished, care can become decontextualized and standardized, making it less sensitive to the nuances of individual situations. Lucas highlights this through his account of how it becomes difficult to interact with standardized categories in the Health Platform's checklist. Is the patient pale or not pale? They are a little pale.

Further, subtle signs, like emotional distress, hesitation, or other contextual details, may go unnoticed. For instance, Maria explains how she could tell how the patient responded to pain medication based on the look in their eyes. However, the documentation demands from the Health Platform caused her to barely look at the patient when entering the room. This can lead to decisions that are technically correct, but practically inadequate. Trust and communication also suffer from the absence of relational engagement. Patients may feel unheard or dismissed, which can reduce their willingness to share important information. Isabell illustrates this in her renditions of how patients often are quiet because they know that the Health Platform has caused nurses an increased workload.

Relational care also enables what Mol (2008) refers to as tinkering: the ongoing adjustments and judgments that good care requires. Without the possibility for this kind of attuned interaction, care risks becoming rigid and centered more on documentation than on the dynamic, moral work of responding to a person's unfolding needs. Ultimately, when care lacks a relational foundation, it may fulfill procedural requirements while failing to meet the patient in their complexity. This can, in turn, result in care that is less humane, less effective in terms of the effectiveness of the treatment, and more likely to overlook what really matters.

Still, it is important to acknowledge that the implementation of the Health Platform does not demonstrate a straight line from relational to standardized care. As Jasanoff (2004) underscores, technology and society are mutually shaping forces, causing both to adjust to one another. Though there is a definite increase in the valuation of standardization, healthcare professionals embody autonomous characteristics, adjusting the platform to their needs. Maria describes how she actively tried to simplify the demands of the platform, arguing that it was necessary to ignore what she did not consider relevant to her in the process of figuring out what worked for her. When nurses choose to ignore certain aspects of the Health platform and instead focus on "what is important to them" in their daily work, this can be considered an example of interactional co-production (Jasanoff, 2004) in practice. Rather than using the platform exactly as intended by its developers, nurses actively adapt and reshape it to fit the realities and demands of their care work. In this process, both the Health Platform and the practice of care are being mutually created. The platform influences how nurses document, communicate, or organize their work, but the nurses, in turn, influence how the platform actually functions in practice by modifying its use according to their professional judgment and priorities (Jasanoff, 2004; Mol, 2008). By focusing on what matters most in a given moment, nurses are not resisting the system outright, but engaging with it in a way that maintains their ability to provide meaningful, responsive care. In doing so, they participate in the co-production of both the care process and the technological system that supports it. This illustrates that technologies are not fixed or neutral. Instead, they are always embedded in and shaped by social and professional practices.

Additionally, several interviewees brought up the topic of task shifting and reconfiguration of professional roles in the healthcare sector, for instance, through the re-introduction of former healthcare professionals, such as auxiliary nurses and *helsefagarbeidere*. When new technologies, like the Health platform, are introduced, they often come with shifts in how work is organized, who is responsible for what, and how professional boundaries are drawn (Jasanoff, 2004). These changes are more than the redistribution of tasks. They actively reshape the structure of healthcare itself. Redefining roles, for example, by expanding nurses' responsibilities or introducing new forms of collaboration between clinicians and IT specialists, contributes to the co-production of both new technological systems and new social arrangements. It produces new forms of expertise, alters professional identities, and reshapes what counts as legitimate care. Thus, the development and implementation of the Health Platform are inseparable from broader changes in norms, authority, and institutional practices. This reflects the core idea of constitutive co-production. Our ways of organizing society, of developing, and using technology are deeply intertwined and continuously shape one another (Jasanoff, 2004).

