



## MIS thesis

### Of patience and journals

How the Norwegian Health Archive came to be

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Supervisor: Dr. Jóhanna Gunnlaugsdóttir  
June 2020



HÁSKÓLI ÍSLANDS  
FÉLAGSVÍSINDASVIÐ

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FÉLAGSFRÆÐI-, MANNFRÆÐI-  
OG ÞJÓÐFRÆÐIDEILD

**Of patience and journals**  
***How the Norwegian Health Archive came to be***

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Final assignment towards an MIS degree in information science

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Of patience and journals

– How the Norwegian Health Archive came to be

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## **Abstract**

This study examines the origins of the Norwegian Health Archive.

The research questions were:

- 1. “How did the Norwegian Health Archive come to be?”**
- 2. “How suitable is the Norwegian Health Archive’s placement under the Ministry of Culture?”**

The Norwegian Health Archive will preserve patient journals digitally in all perpetuity and is seen as the first of its kind.

As its establishment took over a decade and resulted in its unlikely placement in a small town, it is therefore relevant to describe parts of the process for others to learn and benefit. Additionally, given that the organisation is funded by the Ministry of Health, anchored in health legislation but situated under the Ministry of Culture, it is worth considering its placement within the government framework.

The study was conducted through qualitative research methodology. Eight semi-structured interviews were conducted and analysed for their thematic content. A timeline was created by using information from the interviews and external material.

It was shown that the establishment of the Norwegian Health Archive was a long and complex process meeting repeated delays. Its placement in the town of Tynset was a regional-political decision, influenced by concentrated local initiative.

The “interim organisation” that was charged with establishing the archive had to overcome many challenges in the project. These included a lack of mandate and extreme duration due to uncertainty in the external environment. There were also some differences within the team, largely due to the decision to digitise patient journals, mostly without preserving the original. Not having the Health Archive Regulation until late in the process was an operational hindrance for the team but ultimately contributed to their ability to deliver a modern result, which the study suggests can well continue to be situated under the Ministry of Culture despite the Ministry of Health playing a central role for the archive.

## Útdráttur

Þessi rannsókn skoðar upphaf Heilbrigðisskjalasafns Noregs.

Rannsóknarspurningarnar voru:

- 1. „Hvernig varð Heilbrigðisskjalasafn Noregs til?“**
- 2. „Hversu viðeigandi er fyrir Heilbrigðisskjalasafn Noregs að vera staðsett innan menningarmálaráðuneytisins?“**

Heilbrigðisskjalasafn Noregs mun varðveita sjúkraskrár á stafrænu formi til eilífðarnóns og er talið vera einstakt sinnar tegundar.

Þar sem ferlið við stofnun þess varði í meira en áratug og leiddi svo ólíklega til þess að safninu var komið fyrir í smábæ er viðeigandi að lýsa hlutum ferlisins svo aðrir megi læra og hafa gagn af. Þar sem stofnunin er fjármögnuð af heilbrigðisráðuneytinu og lögfest í heilbrigðislöggjöf, en staðsett innan menningarmálaráðuneytisins, er einnig vert að íhuga staðsetningu þess innan stjórnáráðuneytisins.

Rannsóknin notaðist við eigindlega aðferðafræði. Átta hálfopin viðtöl voru framkvæmd og greind með tilliti til þema. Tímalína var gerð með notkun upplýsinga úr viðtölunum ásamt ytra efni.

Rannsóknin sýndi að stofnun Heilbrigðisskjalasafns Noregs var löng og flókin atburðarás sem varð fyrir endurteknum tögum. Valið á bænum Tynset sem staðsetningu var landshlutapólitísk ákvörðun sem varð fyrir tilstuðlan af einbeittu átaki heimafélks.

Svokallaður millibilshópur sem fékk það hlutverk að stofna skjalasafnið þurfti að sigrast á mörgum áskorunum í verkefninu. Þar á meðal voru skortur á verkefnaumboði og óhófleg tímalengd vegna óvissu í ytra umhverfi. Nokkur skoðanamunur kom upp hjá hópnum, aðallega vegna ákvörðunar um að stafræna sjúkraskrár, oftast án þess að varðveita upprunalega eintakið. Langvarandi skortur á sérsniðinni reglugerð leiddi til hindrana í starfi en skilaði sér á endanum í nútímalegri lausn sem rannsóknin bendir til að geti vel legið undir menningarmálaráðuneytinu þrátt fyrir að heilbrigðisráðuneytið gegni lykilhlutverki fyrir safnið.

## Sammendrag

Denne studien undersøker tilblivelsen av Norsk helsearkiv.

Problemstillingene var:

- 1. «Hvordan ble Norsk helsearkiv til?»**
- 2. «Hvor passende er det for Norsk helsearkiv å være underlagt Kulturdepartementet?»**

Norsk helsearkiv vil digitalt bevare pasientjournaler til evig tid og anses for å være unik med sin virksomhet.

Ettersom etableringsprosessen varte i mer enn ett tiår og førte til arkivets utypiske lokalisering i en liten by er det aktuelt å beskrive deler av prosessen slik at andre kan dra nytte og lærdom av den. Ettersom organisasjonen finansieres av Helsedepartementet og forankres i helselovgivningen, mens den befinner seg i Kulturdepartementet, er det også verdt å tenke på arkivets plassering i statsforvaltningen.

Studien ble utført ved bruk av kvalitativ forskningsmetodikk. Åtte semi-strukturerte intervjuer ble gjennomført og analysert med tanke på temaer. En tidslinje ble laget basert på informasjon fra intervjuene og eksternt materiale.

Studien viste at Norsk helsearkivs etablering var en lang og komplisert prosess som møtte gjentatte forsinkelser. Arkivets plassering på Tynset var et regionalpolitisk vedtak, påvirket av sterkt lokalt engasjement.

«Interimsorganisasjonen» som fikk i oppgave å etablere arkivet måtte overkomme flere utfordringer i prosjektet. Disse inkluderte mangel på mandat og ekstremt langvarig prosjektperiode på grunn av usikkerhet i det eksterne miljøet. Det oppstod noen uenigheter i gruppen, hovedsakelig som følge av avgjørelsen om å digitalisere pasientjournaler, i hovedsak uten å oppbevare originalen. Det at Helsearkivforskriften ikke ble vedtatt før sent i prosessen ble en hindring for gruppen men førte til at den kunne levere et moderne resultat, som studien foreslår at gjerne kan fortsette under Kulturdepartementet selv om Helsedepartementet spiller en hovedrolle for arkivet.

## Preface

This thesis is a final assignment of 30 ECTS units in an MIS-degree programme of information science at the University of Iceland.

I would like to thank my supervisor, Dr. Jóhanna Gunnlaugsdóttir, very much for the guidance and responsiveness.

To my dear wife, Berglind Inga, I give all my love, as well as to my wonderful children, Draupnir and Urður.

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## Table of contents

<b>Abstract</b> .....	<b>4</b>
<b>Útdráttur</b> .....	<b>5</b>
<b>Sammendrag</b> .....	<b>6</b>
<b>Preface</b> .....	<b>7</b>
<b>Table of contents</b> .....	<b>8</b>
<b>Table index</b> .....	<b>10</b>
<b>Introduction</b> .....	<b>11</b>
<b>1 Theoretical background</b> .....	<b>13</b>
1.1 Hospital reform and NOU .....	13
1.2 The Norwegian Health Archive and Health Archive Registry .....	14
1.2.1 <i>Goals in 2020</i> .....	15
1.3 Health Registries in Norway.....	16
1.3.1 <i>Health Data Programme</i> .....	16
1.4 Confidentiality of patient journals.....	17
1.5 Digital future of archives.....	17
1.5.1 <i>Archival paradigms</i> .....	19
1.6 Digitalisation of the Norwegian archival environment .....	21
1.7 Perspective.....	22
<b>2 Methodology</b> .....	<b>23</b>
2.1 Goals of the study .....	23
2.2 Research questions .....	23
2.3 Research methods .....	23
2.3.1 <i>Interviews</i> .....	24
2.3.2 <i>External information</i> .....	25
2.3.3 <i>Personal experience</i> .....	25
2.4 Timeline .....	25
2.5 Sample .....	26
2.6 Interviewees .....	26
2.7 Research value .....	27
2.8 Delineation of the research .....	27
2.9 Conflicts of interest.....	27
2.10 Thematic analysis.....	28

2.11	Emerging themes .....	29
<b>3</b>	<b>Role of politics .....</b>	<b>30</b>
3.1	The requirement to establish a health archive .....	30
3.2	The campaign for location .....	31
3.3	Importance of connections .....	32
3.4	Red-green coalition.....	33
3.5	Other hopefuls .....	34
3.6	The final decision to place NHA in Tynset .....	34
3.7	Central repository .....	36
3.8	Elections in 2013 .....	36
3.9	Following KS2 analysis .....	38
<b>4</b>	<b>Interim organisation.....</b>	<b>40</b>
4.1	Mapping the hospitals .....	40
4.2	The Health Archive Regulation .....	42
4.3	Digital preservation system .....	44
4.4	Working together in the group.....	45
4.5	Working with the National Archives.....	48
4.6	Planning, duration and result .....	50
<b>5</b>	<b>Two ministries .....</b>	<b>54</b>
5.1	Archive vs. health registry .....	55
<b>6</b>	<b>Discussion .....</b>	<b>58</b>
6.1	From 2000 to 2010.....	58
6.2	From 2010 to 2020.....	59
6.3	Tying it together.....	62
<b>7</b>	<b>Conclusion .....</b>	<b>67</b>
<b>8</b>	<b>References .....</b>	<b>68</b>
	<b>Appendix 1 – Production numbers .....</b>	<b>73</b>
	<b>Appendix 2 – Timeline .....</b>	<b>74</b>

## Table index

Table 1. Partial comparison between two archival paradigms .....	20
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## Introduction

An overview and description of the thesis is as follows:

*Chapter 1* contains theoretical background relevant to the topic. The chapter opens with a short introduction on Tynset, setting the stage for further discussion about the archive.

The need to form a health archive is discussed and a report that was produced to shed light on the scope of the problem is addressed.

The Norwegian Health Archive is presented, its legal background described along with its goals in 2020 to show what the archive is aiming for in the near future.

National health registries and their connection to the Health Data Programme are mentioned thereafter and following that, the confidentiality of patient journals in the Norwegian Health Archive and its parent institution is discussed.

The digital future of archives is addressed thereafter and a comparison between two archival paradigms is presented.

Lastly, the digitalisation of the Norwegian archival environment is presented.

*Chapter 2* addresses the methodology of the study, presents its goals, research questions and methods; how a timeline was used and sample information. The interviewees are listed, research value described and delineation of the research explained. Possible conflicts of interest are addressed and then a description of thematic analysis is given, as well as the emerging themes.

*Chapter 3* presents findings regarding the theme “role of politics,” where comments from interviewees are grouped into sub-themes presented chronologically in order to show how politics related to the process.

*Chapter 4* presents findings regarding the theme “interim organisation,” where comments are grouped together in non-chronological sub-themes.

*Chapter 5* presents findings regarding the theme “two ministries,” where comments are grouped together in two sub-themes.

*Chapter 6* contains a discussion on the findings in chapters 3, 4 and 5 in relation to material in chapter 1.

The discussion is divided into three separate chapters. The first two cover events over two decades, chronologically and supported by a timeline for better overview. The third

discussion chapter ties together the chronological overview with a theme-based discussion for deeper context.

The research questions are answered in chapter 6.

*Chapter 7* contains the author's concluding comments in wider context.

*Chapter 8* contains references.

*Appendix 1* contains production numbers provided by the Norwegian Health Archive.

*Appendix 2* contains a timeline giving an overview of events, with sources referenced, from the early 2000s and up until the opening of the archive.

## **1 Theoretical background**

Tynset is a municipality in Southern Norway in the county of Innlandet. The town lies between Oslo and Trondheim along the banks of the river Glomma, and has a total population of 5600 people. The economy is mainly driven by agriculture but the town has also evolved into the center for official administration and services in the area, with institutions such as a hospital, a high school and a regional court (Thorsnæs, 2020), attracting a well educated workforce (Tynset kommune, 2017).

Tynset is graced with, according to locals, “the better” view of nearby Tron; a majestic mountain jutting out of the horizon.

Interestingly, in 1917 an Indian poet and philosopher took up residence in the slopes of Tron, where he then lived out his life through dozens of biting winters (Swami Sri Ananda Acharya Stiftelse, n.d.).

If he was ever treated in hospital, eventually the philosopher’s patient journals should find their way to the Norwegian Health Archive in Tynset, joining 15 million others in digital form and contributing to the country’s future health research (Arkivverket, 2019a).

### **1.1 Hospital reform and NOU**

As a result of the Norwegian Health Enterprise Act (Helseforetaksloven, 2001) and the following Hospital Reform of 2002 (Braut, 2020) Norwegian hospital archives became official archives and a future solution needed to be found for them.

A committee was tasked with evaluating a possible arrangement for a specialised repository and in 2006 they presented a large report commonly referred to as “the NOU” (Arkivverket, 2020c). The NOU committee established, through extensive use of questionnaires, which according to Saffady (2016, p. 43) is an effective way to take inventory that the total amount of physical archives within the hospitals, around 200,000 shelf metres, was larger in volume than everything preserved by the National Archives Services at the time (NOU 2006:5, p. 152). For context, only 10,000 shelf metres of hospital archives had been delivered to official archive repositories, according to the

report (2006, p. 13). A separate mapping of electronic patient journals was also conducted (2006, p. 182) which required the specialised assistance of a hospital information system vendor as well as IT personnel within each organisation.

In this comprehensive analysis of the country's health archive landscape, the committee proposed, among other things:

1. The creation of a special repository for the archives of the specialist health care services (Braut, 2018), named "Norsk helsearkiv" [The Norwegian Health Archive] (2006, p. 118).
2. Special rules for preservation and disposal (2006, p. 104) of material within the country's patient archives, in order to limit the amount of material delivered to a repository, which they estimated to be a gargantuan 160-175,000 shelf metres of physical patient journals (2006, p. 120).
3. That material from before 1950 be preserved entirely as well as material from certain select hospitals (2006, pp. 106, 110).
4. That physical and electronic patient journals be delivered to the Health Archive 10 years after the patient's death (2006, p. 16).

The report mentions scanned journals, OCR and data mining, but the Norwegian word for "digitise" and "digitalisation," which has developed in strides in the years following the report (Prescott & Hughes, 2018), is nowhere to be found.

The committee established that none of the neighbouring Nordic countries had a national arrangement for patient archives. They also constructed new terms to distinguish between patient archives of the dead<sup>1</sup> and of those still alive<sup>2</sup> (NOU 2006:5, pp. 15, 165-166).

## **1.2 The Norwegian Health Archive and Health Archive Registry**

The Norwegian Health Archive, along with the National Archive, regional county archives and the Sami Archive constitute the National Archives Services of Norway; an independent government authority led by the Director General and placed under the Ministry of Culture (Arkivlova, 1992).

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<sup>1</sup> Morsjournal: A patient journal of a dead person.

<sup>2</sup> Vitajournal: A patient journal of a living person. A vitajournal becomes a morsjournal at death.

The Norwegian Health Archive is provisioned in the “Regulation of the Norwegian Health Archive and the Health Archive Registry”, known in short as the “Health Archive Regulation” (Helsearkivforskriften, 2016). It, in turn, is firmly rooted in health legislation with provisions in the Personal Health Data Registries Act (Helseregisterloven, 2014), the Specialist Health Services Act (Spesialisthelsetjenesteloven, 1999) as well as the Archive Act (Arkivlova, 1992).

Paragraph 1 in the Health Archive Regulation “establishes the Health Archive Registry in the Norwegian Health Archive.” The regulation was partially adopted on 3 March 2016 and then fully on 1 January 2018 (Helsearkivforskriften, 2016).

According to the regulation the Health Archive Registry’s objective is to receive and preserve patient archives from the specialist health care services and to make health information in the archive available to approved researchers and next of kin, who by law (Pasient- og brukerrettighetsloven, 1999) have the right to information surrounding the person’s health, if doing so does not violate confidentiality (Helsearkivforskriften, 2016).

The Health Archive’s functions are divided into six main categories: Acquisition and related services, delivery reception, digitisation, registry management, preservation, and delivery from the archive (Arkivverket, n.d.-b). These functions are performed in three departments; User Contact; IT and Health Archive Registry, and Digitisation (Arkivverket, 2020a). There are also independent organisation-wide areas relating to a digital preservation system, to logistics and tracking, and information security (Arkivverket, n.d.-b).

### **1.2.1 Goals in 2020**

The Health Archive’s goals for 2020 are clearly laid out in a letter of allocation from the Ministry of Culture (Kulturdepartementet, 2019b) and they give a good overview of the organisation’s objectives now and in the near future.

According to the letter the archive shall be in full production in 2020, continue optimising digitisation methods and ensure sufficient supply of material from those obligated to deposit with the archive. The archive is to engage in a development project in cooperation with a large regional health enterprise, a hospital information system provider and the Directorate of eHealth. The result is expected to allow extraction from a prominent electronic health records system and the Health Archive is subsequently

expected to receive, test, quality assure and then preserve the first deposits from this project (2019b).