6.3. Narratives of Digitalization in the Healthcare Sector

Based on the analysis, one may gather that the narrative regarding digitalization in the healthcare sector in Norway emphasizes efficiency, improved quality of care, and patient safety. Digital tools, such as the Health Platform, are portrayed as essential for modernizing the healthcare system, enabling better coordination across different services, reducing errors, and making care more accessible, particularly in rural areas. This narrative often highlights the promise of seamless information flow, empowerment of both healthcare professionals and patients through better access to data, and the potential for cost savings amid growing demands on the system. Policymakers and health authorities frame digitalization as a key strategy to meet the challenges of an aging population, increasing chronic diseases, and resource constraints. Simultaneously, this optimistic narrative tends to underplay or overlook the complexities and tensions that arise in practice. For instance, workflow disruptions, increased administrative burdens, and concerns about the relational aspect of care. These issues, while acknowledged, are often framed as challenges to be overcome on the path toward a more efficient, technologically advanced healthcare system.

This is reflected in Norway's strategy to be a highly digitalized public sector and a leading nation (Digitaliserings- og forvaltningsdepartementet, 2019; World Health Organization, 2024). The interplay of national policy, technological optimism, and structural reforms supports this narrative, which can be recognized in several of the Nordic countries (Andreassen et al., 2024; Hoeyer, 2019). Digitalization is positioned as a central solution to the growing pressures on the healthcare system, including an aging population, increasing rates of chronic illness, and limited resources. Initiatives such as the Health Platform and its idea of "One Citizen – One Record" contribute to framing digitalization as a technological upgrade as well as a necessary step toward a more sustainable, integrated health service. This narrative is underpinned by a strong belief in technological progress. Digital tools are expected to streamline communication across sectors, reduce medical errors, and empower both professionals and patients through better access to information. It reflects a broader modernization agenda, rooted in ideals of rationalization, transparency, and patient-centeredness. While challenges such as workflow disruptions or increased administrative demands are acknowledged, they are often treated as transitional issues to be resolved through further innovation and adaptation. Thus, the narrative presents digitalization as both inevitable and inherently beneficial, shaping how new technologies are introduced and justified within the Norwegian healthcare sector.

The idea of digitalization being a significant part of the solution to the challenges faced in the healthcare sector was also shared by the healthcare professionals in this study. The narrative can be considered a sociotechnical imaginary (Jasanoff, 2015) because it represents a collectively held vision of a desirable future, where technological systems are seen as essential to realizing national goals of efficiency, integration, and high-quality care. The imaginary is embedded in national policies, strategies, and public discourse. Digital tools are portrayed as essential to achieving sustainability, quality, and equity in care. This sociotechnical imaginary can be tied back to several national strategies in the Nordics (Andreassen et al., 2024; Hoeyer, 2019). Further, it can be considered as a part of Norway's national identity and self-image as a technologically advanced, fair, and forward-thinking welfare state. In this context, the collective vision of digital health is about solving practical issues, as well as reflecting and reinforcing core national values such as efficiency and universalism. By framing the Health Platform as necessary for achieving sustainability, integration, and quality in care, this imaginary aligns with a broader national narrative where technological progress is positioned as both a moral and pragmatic action. Norway's emphasis on digital governance, transparency, and equal access to services is reflected in how healthcare digitalization is framed – a continuation of the welfare state's promise to provide high-quality, universally accessible care.

This vision is embedded in national policy documents (Digitaliserings- og forvaltningsdepartementet, 2019) and public discourse, where digitalization is portrayed as inevitable and a reflection of Norwegian modernity and responsibility. Thus, the sociotechnical imaginary goes beyond guiding technological development. It contributes to the nation-building project by projecting a future where Norway maintains its position as a model welfare society, capable of adapting to demographic and financial pressures through rational, inclusive, and technologically enabled governance. Technologies like the Health Platform and other telemedicine initiatives are imagined as instruments for realizing this future. They promise seamless information flow, reduced errors, empowered patients, and more effective use of public resources. Importantly, these imaginary shapes the design and implementation of digital systems, as well as the expectations and responsibilities of healthcare professionals and patients (Jasanoff, 2015).