Other goals for the foreseeable future are also mentioned. The Health Archive is thus:

- already preparing an arrangement with the Directorate of Health which will expand its role to include the reception of patient journals from health care providers whose licence has been revoked. This will include patient records from people still alive (Helse- og omsorgsdepartementet, 2016).
- expected to advance medical and health research through, for example, the development and optimisation of data identification and extraction.
- meant to establish fully digital solutions for all users of services entailing requests for, and delivery of, information or health data. To that effect, the archive shall participate in the Health Data Programme (Direktoratet for e-helse, 2020) and its collective solutions for request and delivery to researchers and other users (2019b).

### **1.3 Health Registries in Norway**

There are numerous national health registries in Norway. The country's 17 nation-wide registries (Folkehelseinstituttet, 2018) are all provisioned in the Personal Health Data Registries Act (Helseregisterloven, 2014).

#### **1.3.1 Health Data Programme**

The Health Data Programme is an initiative from the Norwegian Directorate of eHealth meant to "give simpler access to and a better foundation for the analysis of health data" (Direktoratet for e-helse, 2018).

According to the directorate, Norway's many health registries exist within a complicated regulatory framework resulting in difficult and time-consuming requests for data access. Some of the registries also reach far back in time to when there was a lack of national or international standardisation. These complexities hinder data analyses which, due to unclear benefits, decreases the incentive for health workers to provide input to the registries (2018).

Although the health registries are the main focus of the Health Data Programme, it will also include input from other relevant contributors such as biobanks and health studies, along with demographic and socio-economic data (2018).

#### **1.4 Confidentiality of patient journals**

The Norwegian Health Archive is required to protect confidentiality of information within the Health Archive Registry and the legal requirement for this is found in two different acts of law; in the Public Administration Act and, via the Personal Health Data Registries Act, in the Health Personnel Act (Helsepersonelloven, 1999) which makes the confidentiality perpetual (Helse- og omsorgsdepartementet, 2013, p. 9).

The National Archives recognises that the Health Personnel Act regulates access to patient journals and that the act does not set time limits with respect to confidentiality. The Archives' interpretation, however, based on a different article within the same act, is that the confidentiality does not preclude use of the information when no legitimate interests require secrecy. The National Archives' interpretation is therefore that "patient journals that are older than 150 years can be used freely" in its reading rooms (Arkivverket, 2020d).

#### **1.5 Digital future of archives**

Technological changes can present existential challenges to archives. Even though archival institutions will most likely continue to exist because of several redeeming factors,<sup>3</sup> all of their functions, whether in Antiquity's or tomorrow's archives, have been shown, by Ivan Szekely (2017) to be susceptible to replication by internet technologies at the fundamental level of information operators<sup>4</sup> describing the archives' function from the standpoint of how information is treated (pp. 4-14).

Because societies change, it can be said that archives exist in a constantly changing environment that reflects and affects their purpose and characteristics. Some of the

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<sup>3</sup> Some factors supporting the future existence of archives: Institutional inertia and traditions; persistent functions of documents and data; preservation of physical copies, preservation of context; migration of document formats, and institutional responsibility (Szekely, 2017, pp. 11-14)

<sup>4</sup> Information operators replicable by technology: Recording, coding (encoding/decoding), structuring, storing, processing, making retrievable/accessible, copying/multiplying and combining (Szekely, 2017, pp. 6-10)

earliest examples of artifacts showing ancient records are from the Sumerian civilisation, in the form of clay tablets. Documents in need of long-term preservation were baked in a kiln and they still exist today, whereas less important information was recorded on tablets that were not future-proofed with fire. Record-keeping in ancient times was generally used in business purposes and gradually, archiving evolved into the preservation of more complex documentation where official information such as political decisions and records of ownership were among archived material. The title of archivist enjoyed great respect and those holding it often came from the highest rungs of society (Gunnlaugsdóttir, 2006, pp. 45-46).

Archives have always served some, or someone's, purpose. In earlier periods the importance of archives lay, for example, in their role of documenting ownership, titles, ranks and so on, with secrecy as a distinguishing element. Archives thus became a target for revolutionaries, during the French Revolution, who feared that the ruling class would reemerge by way of the archives. The roles of archives have gradually changed, bringing more openness, and after the Second World War public archival institutions started introducing research rooms open to the public, leading to the rise of the archivist as a distinguished key expert (2017, pp. 7-8). In contrast to past, secretive archives operating in the rulers' favour, archives in modern democratic societies can have the role of ensuring government accountability and helping people understand government actions (International Council on Archives, n.d.).

Today's archives are also a tool with which to preserve our collective memory (Arkivverket, 2012) and as societies become more, not "digitised" but "digitalised", in the sense that digital technology increasingly permeates every thread of our existence, archives are moving towards the future in order to stay relevant (Arkivverket, n.d.-a).

But staying relevant means adjusting to a new environment and that can present inherent challenges to archival institutions, as well as to the legal framework and mechanisms that regulate their operations. Szekely describes the challenges faced by archives, and other organisations in today's digital environment as not only testing their inner functionalities, due to the necessity of technology functioning in a cohesive way, but as also "blurring" institutional frameworks. The transition from a document-centered

to a data-centered archival landscape also challenges existing archival laws which have little means of accommodating the rising tide of technology (2017, pp. 1-6).

### **1.5.1 Archival paradigms**

Four different and successive paradigms (Szekely, 2010, p. 34) in archival history have been described. These have also been further set apart by the defining of characteristic elements for each paradigm (see table 1), thus allowing a comparison of archives.

Contemporary archives are said to exist on an intersection between the two latest paradigms; the public and the global paradigms, respectively (Szekely, 2017, p. 6). The paradigms can therefore potentially be used to compare modern archives with others or to assess their development longitudinally over longer periods.

Table 1 shows a partial comparison of two archival paradigms; the public and the global as seen through how they relate to characteristic elements<sup>5</sup> concerning archives and their environment (2010, p. 34).

**Table 1. Partial comparison between two archival paradigms**

	<b>Public paradigm</b>	<b>Global paradigm</b>
Users and target audience	The State, historians, learned or concerned public, genealogists	Internet users, laymen
Key technology	User-friendly finding aids, inter-archival cross-references, outreach programmes	Computer, internet
Key professional	Archivist	IT professional
Impact and key element	Public reading rooms, services	Archiving “everything,” digitising, preserving “forever”
Problems	Access restrictions	Context, quantity/quality, preserving electronic documents
Period	WW2 -	2000 -

By looking at the columns assigned to each paradigm, it is possible to see how the public paradigm is characterised by factors commonly found in traditional archival institutions. The column denoting the global paradigm, however, contains elements reliant on or related to internet technology and associated expertise.

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<sup>5</sup> The elements covered in table 1 are: Users and target audience; key technology; key professional; impact and key element; problems, and period.

## 1.6 Digitalisation of the Norwegian archival environment

The archival environment in Norway is on a well-lit path towards digitalisation, as is evident by the government's large financial commitment to the cause (Kulturdepartementet, 2019a).

Already in 2009, a government white paper on a "National Strategy for Digital Preservation and Dissemination of Cultural Heritage" was presented in Norway. The white paper laid the groundwork for increased digitalisation within archives, libraries and museums, with the National Archives Services leading the way in areas such as digital long-term preservation, digitisation, as well as online accessibility (Fonnes, 2017, pp. 410-411). Digitisation is a complex process involving people with a varied professional background and skills (Dahlström & Hansson, 2019, p. 2). An important part of the digitisation process is ascribing metadata (p. 5) to the material and large efforts are well underway in terms of digitisation of documents through the Digital Archive (Arkivverket, n.d.-a).

The Digital Archive allows its users, numbering in the millions, to access the country's soon hundreds of millions of digitised pages through self-service online (Arkivverket, 2019b). It is also trying to appeal to the public when it comes to publishing private archives, which used to account for a disproportionately small share within the country's archival repositories, as described some years ago in a government white paper (Kulturdepartementet, 2012) on archival challenges. This imbalance has since been ameliorated through the National Archives' effort (Arkivverket, 2018).

As of 7 May, the Norwegian Health Archive had digitised about 8.8 million pages in 2020, or roughly 67,000 patient journals, with a goal of 24 million pages for the whole year (appendix 1). These high production numbers indicate mass digitisation but whereas mass digitisation has been said to minimise interpretation and metadata (Dahlström, Hansson, & Kjellman, 2012, p. 463), the process in the Health Archive involves the registering of metadata about patients and is therefore an integral part of the process.

The National Archives Services is also actively participating in the long-term effort around Archiving-by-design, a way of systematising record-keeping in the public sector. The goal is to solve archiving through system design such that it happens automatically

in the background without employees having to think about it, thus freeing up time (Sjøvoll, 2019).

New legislation is in the making, meant to support future needs and will replace the Archive Act (Arkivlova, 1992), that has only been in effect since 1999 but does not manage to sufficiently encompass digitalisation trends (Kulturdepartementet & Kommunal- og moderniseringsdepartementet, 2019).

### **1.7 Perspective**

Given the complex background seen here, whether through legal changes two decades ago or the scope of the project and its unique goal, a further look into the Norwegian Health Archive's beginnings is warranted. Its existence between the worlds of health and culture; between yesterday and tomorrow invites questions relevant to analogous projects.

## **2 Methodology**

Information was gathered by means of qualitative research methodology which is a common approach in social studies and increasingly used in organisational research (Hegde & SpringerLink, 2015, p. 124).

### **2.1 Goals of the study**

The aim of the study is to describe parts of the process which led to the establishment of the Norwegian Health Archive and the views of some of those who were involved in the process at different stages.

The road for this organisation has been both long and winding and many different external factors have affected the project. The process has been documented from many sides and adding the personal account of those involved might further help to give context and nuance to events regarding the establishment. It is the author's hope that information gained from the study may be of value to others who plan on establishing similar institutions and to provide context for further studies of the Norwegian Health Archive and the Health Archive Registry.

### **2.2 Research questions**

The research questions in the study are as follows:

- “How did the Norwegian Health Archive come to be?”
- “How suitable is the Norwegian Health Archive's placement under the Ministry of Culture?”

### **2.3 Research methods**

The subject matter was approached from three sides. Triangulation is an approach identified as a means of enhancing credibility in qualitative research by comparing information from different sources (Patton, 1999, p. 1192).

The three information gathering sources are listed as follows:

- a. Semi-structured interviews.
- b. Evaluation of external information, including online content, news, laws, regulations and research relevant to the topic.
- c. Information based on the personal experience of the author as an employee.

### **2.3.1 Interviews**

Interviews are the most common method for collecting data in qualitative research (Clarke & Braun, 2013, p. 77). The founding of the archive is documented from many sides but the views and experience of those involved in the process were of interest to the author. An interview structure was used; a useful aid when the researcher knows something about his or her interviewees beforehand. It can evolve and change as the study progresses (Taylor, Bogdan, & DeVault, 2016, p. 102).

Eight people were interviewed, all of them having some connection to the founding of the archive and the author therefore had some prior knowledge of their background and role related to the topic. In some cases, the interview structure differed slightly between participants with respect to the type of connection they had to the subject. Interviewees also focused on different aspects, presumably owing to their different backgrounds and involvement. Interviews during the later stages were also informed by the findings in previous interviews.

All the interviews were semi-structured but a couple of them began as an almost unstructured (2013, p. 78) recount of the events or topics in question, possibly because the persons were very keen to share their view from the start. One of those interviewed was so thorough that almost all the topics in the interview structure had been addressed in some way towards the end.

Sometimes, comments from interviewees rendered questions irrelevant or possibly counterproductive to the interview or its flow. In those cases, the questions were simply omitted during the interview.

Most of the interviews were conducted from October of 2019 through March of 2020 apart from one that was conducted in mid-April.

Those interviewed were chosen for their knowledge of the topic and were contacted either by email, text or telephone. Choosing interviewees was challenging given the broad scope of the study. Eleven people were asked for an interview and eight were granted. All interviewees registered their consent to be interviewed and for their names to be used. Locations of the interviews varied somewhat with one being taken at an interviewee's place of work while four of them were taken at a café, restaurant or a meeting room within the National Archive. Three interviews were taken via an online

teleconferencing program and another three in Oslo during a trip for that purpose. To minimise intrusion (Lichtman, 2014, p. 61), participants were generally allowed to suggest a place although the author did so as well when appropriate.

### **2.3.2 External information**

Relevant websites were studied along with published material such as laws, regulations, reports and news items. External research articles related to some topics were also studied.

A Norwegian citation guide was used for all citations, owing to a large number of official Norwegian sources. An English version of the citation guide was used to match the language in the paper. This provided instructions on how to register sources into EndNote, which the author used for creating a bibliography and keeping track of citations (Høgskolen i Sørøst-Norge, Universitetet i Agder, & Universitetet i Stavanger, n.d.).

### **2.3.3 Personal experience**

As an employee of the Norwegian Health Archive the author has prior knowledge of the fledgling organisation. This helped to devise interview structures, find material and select initial study participants. Personal experience also gave the interview results better context and provided for better insight overall, in the author's view. Being neutral with regard to the study matter was considered important by the author (Taylor et al., 2016, p. 33) and to that effect no unpublished information from within the archive was used, with the one exception of production numbers attained through email correspondence which are included here (appendix 1).

## **2.4 Timeline**

A timeline of events was created from external material and the interviews (appendix 2). This was done to give a simple overview as well as to cross-reference what interviewees had said. Events were registered in a spreadsheet with the relevant year and, possibly, month in separate columns. For verification a column was also assigned to each participant or other source. That way, multiple sources could be attributed to a single event within the timeline. The timeline was also used to support the paper's discussion.

## **2.5 Sample**

A purposive sample of eight individuals was used and interviewees were chosen based on their shared criterion of having insight into or experience with the founding of the new organisation.

Purposive samples are popular within qualitative research where researchers are often more interested in gleaning information from individuals perceived to be pertinent for a certain case study. Participants in purposive samples are thus chosen for their connection to the study topic and to benefit the research based on their knowledge of the matter (Palys, 2008, p. 697).

Initial interviewees and others in the author's network knew of further potential interviewees. A few additional ones were thereby chosen through what can possibly be described as a snowballing sample. A snowballing sample is a method of creating a group of participants by gaining information from other participants along the way. However, considering that the process was not very repetitive the sample can hardly be considered a true snowballing sample (Noy, 2008, p. 330) even though it resulted from information from other participants.

The group of interviewees consisted of:

- Members of a now-retired interim organisation tasked with planning and preparing the establishment of the Norwegian Health Archive.
- Current and former Directors General of the National Archives Services of Norway.
- Former local politicians in Tynset.

## **2.6 Interviewees**

Interviewees in the study:

1. Bersvend Salbu, former council chair of Tynset municipality (15 October, 2019)
2. Heidi Tronbøl, former member of the interim organisation (30 October, 2019)
3. Tom Kolvig, former leader of the interim organisation (27 February, 2020)
4. Inga Bolstad, current Director General (27 February, 2020)
5. Ivar Fonnes, former Director General (28 February, 2020)

6. Dag Henrik Sandbakken, former council chair of Tynset and former state secretary (9 March, 2020)
7. Jon Are Vøien, former member of the interim organisation (11 March, 2020)
8. Kristine Aasen, former member of the interim organisation (16 April, 2020)

## **2.7 Research value**

Even though the founding process of the Norwegian Health Archive received a good deal of attention in its time, the establishing of the archive has not been written about in an academic paper before. It is of potential value to seek out and compare the personal views of those involved to get a more nuanced account of certain events which already have been described, for example in newspapers. Former analysis (NOU 2006:5, p. 5) strongly suggests that no other nation has founded an archive like this one. A description of the background and process is therefore useful as an overview, either for those who are interested in founding a similar institution or those who would like to further study the archive.

## **2.8 Delineation of the research**

The study addresses the background of how the Norwegian Health Archive came to be. Thus, it examines the process which led to the establishing of a health archive in Norway. The circumstances leading to the choice of Tynset as a location are addressed, as well as the work of the interim organisation. The paper also discusses the placement of the Health Archive within the Norwegian Ministry of Culture.

The building process itself is mostly outside the scope of this paper, as are practical and technical solutions, and organisational structure within the archive or its parent institution. The paper, furthermore, does not provide an exhaustive analysis of all projects during the interim organisation's decade-long lifetime. Aspects of information technology solutions are not a focus in the paper and neither are day-to-day operations or human resource management a central topic here.

## **2.9 Conflicts of interest**

The author is an employee of the National Archives Services of Norway, within the department of the Norwegian Health Archive. This provided useful insight but presented

implicit challenges as well. Being an employee may affect how conclusions regarding one's workplace are presented and having a professional stake in the study matter can lead to problems such as one-sidedness (Taylor et al., 2016, p. 33).

The employer was very supportive throughout while maintaining a comfortable distance to the study. Enquiries were mostly along the much-dreaded lines of "how's your masters coming along?"

## **2.10 Thematic analysis**

All the interviews were conducted in Norwegian and later transcribed and analysed thematically for their content. Thematic analysis was conducted on the material while still in the source language and translation then performed on quotes used. The author, an Icelander living in Norway, felt that translating the entire interview transcripts would likely and needlessly lead to a loss of meaning and cultural nuance (Taylor et al., 2016, p. 17) early in the process.