Digitalization in healthcare is framed as a solution to systemic challenges, such as demographic shifts, resource constraints, and fragmented services. This framing is not neutral. Instead, it can be considered to reflect a technopolitical regime (Allen & Hecht, 2001) that prioritizes data integration, efficiency, and interoperability as key values. Within this regime, the Health Platform is not just seen as an instrument of support, but as a necessary infrastructure for maintaining a sustainable and equal welfare state. The regime is sustained through policies, funding structures, and institutional reforms that align technological developments with governance goals (Allen & Hecht, 2001). For instance, a large-scale program like the Health Platform is shaped by political expectations of efficiency and seamlessness. Simultaneously, alternative models of care, emphasizing relational, tacit, or situated knowledge, tend to be marginalized or absorbed into the dominant logic of efficiency and standardization.

By embedding digitalization within this narrative (Allen & Hecht, 2001; Jasanoff, 2015), the Health Platform gains legitimacy and momentum, even in the face of practical challenges or unintended consequences. This could be seen when the proposal to investigate the potential abandonment of the platform was voted against in the Norwegian parliament (Haugen, 2025). The imaginary helps frame the digital transformation as both inevitable and morally desirable, aligning technological change with national values such as universal access, trust in public institutions, and the welfare state model. Thus, the digitalization of healthcare in Central Norway is not just a matter of policy infrastructure, but a sociotechnical project rooted in shared imaginaries of what "good" care should look like in the digital age (Allen & Hecht, 2001; Jasanoff, 2015).

Currently, the Health Platform reflects many characteristics of the logic of choice (Mol, 2008), despite operating within a welfare system that traditionally aligns more with the logic of care. The logic of choice refers to a healthcare model where patients are seen as autonomous consumers who make rational decisions among pre-defined options. This logic emphasizes individual responsibility, standardized information, and clearly defined choices, often overlooking the complexity and relational aspects of care. In contrast, the logic of care values adaptability, ongoing support, and the situated judgment of healthcare professionals (Mol, 2008). Regarding the Health Platform, the system reflects many aspects of the logic of choice. For instance, structured decision paths, digital documentation demands, and a focus on standardization and measurable outcomes. This creates tension with the Norwegian welfare state's traditional orientation toward the logic of care, where trust in professional discretion, and relational and patient-centered support is central. As such, the platform introduces a more consumerist and managerial logic into a system that historically has been rooted in collective, adaptive, and context-sensitive healthcare practices. Its reliance on standardized workflows, rigid documentation requirements, and centralized decision-making structures shifts the emphasis away from nuanced and situated practices that characterize everyday clinical care. Healthcare professionals have reported that the platform often constrains their ability to adapt to patients' needs in real time, instead requiring them to navigate system demands that prioritize data entry, protocol adherence, and administrative coherence. These tensions reveal a deeper conflict. While the public narrative of digitalization ties the Health platform to improved care and efficiency, its operational logic may undermine the very practices of care it aims to support. By embedding the logic of choice within the infrastructure of care delivery, the platform risks marginalizing professional judgment and relational care practices in favor of quantifiable outputs and traceable actions.

While the Health Platform is officially presented as a step forward in the digital transformation of healthcare, its technopolitical underpinnings reflect values that do not necessarily align with the values among Norwegian healthcare professionals. The resistance from healthcare professionals, expressed through concerns about disrupted workflows, diminished professional autonomy, and reduced focus on patient care, reveals a disconnect between the idealized narratives of digitalization and the lived experiences of working within a technologically rigid system. In practice, the promise of digital innovation becomes entangled with new forms of managerialism and technical dependency. Furthermore, the political framing of the Health Platform reflects what Winner (1986) identifies as a common trend in modern technological discourse: the tendency to present certain technological choices as necessary and apolitical. "Fine, but that is no way to run [healthcare]" (Winner, 1986, p. 133). Norwegian digitalization policies may unintentionally reinforce a narrow, efficiency-driven vision of progress that leaves little room for contestation or adaptation at the local level. Thus, the introduction of the Health Platform does not merely fulfill the national narrative of digital health transformation; it challenges and reconfigures it. It brings to light the contradictions between a universalizing, top-down vision of technological progress and the more diverse and participatory mentality that underpins Norwegian healthcare. The interaction between the Health Platform and these narratives highlights a fundamental question at the heart of digital change management: how to implement technology effectively while upholding democratic values, institutional trust, and professional integrity.