Each interview was examined with respect to possible themes. When a new theme came up it was assigned a specific colour and the relevant text coloured. If the theme was encountered again, whether in the same interview or subsequent ones, it was coloured identically. This was repeated until the interviews were all but exhausted of possible themes. Following this, texts corresponding to a theme were copied and pasted over to a separate file consisting of all themes and partitioned by headings. There, every bit of text was given a colour denoting each interviewee, making their comments clearly distinguishable from one another. This, in turn, allowed for the rearranging of text without the loss of origin and care was taken to preserve context by comparing with the original transcript as needed. Finally, a file consisting of all the full, individually coloured transcriptions was created for quick referencing and additional research as the writing process wound on.

## 2.11 Emerging themes

A range of themes was quite evident from the start:

- Archival challenges
- Archive vs. health registry
- Changing times
- Economy
- Education and competence
- Future possibilities
- Two ministries
- Health records
- History
- Hospitals
- International
- IT
- Legal
- Mood
- Other candidates
- Politics
- Project management
- Strategy
- The building
- The interim organisation
- The National Archives
- Tynset

After rearranging and combining some themes, the following were found to stand out:

1. Role of politics
2. Interim organisation
3. Two ministries

### **3 Role of politics**

Politics was a particularly important subject and many interviewees shared a great deal of information and insight regarding that. The subsequent chapters describe how the participants discussed politics in connection with the process.

#### **3.1 The requirement to establish a health archive**

According to Ivar Fonnes, the need for a health archive repository had been around for a very long time: "...the health archives were... a challenge – a headache, for the Director General really, from the 80s and onwards. Large quantities, very differing provenance..." (Fonnes, 2020). The Norwegian counties had become responsible for many Norwegian hospitals in 1976 and the county-level archives did not have a specific solution for receiving patient journals. State hospitals could deliver archives, either to the National Archives or to the larger city archives established in the 80s and 90s, but none of these were able to receive health records in any serious way (Fonnes, 2020).

The clear requirement to establish a special archive, however, was a result of the Health Enterprise Act of 2001 which gave rise to the Hospital Reform of 2002, thereby transferring the ownership of county hospitals along with their archives over to the Norwegian state.

The new regional health enterprises were a form of state enterprise whose archives were considered private according to the Archive Act (Fonnes, 2020). Fonnes said: "And then it was very important to get it stated that the health enterprises' archives [were] official." Fonnes then described how the National Archives had managed, after discussions with the Ministry of Health, to get the health enterprise archives legally defined as official archives within the Health Enterprise Act (Fonnes, 2020).

The Hospital Reform eventually led to the NOU, an official study of possible solutions regarding health archive material (Fonnes, 2020; Kolvig, 2020; Salbu, 2019; Vøien, 2020). The suggestions in the NOU from 2006 for a central health archive received good support but not much happened until the summer of 2009 (Kolvig, 2020).

### 3.2 The campaign for location

The campaign for location involved local governments, the national government, party leaders and others in the political framework such as state secretaries (Salbu, 2019; Sandbakken, 2020). One of the interviewees had been a member of a local council and later became involved in politics on a national level.

Prior to his role as state secretary within the Ministry of Local Government, Dag Henrik Sandbakken served as chair of the Tynset local council. At the time he attempted to get another organisation placed in Tynset. The matter had already reached the Norwegian Parliament and Sandbakken arranged a meeting where he was told by a party colleague something he remembered from then on: “*“You realise,” she said, “that the situating of this [organisation], it’s decided within the government.”* So, she said it was too late to suggest a location when the matter is in Parliament” (Sandbakken, 2020).

Bersvend Salbu mentions which channels the health archive campaign went through: “...this here went through political channels. It didn’t go through professional channels because, the professional channels and the National Archives, they wanted to build up their existing state archives.” (Salbu, 2019).

However, Fonnes, a previous Director General said that the National Archives did not really have a say regarding location and that Tynset had not been in the minds of those at the National Archives:

We hadn’t exactly thought of Tynset, eh, to begin with. There were many, after all, many places proposed, [...] DORA in Trondheim was a very good place because there was also an archive environment there from before. But, ehm, when Tynset was chosen we were all-in, then we ran with it. It’s a government decision, we can’t do anything about that either way (Fonnes, 2020).

Salbu reiterated that viewpoints of professional institutions had not been central to the argument regarding place. This, he meant, was because the decision was a political one involving regional development: “It’s politics – pure politics” (Salbu, 2019).

### 3.3 Importance of connections

Dag Henrik Sandbakken discussed the importance of having had the role of state secretary:

Then I was made state secretary in October 2005, within the Ministry of Local Government and [it] serves many functions so to speak - one of them being a coordination of sorts. So, when ministries for a relevant sector write white papers or propositions and those kinds of things, the Ministry of Local Government is always very involved; either because it concerns municipalities - the municipal sector, or regional politics. So already in February 2006 I received a draft for a white paper from the Ministry of Health concerning the establishment of a health archive (Sandbakken, 2020).

Salbu also mentioned the importance of local political influence within the Ministry of Local Government:

“In 2005 Dag Henrik Sandbakken, he was then the council chair in Tynset, he then became state secretary within the Ministry of Local Government in 2005. It [...] was very important that there was one from Tynset there, then” (Salbu, 2019).

Asked whether his role as state secretary had been of great significance for Tynset, Sandbakken said that it had and if he hadn't been there:

...then I wouldn't have caught that in the white paper at that time. Then it would never have been Tynset. It would have been completely impossible. Ehm... we wouldn't ever have managed to catch it in time, unless we had had contacts with someone who, some politician at an early stage. Eh... so it was... to a certain extent a little luck and, [...] I paid attention to it because I had worked on it earlier as council chair and had [it] at the back of my mind all the time, this here is one of the things I must try to get done. Eh... so it was totally crucial, then after that there were many who did a lot of good work. Hadn't we been there, then, the train would have left. Then the health archive would have been [...] situated together with one of the National Archives' sites (Sandbakken, 2020).

### 3.4 Red-green coalition

Changes in the Norwegian political landscape were mentioned. A red-green coalition governed from 2005 and the SV party got the Tynset council chair in 2007 (Salbu, 2019). The influence exerted by the Tynset municipal government on the national political stage was important and Salbu described how being an SV council chair brought attention to the cause.

I became chairman in 2007 and then I was one of, was it 4 or 5 SV council chairs? SV had gone in in 2005... and it was after all the first red-green government eh... and there was, yes, in and of itself, an enthusiasm around that. But I would like to think that [the fact] that I was one of just a few SV municipal chairs [...] had a very positive look to it. When the Centre Party and the Workers' Party had 100-150 municipal chairs it's easier to have your way [as] an SV council chair, at least when you have a pretty good prospect. And I noticed that (Salbu, 2019).

The town's political efforts were very considerable according to Salbu and they needed to employ strategies based on their very small team and lack of budget:

We fought against the mightiest in the country by being, kind of, very smart and we call it, what do they call it again... eh... not warfare, but "asymmetric warfare" if you know what I mean, a little like the guerrilla-principle; we're not the biggest when it comes to force and power and everything, therefore we have to be smart and push exactly where it hurts the most [...] or that which results in our breaking through (Salbu, 2019).

Salbu said: "We didn't go to the professionals, we didn't go to the legislative body, the Parliament, we went to the executive branch, which is the government, so it was a little like, eh... we found out that there were detours – we have to go right at it" (Salbu, 2019).

Tronbøl, who was not involved in the campaign, said: "I believe it was the engagement in Tynset, [...] from the political side that resulted in Tynset being chosen. I think they were the most proactive about getting it" (Tronbøl, 2019).

### **3.5 Other hopefuls**

Tynset wasn't the only contender for the health archive and choosing between different options was a political issue. As discussed by Salbu: "There were many who started working on this from the standpoint of various regional state archives. So then it was very much on the cards that it should be in the Trondheim and DORA area" (Salbu, 2019). He also named Hamar, Kongsberg, Raufoss and Porsanger in Finnmark as options although the last one was an unlikely candidate (Salbu, 2019). Sandbakken also mentioned many contenders and named the Raufoss area, Finnmark and Trondheim (Sandbakken, 2020).

Some of those interviewed mentioned the formidable strength of the Trondheim area from both a professional and political standpoint.

Fonnes said: "And then there was, [...] Trondheim had the DORA complex of course, where they had room already, sort of from day one" (Fonnes, 2020). Aasen mentioned the strong health research and related government institutions in the area (Aasen, 2020) while Salbu talked about how "Trondheim and the environment there is extremely strong" and that this was one of the most formidable powerhouses in Norway with strong political links (Salbu, 2019).

### **3.6 The final decision to place NHA in Tynset**

The final decision to place the NHA in Tynset involved regional politics and a response to a financial crisis at the time (Salbu, 2019; Sandbakken, 2020).

Situating the archive outside large, urban areas was important for some parties and a decentralised placement resonated well with the political ideology of the Centre Party, or as Sandbakken put it: "...and this here was a politically important matter. To show that one could establish a state-run organisation outside the large urban areas" (Sandbakken, 2020). Asked why that was the case, he answered: "Well, because the Centre Party has always been very keen to make use of the whole country and to use state resources to strengthen the whole country" (Sandbakken, 2020).

The financial crisis of 2008 had, according to some interview participants, an important influence on the decision regarding location. Fonnes said that:

...one of the things that triggered the matter, [...] was the financial crisis of 2008, because then there was the need to [...] start official measures which

could result in workplaces – and not least in the [rural] districts. And there had been a lot of lobbying, from Tynset, for instance, and from Trondheim – from DORA and so on. But nothing very solid really happened until right at the end of 2008, that’s to say two and a half years after the NOU was handed in (Fonnes, 2020).

The economic crisis resulted in an initiative to create new jobs. Sandbakken: “And there was wide discussion in the government then. There was pressure to move jobs [...] out of Oslo which is challenging and the government came to a decision about [...] how this could be accomplished [...] specifically with a focus on establishing new jobs” (Sandbakken, 2020). He said:

The financial crisis challenged the commercial sector markedly in parts of the country, including the Raufoss area where there were considerable furloughs in the car parts industry and there was political pressure around compensating for this. So we worked pretty intensely on finding solutions (Sandbakken, 2020).

Salbu also mentioned that “Raufoss then suddenly became a strong contender” (Salbu, 2019).

Sandbakken went on to describe how, in 2009, the government reached an agreement which helped mitigate the problem Raufoss faced, for example, and that this contributed to the decision of placing the Norwegian Health Archive in Tynset (Sandbakken, 2020). Salbu’s account is similar:

The last prelude before we finally get the thing, that’s that Raufoss gets a measure package of ten-million-and-something for restructuring and then I realised that here, now, YES [...] and then it was announced that [...] the Health Archive will be placed in Tynset (Salbu, 2019).

Salbu: “Yes, so we pushed all the right buttons so then it was decided by a [governmental subcommittee] which consists of the party leaders who all were ministers at the time” (Salbu, 2019). After the government reached a conclusion the matter went through Parliament without a hitch, according to Sandbakken:

The situating of this type of workplace is very political, but... after a while there was [...] support for that within the government that this was good politics for the government and [it was] suggested to Parliament that this would be situated in Tynset. And the Parliament, they just confirm these types of decisions so that, ehm, it went very well (Sandbakken, 2020).

### **3.7 Central repository**

According to Fonnes an important development was the decision to scale up the building plans in Tynset to include a central repository which was meant to efficiently solve the National Archives' future capacity needs. The decision was made as a result of a large "KS1 analysis" but this delayed the whole project by at least one year (Fonnes, 2020).

Fonnes described what led to the KS1 study:

There was this sort of initiative from the Ministry of Culture in the beginning of 2010 and... since the [health archive] is being established in Tynset, can't we then do something more with that? Then we went ahead and found out that, we had seen earlier that very much of the budget increase the National Archives received went into new construction. So, if it's possible to find a solution where we can save money with a central repository, then that's of interest. And then we began and we thought it could be done, that the ministry could evaluate that a little bit. No, that turned into a big study, a so-called KS1 study, directed by the Ministry of Culture and the Ministry of Finance and that then lasted from the summer of 2010 to the summer of 2011, August 2011. It then put the whole building project in Tynset on hold (Fonnes, 2020).

### **3.8 Elections in 2013**

A change of government in 2013 resulted in the Health Archive and central repository being taken off budget. Kolvig talked about how the change of government affected the project:

Of course a new government is interested in implementing its own politics as quickly as possible and [...] there had been a suggestion of funds to realise the

idea in Tynset with that large mutual repository. It was very handy for them to pluck out that billion and use it for other things. Ehm... I have to say that it wasn't surprising at all to me, but for very many others it was [a big disappointment] so to speak. Not least for the local community which had already experienced it going a little bit back and forth (Kolvig, 2020).

Salbu mentioned what the new government did:

BUT... then a blue/blue government was elected and it is very peculiar, even if they weren't finished with the KS2 [the finance minister] gives the message to remove EVERYTHING that doesn't need to be there because now they're going to make their mark on the budget. They just take out absolutely everything in order to insert their own things they promised in the election campaign (Salbu, 2019).

He then described how this made the Tynset team furious and how they scrambled to gain support so "there wasn't a single member of Parliament who didn't know about the Norwegian Health Archive in Tynset." Following this the Tynset team directly contacted people across the political spectrum in order to, as Salbu put it "smoke out our enemies" by "saying everything you know. Plain and simple" (Salbu, 2019).

Referring to the period when the archive had been taken off budget, Tom Kolvig said:

Then we went from 2013, yes, then there were years without this being in the budget again. And then the darkness came to Tynset and the Fjellregionen [area] also. Ehm... we had fantastically good teamwork with [Salbu] and later with Merete Myhre Moen who is the current council chair. And Bersvend [Salbu] and I had a lot of meetings, official and unofficial. During that period I spoke with uhh... a larger part of the political environment than I ever thought I would (Kolvig, 2020).

He later added:

I believe people, politicians are honest human beings who wish to do what's best, and everyone I met, and that goes for all parties, they all had the opinion

that the health archive was a good thought, eh... but that we just had to have a little bit of patience. So, the health archive, we were lucky. We got our money, we worked on. But we just needed to show patience (Kolvig, 2020).

### 3.9 Following KS2 analysis

According to Fonnes the building project of the larger, mutual repository needed to undergo a large quality assurance analysis (KS2) since the cost estimates by the Ministry of Culture failed to account for inflation, thereby rising over the threshold of 750 million NOK (Fonnes, 2020). After the KS2 quality assurance report had been delivered there was a resurgence of political activity around the choice of location (Salbu, 2019).

Fonnes: “One of the [arguments] against the building project was [...] the groundwater level, that the storage facilities would lie so low [...] but then Statsbygg said [...] *“this isn’t a problem, we’re used to dealing with this”* but it was used for all its worth” (Fonnes, 2020). Salbu’s comments support how the KS2 report was used to influence the building’s location:

Statsbygg were pretty sour, because arguments other than real arguments were used to be able to twist the case in order to push it away from Tynset for ever and always. And it became implanted into political..., or the political environment used it specifically that it wasn’t possible to build on that plot and that ground wasn’t good enough in Tynset, like, and there weren’t any building engineers that..., but, those kinds of truths were created around this to make the case for construction elsewhere (Salbu, 2019).

Fonnes mentioned the resurgence:

But then Trondheim started moving again. There was lobbying done to get it to DORA after all. And it went so far that [The Standing Committee on Scrutiny and Constitutional Affairs] asked the minister about what kind of contact they had had with DORA. They were critical towards [...] the contact that the Ministry of Culture had with DORA because there had been a decision about building in Tynset (Fonnes, 2020).

Salbu also mentioned that Trondheim had been very challenging with powerful political links towards the end. In that sense he mentioned that the culture minister at the time had to recuse herself in the matter because of her ties with persons within DORA (Salbu, 2019).

## **4 Interim organisation**

The interviewees, particularly those involved in the interim organisation discussed its role and how they felt about the project.

The interim organisation started during the fall of 2010 with the director being hired and grew to a team of ten people in the summer of 2011 (Kolvig, 2020; Salbu, 2019).

When we began in the fall of 2010 there hadn't anything been done. We had money, we got office space [within the National Archives] but nobody had thought very much about this. And the legal framework wasn't there, either, for establishing a Norwegian Health Archive (Kolvig, 2020).

The interim organisation consisted roughly of two groups; an "archival group" and an "IT group" where the former concentrated on the mapping and receiving of physical journals, whereas the latter concentrated on the digital aspect (Kolvig, 2020).

### **4.1 Mapping the hospitals**

Mapping the hospital archives was discussed:

"From the beginning of August 2011 there were 9 of us and then we made an archive group which was to concentrate on mapping [hospital archives] and planning the reception of paper archives" (Kolvig, 2020). Vøien also discussed mapping: "We pretty quickly had to get an overview over the numbers presented in the NOU. That meant we had to get information from various hospitals, public and private – what it was they really had of the physical material" (Vøien, 2020). Vøien then went on to describe that this concerned quantities and type of material and what registries the hospitals had for finding and identifying material. This, they solved by visiting hospitals all around the country (Vøien, 2020) and then repeating the process a few years later where they finished up with some of the larger hospitals (Tronbøl, 2019).

Kolvig pointed to the complex organisational structure of the hospitals and how approaching them was different from the perspective of physical and electronic archives. According to him the archivists were usually found quite far down in the corporate hierarchy, whereas those working in information technology turned out to be further up

within the organisations. He said: “We never managed to work together with both the archival people and the IT people; we have to work with [them] separately” (Kolvig, 2020).