Through Mol's (2008) lens, the resistance from healthcare professionals to the Health Platform can be interpreted not as resistance to digitalization, but as a defense of the logic of care. A call to preserve the flexibility, responsiveness, and human attentiveness that make *caring* possible, not just *curing*. Their critique highlights the need for digital health technologies to support, rather than override, the complex and context-sensitive practices that "good" care depends on. Thus, the case of the Health Platform illustrates friction between technopolitical regimes and national values, as well as exposing the ongoing struggle between competing logics of organizing healthcare. Mol's (2008) framework helps articulate what is at stake: not just the efficiency of healthcare systems, but the ethics and experience of care itself.

7. Conclusion

Drawing from the findings of this study, it becomes evident that the implementation of the Health Platform in Central Norway represents a significant sociotechnical shift. This means that the change affects not only the technology used in healthcare settings but also the social structures, workflows, professional roles, and relationships surrounding it. The introduction of the Health Platform alters how healthcare professionals interact with patients, each other, and data. In this sense, the implementation is a deep transformation that involves both social and technical elements, highlighting the interdependence between technology and the social contexts in which it is embedded. It has challenged the foundation principles and practices of Norwegian healthcare. The digital system introduces an internal logic grounded in standardization, efficiency, and traceability. These characteristics are recognizable as guiding the American healthcare system. While intended to promote streamlined workflows and institutional accountability, the system's logic frictions with the foundational values of the Norwegian welfare model, which prioritizes relational care, professional discretion, and trust-based governance. This cultural misfit was not lost on the interviewees. They expressed clear skepticism toward what they perceived as a foreign system imposed on a domestic healthcare context. From their perspective, the Health Platform restructures how care is delivered and understood. This has shifted their role from attentive and relational caregivers to administrative system navigators.

The consequences of this shift were experienced on both symbolic and practical levels. Healthcare professionals described how their work increasingly involved "clickwork," documenting care in rigid templates and structured fields that often failed to reflect the nuance and complexity of clinical judgment. The system's emphasis on thorough traceability and accountability, framed as a necessary safeguard, was perceived by many as a decrease in the value of professional discretion, fostering a sense of surveillance and reducing their autonomy. The impact became especially visible in somatic care practices, where high-paced, context-sensitive decision-making is essential. In these environments, the platform's demands for detailed, real-time documentation clashed with the need to prioritize immediate patient needs. This creates a backlog of administrative tasks and increases stress. In this light, the system did not simply support care. It reordered it, prioritizing data over human connection.

Central to these challenges is a deeper clash between different technopolitical regimes. The Health Platform, as an imported digital infrastructure, carries embedded assumptions from the American healthcare model. For instance, assumptions about liability, cost-efficiency, and individual responsibilization do not easily translate to the Norwegian context. What emerged through the interviews was not technophobia, but rather a reflective and critical stance grounded in professional values and care ethics in professional values and ethics. Healthcare professionals were not resisting technology itself, but rather defending what they considered to be the moral, relational, and context-sensitive dimensions of good care. Their responses highlight how digital tools are never neutral. They are shaped by, and in turn shape, cultural norms, political ideologies, and institutional structures.

Further, the implementation process was hindered by a series of structural and procedural barriers. A lack of tailored training left many professionals feeling unprepared, unsupported, and frustrated. Frequent system updates, inconsistent interfaces across roles, and poor communication further undermined confidence in the system and continuity of care. Super-users played a crucial role in bridging these gaps, but the success of their efforts often depended on individual initiative and informal peer-led strategies. The emergence of unofficial manuals, workarounds, and grassroot support networks underscores the limitations of top-down implementation strategies and the critical importance of local, practice-based knowledge in sustaining large-scale digital reforms.

These findings make it clear that digital transformation is not simply a matter of introducing new tools. It is a deeply situated social process that reconfigures how care is delivered, who holds responsibility, and what is counted as legitimate work. Through the lens of co-production, we see how healthcare professionals actively shape the implementation through negotiation, adaptation, and resistance. Friction arises from technical design, as well as from a mismatch between standardized system expectations and the lived realities of complex clinical environments. In some cases, this friction leads to new configurations, such as task drifting, redefinition of roles, or the reintroduction of auxiliary healthcare staff. This highlights how the platform's presence catalyzes broader institutional change.

Nevertheless, amidst the tension, the resilience and adaptability of healthcare professionals become visible. They do not passively accept the system; they appropriate, reinterpret, and at times subvert it to make it workable within their practice. Acceptance, where it occurs, is seldom enthusiastic or uncritical. It is shaped by necessity, professional identity, and a desire to preserve patient-centered care within an increasingly system-centered environment. These acts of adaptation reveal a crucial insight: successful digitalization depends as much on social and cultural alignment and professional engagement as it does on technical functionality.

Finally, while the broader narrative of digitalization in the Norwegian healthcare sector remains one of progress and inevitability, this study reveals the real and complex costs of such transformations. If digital health technologies like the Health Platform are to succeed in enhancing care, they must be attuned not only to institutional ambitions and policy goals. They must also respond to the nuanced, relational, and ethical landscapes of everyday clinical practice. Without such alignment, digital systems risk undermining the very values they are meant to support.

Moving forward, future research can help uncover how digital health technologies embed particular assumptions about what constitutes good care, accountability, and efficiency. These assumptions often reflect broader political and economic ideologies, such as those tied to market-based healthcare models. STS possesses a useful position to explore issues of power and governance within digital health infrastructures. This includes examining how responsibility is redistributed through digital traceability, how professional autonomy is reshaped by platform logic, and how public trust is negotiated in systems increasingly influenced by private technology vendors. As countries across Europe move toward unified data infrastructures under initiatives like the European Health Data Space, STS can critically assess how visions of “data-driven healthcare” are constructed, contested, and legitimized. Rather than treating technology as externally imposed, STS can highlight how healthcare professionals, patients, and institutions co-construct the meanings, functions, and consequences of digital tools. By foregrounding these relational dynamics, research can contribute to more democratic, ethical, and context-sensitive approaches to digital health governance, both in Norway and across the broader European landscape.

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Appendices

Appendix 1: Informed Consent Agreement

Science, Technology, Society – Master Thesis
Summer 2025, Ulrike Felt
Sofie Aspelund Klevstrand

Informed Consent

Regarding an interview and the subsequent use of data in the context of a master thesis

I hereby agree to give an interview in the framework of a master's thesis. I have been sufficiently informed about the aims and questions of the research and the conditions and implications of my participation.

I have been made aware and agree that the interview will be digitally recorded. The recording will be stored by the conducting student for the duration of the course. It will be transcribed, meaning that what is said will be transformed into writing and stored as a digital file. It will be analyzed in the context of a seminar at the University of Vienna, Department of Science and Technology Studies. The transcript will be stored digitally for an indefinite amount of time, the audio files will be deleted by December 31st, 2025.

The transcript will be accessible to the conducting student as well as to the course lecturers. Statements may be cited in the final thesis and translated into English. These will only be accessible to Sofie Aspelund Klevstrand, the supervisor, and the examiner.

I confirm that some of my statements may be cited in reports and publications, which will be publicly accessible. The quotes will be used in pseudonymized form exclusively, which means that pseudonyms will replace my name and any other identifying information. The use of the data will be for scientific/educational purposes only.

I understand that the interview is voluntary and that I have the right to discontinue at any time. In this case, the data pertaining to me that already has been collected may only be used with my explicit permission.

I am aware that it is my right to inquire which data relating to me have been stored and to retract my consent to the use of my data until December 31st, 2025, using the contact details given below.