Asked how one goes about mapping hospital archives, Vøien said they gave word well in advance and then sent questionnaires. They asked the hospitals about various things such as how many shelf metres of archives they had, whether they had separated the patient journals of those now deceased from those who were still living. They also enquired about time periods pertaining to the archives and about any registries used to find these archives, as well as how the hospitals kept track of admissions and discharges. On top of that they sought information about where the hospital archives were located (Vøien, 2020). Upon inspection they often saw that the archives were located in areas not designed for archive storage (Vøien, 2020). Vøien also mentioned that the people from the interim organisation had sometimes shown hospital staff how to locate old archive material:

These are, after all, things they hadn’t done for many, many years – maybe never before if they were of a little bit younger generation, but the older generation had good know-how. The younger had maybe never touched these things and were surprised that we managed to find our way like this and see how these archives had really been used (Vøien, 2020).

He added that it was very interesting to see what they had, where it was kept and also a little bit fun for the hospitals to finally make sense of old registries that had lain there since the 30s, 40s and 50s and realise that “Oh, so that’s how it worked!” Both Fonnes and Vøien mentioned the difference between the thickness of patient journals within the hospital archives. The interim organisation discovered that the journals were thinner as compared with the original estimates from the NOU (Fonnes, 2020; Vøien, 2020). According to Vøien the NOU mentions about 50 journals per shelf metre whereas the interim organisation estimated over 100 (Vøien, 2020).

Vøien discussed the development of NHAREG, a system for assisting the hospitals in registering metadata, particularly diagnoses, from patient journals in a standardised way such that accurate lists regarding delivered archives could be produced (Vøien, 2020). “We saw this could become very difficult for the hospitals and it would have been much

simpler if we laid down the structure so it would be similar for all the hospitals” (Vøien, 2020). He also noted the requirement for the system to support the use of different versions of ICD disease codes from earlier time periods to generate accurate disease diagnoses irrespective of when the diagnosis was made (Vøien, 2020).

Kolvig talked about the challenges of receiving electronic patient journals from the hospitals.

We understood quickly that would be challenging since the hospitals don't have the same systems and the hospital systems, after all, aren't made with it mind that you can extract the journals and deliver them. So, and that, that's still a little difficult (Kolvig, 2020).

He went on to mention that the largest providers of hospital IT systems were working together with the Health Archive to create a standard for extraction in order to be able to deliver electronic patient journals to the archive (Kolvig, 2020).

Aasen said that mapping the digitally created material was one of the most important assignments she got when she started. The first step was to find out what it was they wanted to ask about and how to go about getting the information needed (Aasen, 2020). Aasen then described how difficult it was mapping the hospitals for the electronic patient material because the hospitals, due to organisational structure, did not harbour the IT competence needed. The interim organisation thus became reliant on the hospitals' information technology service providers to answer questions, for example, regarding data volume within various systems. The service providers, in turn were not authorised to provide information, which made the path to get information difficult for the team (Aasen, 2020).

## **4.2 The Health Archive Regulation**

Kolvig noted that when he began working on the project the legal prerequisites for founding the Norwegian Health Archive were still lacking.

We were pressed by both the Director General and the Ministry of Culture to speed it up a bit. But, but the answer was quite simple for me in any case – that is, there is no legal authority to establish the Norwegian Health Archive

yet, so first the legal provision needs to be there [...] then we can do it (Kolvig, 2020).

According to Fonnes it was very important early on for the health authorities to have the organisation's provisions grounded in health legislation, not least because of the large amount of health information that was to be stored by the organisation. The National Archives also felt a specific regulation was needed (Fonnes, 2020).

Some interviewees talked about the implications of not having the Health Archive Regulation until rather late in the process. Vøien said: "Yes it was a little frustrating because that regulation certainly took its time" (Vøien, 2020). Both Vøien and Tronbøl expressed how inconvenient it was not to have the regulation to point to when visiting the hospitals (Tronbøl, 2019; Vøien, 2020). Vøien said: "We were out with the hospitals and had to say that we thought it was going to be like this or that. We couldn't insist on anything and use the regulation to hit the table with" (Vøien, 2020). Tronbøl also mentioned that the NOU, while something they could refer to when communicating with the hospitals, was not anything they could use to make demands with (Tronbøl, 2019).

According to Vøien one member of the interim organisation spent a few months working with the Ministry of Health on the Health Archive Regulation. He then kept the rest of the team informed and they commented on the work (Vøien, 2020).

Aasen noted that a lot of work had gone into forming the Health Archive Regulation but that they had also sat and waited for a very long time for it to be adopted. She mentioned that the Health Archive Regulation gives very clear guidelines and until it finally became adopted they didn't know exactly how to proceed (Aasen, 2020). She continued: "And in hindsight it was good that it took time – it was good that we got that maturation, I think. Because then we [...] got a digital health registry as opposed to just, eh... a large archive building" (Aasen, 2020).

Aasen also noted that the delays might in the end have led to more focus being given to the research potential of the registry and to what purpose it should serve (Aasen, 2020).

Kolvig had the same view and said the Health Archive Regulation became much better as a result of it not being in place when the interim organisation began. He said:

Because when we sat down with the Ministry of Health and a couple of hospitals to write the regulation [...] we had a lot of experience, both from mapping electronic patient journals at the hospitals; of physical patient journals. We had made our own little roadmap towards the goal – we had tested digitisation and those kinds of things, so I believe it became a much better regulation than it otherwise would have (Kolvig, 2020).

### **4.3 Digital preservation system**

When asked about what is needed to establish an archive, Bolstad replied:

Today, I think that to establish an archive one first and foremost needs digital competence, one needs to have solutions to preserve the digital and one needs to have solutions, or arrangements to make the data and information available (Bolstad, 2020).

Kolvig mentioned how innovative it was to implement the archive's digital preservation system (DPS): "We were the first, not just in Norway but Scandinavia and maybe more than that, organisation that... defined the requirements for and purchased a system which could preserve digital information for all eternity" (Kolvig, 2020). Aasen, whose main assignments included the DPS project, said some members of the team got an exciting insight into digital preservation systems during a conference abroad. Much later, when planning an official bidding competition for supplying the DPS solution she experienced different views about whether external contractors were needed at all. She said:

Some maybe were of the opinion that the organisation in Tynset should do more themselves, while I felt we needed consultants to assist in this. So it was a large and unknown assignment which I thought few in Tynset would have had experience, eh... in working with. And it would have taken a very long time before one had had a digital system up and running (Aasen, 2020).

She mentioned that before the bidding competition was advertised they had a conference with prospective suppliers where some of the demand specifications were

presented. One of the most important requirements was that the system had to be OAIS compatible (Aasen, 2020).

After the contract had been awarded there was much positivity and the team was confident that the system would fulfil the needs and demands of the archive (Aasen, 2020). Aasen mentioned, however, that despite her efforts the requirements specifications were very generic, owing to the fact that the interim organisation worked with both the National Archives and the National Library on jointly developing specifications. Aasen felt it was a challenge to get certain things pertaining to the archive in Tynset included in the requirements specifications. The HARI, a database for metadata, for example, was almost omitted from the contract and she felt its specifications became very thin (Aasen, 2020). In her view the generic nature of the specifications then potentially led to delays in the final delivery (Aasen, 2020). The work around the requirements specifications resulted, however, in a positive exchange of competence between the three different institutions which was very good and very useful, according to her (Aasen, 2020).

#### **4.4 Working together in the group**

Kolvig said the tone in the group was generally good throughout: “And we had a lot of parties and fun. [...] I don’t think anyone of those who worked there ever drank as much champagne as they did during these ten years in the Health Archive [...] because we celebrated our milestones” (Kolvig, 2020).

Kolvig mentioned pilot projects undertaken by the interim organisation. In order to identify the best methods for working they: “performed many pilot projects to see [...] what kind of scanning equipment we should have, what kind of picture format should we have as a result of scanning, what kind of resolution, that is, a whole lot of such technical things” (Kolvig, 2020).

Developing ways to capture metadata from physical journals was very monotonous and repetitive, according to Kolvig, but that those involved had been very persistent and had done it with a smile (Kolvig, 2020).

Many interviewees mentioned differences between the two groups in the interim organisation (Aasen, 2020; Kolvig, 2020; Vøien, 2020). Kolvig mentioned how it had occasionally been challenging for the two groups to work together:

Getting a group with the same professional background to work together is generally simple. [...] Getting [...] cooperation going between two different professional groups – that has, periodically at least, been a challenge in the tiny interim organisation, just like in other organisations (Kolvig, 2020).