Name of interviewee:
E-mail address:
Date:

_______________________________ _______________________________
Signature of interviewee Signature of Sofie Aspelund Klevstrand

Appendix 2: Interview Guide (Norwegian)

Intervjuguide (as used in the interviews)

Introduksjon

1. Hvor jobber du, og hva jobber du som?
2. Hvor lenge har du jobbet for HMN?
3. Hvordan ser jobbhverdagen din ut?

Personlige erfaringer

4. Når du ser tilbake, hvordan vil du beskrive reisen til Helseplattformen fra den først ble introdusert til der den er i dag?
    a. Hvilke viktige øyeblikk, utfordringer og suksesser skiller seg ut i din erfaring?
5. Hvordan opplever du at Helseplattformen påvirker arbeidet ditt?
    a. Hvordan kan du gjøre tilpasninger eller justeringer i plattformen?
6. Har du observert konflikter eller misforståelser mellom helsepersonell og Helseplattformen? Noen eksempler?
    a. Hvordan tror du slike konflikter påvirker implementeringsprosessen?
7. Har du eller dine kollegaer noen workarounds/snarveier for å håndtere utfordringer med Helseplattformen?
    a. Kjenner du til noen metoder/praksiser som jobber mot systemets ønskede flyt?
8. Hvordan opplever du at Helseplattformen påvirker hvordan du og dine kollegaer samarbeider eller kommuniserer?
9. Hvordan blir Helseplattformen snakket om mellom deg og dine kolleger?

Generelt om plattformen

10. Hvordan ser du for deg at helsetjenesten vil gi omsorg i fremtiden?
    a. Hvordan vil måten du arbeider på endre seg? F.eks. om fem år?
    b. Hvordan passer Helseplattformen inn i dette scenarioet?
11. Dersom Helseplattformen er kommet for å bli, hvordan ønsker du at den skal videreutvikles?
12. HMN innførte Helseplattformen i slutten av 2022. Hva er din generelle oppfatning av plattformen?
    a. Hva mener du er den største utfordringen?
    b. Hva mener du er den største fordelen?
13. Hvordan opplever du at helsepersonell har hatt innflytelse på utformingen og utviklingen av Helseplattformen? Noen eksempler?
14. Helseplattformen utvikles av Epic Systems, et amerikansk selskap. Hvordan opplever du at systemet er i møte med den norske helsetjenesten?
15. Hva er dine tanker om Helseplattformens rolle i helsetjenesten og dens betydning for omsorg?
16. Hvordan vil du beskrive forholdet mellom helsepersonell og det administrative HMN?
    a. Har forholdet endret seg? Hvordan?
17. Hva tenker du om digitalisering og IT sin rolle i helsetjenesten?
18. Har du noe annet du ønsker å legge til?

Appendix 3: Translated Interview Guide (English)

Interview guide (translated version)

Introduction

1. Where do you work and what is your role?
2. How long have you worked for the Central Norway Regional Health Authority?
3. What does your workday look like?

Personal experiences

4. Looking back, how would you describe the journey of Helseplattformen from its initial introduction to where it stands today?
   a. What key moments, challenges, and successes stand out in your experience?
5. How do you perceive the platform to affect your work?
   a. How can you make alterations, adaptations, or adjustments?
6. Have you observed any conflicts or misunderstandings between healthcare professionals and the Health Platform? Any examples?
   a. How do you think such conflicts affect the process of implementation?
7. Do you or any of your colleagues have any "workarounds" for handling challenges posed by the Health Platform?
   a. Do you know any methods/practices that work against the intended flow of the system?
8. How do you perceive that the Health Platform affects how you and your colleagues collaborate or communicate?
9. How is the Health Platform talked about between you and your colleagues?

General about the platform

10. How do you imagine the healthcare services will provide care in the future?
    a. How will the way you work change? (i.e. in five years)
    b. How does the Health Platform fit into this scenario?
11. If the Health Platform is here to stay, how would you like to see it develop?
12. The Central Norway Regional Health Authority implemented the Health Platform towards the end of 2022. What is your general perception/opinion of the platform?
    a. In your opinion, what is the greatest challenge?
    b. In your opinion, what is the greatest benefit?
13. How do you experience the influence of healthcare professionals on the design and development of the Health Platform? Any examples?
14. The Health Platform is developed by Epic, an American system. How do you perceive the system in relation to Norwegian healthcare services?
15. What are your thoughts on the Health Platform's role in healthcare and its impact on patient care?
16. How would you describe the relationship between healthcare professionals and the Central Norway Regional Health Authority?
    a. Has the relationship changed? How?
17. What are your opinions on the role of digitalization and IT in healthcare services?
18. Is there anything you want to add?