According to him it was difficult for the traditional archival group to accept that the hospitals were supposed to perform much of the preparatory work on the patient journals before delivery to the health archive. He also noted another thing about the treatment of the material that was difficult for the archival group to accept:

When it arrives at the health archive it is digitised and then it is mainly disposed of, the physical material. While they have always, after all, preserved it and that's something fundamental [...] which will change - fundamental views. [...]. That was probably the biggest challenge we had between professional groups, like that (Kolvig, 2020).

Vøien talked about digitisation from the point of view of the archival group. In his view, working in the interim organisation turned out to be somewhat of a “shock” since the first underpinnings of the health archive originate back in the NOU, where there is very little talk of digitisation and scanning (Vøien, 2020). He said:

So, one went into this here with somewhat different... different expectations of receiving much larger quantities of physical archives, in order to also store much larger quantities of physical archives. [...] And then we started pretty early to talk about digitising [...] in order to dispose of the physical material (Vøien, 2020).

Vøien then mentioned that those of them who worked in the archival group and mainly concerned themselves with physical archives had a different opinion of the matter than those who worked on the IT side. He then added that there were some intense

discussions about the matter of digitising but then they saw that this was the most practical way when taking future research into account (Vøien, 2020).

According to Aasen's experience the group had

...very different competencies. Those who worked in the archive group worked a lot on their own and were very concerned with the archival aspect, while we who worked on the technological side were very concerned with that we were eh... supposed to get things digitised and that we eh... should think in terms of a very modern archive. I often felt we maybe talked past each other. The archival group was very... thought in traditional terms, about archives and archivistic rules (Aasen, 2020).

Kolvig said that it wasn't always easy for those in the archival group to participate in discussions around IT and vice versa (Kolvig, 2020). He then said: "The archival group could sometimes feel a bit overrun by the IT people. I've never heard the opposite" (Kolvig, 2020).

According to Aasen the archival group had a hard time understanding all the possibilities around digitisation (Aasen, 2020). She said: "When we digitise we can after all combine information in many different ways," referring to recurring discussions about whether or not the order in which things are created really mattered or not (Aasen, 2020).

Vøien talked about the challenges of "putting physical archives into a structured electronic stall" (Vøien, 2020), or as he said: "Often, when you're working on electronic archives you have... there's a lot of structure in that, eh, and it's easier to extract the information, like, which was not the case with physical archives" (Vøien, 2020). He then said that the group learned from one another and later became closer as the work progressed (Vøien, 2020).

After describing the original difference of opinion around digitising, Vøien said:

...times change, we can't always start by looking back in time – we have to look forward. What does one expect from a new archive in the future? Then those waves calmed down later on – this was a very genuine crowd that worked in the interim organisation (Vøien, 2020).

Later in the interview, Vøien expressed that he nevertheless was still of the opinion that preserving the physical records was preferable to disposing of them after digitising (Vøien, 2020).

#### **4.5 Working with the National Archives**

When asked about whether the health archive had had an effect on the National Archives as a whole, Bolstad replied:

I think it has had, ehm... a positive effect because the health archive was a little bit on the side and also because it had a long eh... inception, that is to say a long project period. The Health Archive had its own focus – the National Archives has a wider focus but I think it's been – they've sharpened themselves on each other, both the National Archives and the Health Archive and there have been sparks between the two, ehm... but I think it's been very positive for the National Archives because the Health Archive is, after all, something that enriches the National Archives. The Health Archive is a part of the National Archives and it... then the National Archives gets additional legs to stand on and an exciting extra project. So I think it's been positive (Bolstad, 2020).

Some people in the interim organisation mentioned the experience of working with the National Archives. When discussing the planned, large central repository that was at one point supposed to house both organisations, Kolvig said a lot of energy had gone into that project and that the work between the two organisations had not been quite optimal, because of the many differences between the two organisations. According to Kolvig there was interest from within the National Archives to wider benefit from the Health Archive's funds which came from within the health ministry's deep pockets (Kolvig, 2020). Kolvig said:

We were always of the opinion that there wasn't an opportunity to work around each other in the sense that everyone at the National Archives could also work with patient journals – it's a question of confidentiality. We won that, so to speak but there were rather tense discussions on that for several

years. We had good support from the Ministry of Health, but many years went by until we broke through regarding the fact that it couldn't be like that. The confidentiality, patient information is one of the most sensitive things about people; it needs to be handled within a limited geographic zone [...] in the building and by a limited number of people. It comes from health legislation; you must know who has access, who views what. That's not something the National Archives paid much thought to and has hardly done since (Kolvig, 2020).

When asked whether the Health Archive needed to be a separate organisation and in its own building, Bolstad replied that, in her opinion, it did not: "You can follow the demands in the regulation without being in your own building and your own organisation," she said (Bolstad, 2020).

Aasen also expressed her views regarding confidentiality. She said: "It [...] was my strong impression that the National Archives was not willing to, eh... separate between public administration cases and patient journals" (Aasen, 2020). She then described how there had been recurrent conflicts with the National Archives regarding the treatment of patient journals and mentioned cases where old journals had been published online:

Eh... it certainly doesn't help whether or not they're old patient journals when they're accessible under full name and that [the person in question] is born insane, and a cripple and deaf, it's things like these that lie open and accessible on the Internet. We took it up with the National Archives many times without them wanting to do anything. It was the same with providing patient archives to genealogists, simply because they were curious, then the material was provided to them (Aasen, 2020).

Aasen then explained that the eternal confidentiality from the Health Personnel Act was what required them to be handled differently from public administration cases (Aasen, 2020). She then pointed out that the Health Archive Regulation regulated how patient archives were handled irrespective of whether it was within the Health Archive or the National Archives, finally saying: "And those discussions were very difficult."

Vøien said: “We were very clear regarding the fact that these really were two different institutions, at least [there were] two different categories of material coming in” (Vøien, 2020).

#### **4.6 Planning, duration and result**

The duration of the project was discussed and some interviewees also talked about planning. Tronbøl said: “When I started I was actually hired for two years, because [the interim organisation] was supposed to be, eh, done in 2014. Then the building was supposed to be ready and operations begun” (Tronbøl, 2019). She also said it was challenging that they didn’t have a clear deadline, adding:

And then it’s been a challenge that we actually had a lot of time. Had a little bit too much time so we were... that is to say decisions weren’t made because we had such ample time. Then we got really busy the last year. And we actually could have avoided that because we knew after all what was to be done. We could have picked up the pace a little earlier, then we could have delivered more [...] to Tynset than was done now (Tronbøl, 2019).

When asked about how the end result had met her expectations she said:

I think we didn’t get as far as we had hoped we would. Felt like we never completely reached the goal. But I think we have done quite a lot but eh... I had hoped we could have done more. Be done with more instructions, routines and such things. Get more of that which was thought out [written down] in a little bit more structured form (Tronbøl, 2019).

In Bolstad’s opinion the founding phase of the Norwegian Health Archive was very long.

...and ten years is way too much time. But, those who did the work [...] did a very good job. They were very dedicated, had a lot of time to stress test things, we had time measurements, how long it took, how can one make the digitisation effective. So I think that they... it took long but it was good work. One certainly can’t have projects lasting ten years today (Bolstad, 2020).

Kolvig mentioned the lack of a project mandate:

We never got a mandate, what is it we are supposed to deliver. We had the NOU and after that there wasn't anything written about what we're meant to do. So we figured it out for ourselves. This is NOT meant as a complaint, but we never got a mandate. But we had, one can say, very good and continuous communication with the Ministry of Health (Kolvig, 2020).

He went on to describe their pleasant cooperation with the Ministry of Health and that they always struck a good tone with the people there who gave them input: “*“Have you thought about this,” “maybe we should do it like this and like that,”* but mostly they said *“this looks very good – continue like that.”* “ (Kolvig, 2020).

Kolvig described how, after having worked for two to three years like this, it would have been perhaps a little misplaced to press the ministry for a project mandate. What the interim organisation did was to have periodic meetings with the ministry and tell them about the goal. They told them about what they had roughly thought to deliver and in that way they made their own mandate and got it accepted (Kolvig, 2020).

Aasen noted how different the end result was from what was discussed in the NOU and that the focus on digitisation “changed the project to a very great extent and has led to the Health Archive Registry being a digital registry and not a physical health archive. And that was very interesting to see” (Aasen, 2020).

Regarding what was delivered, Vøien said:

The building is one thing – that I am very pleased with, it's one of the finest buildings in the National Archives, if not the finest – new and modern and all. And then it's the question of how to do the work – we also had to do with that. We saw almost in some instances that it could be unnecessary to go into micro-details of how to do the work (Vøien, 2020).

He then described how he felt that the future organisation was best suited to finding the most sensible way to figure things out down to the smallest detail based on the preparatory work by the interim organisation (Vøien, 2020).

Aasen told about how in the summer of 2017 she started drawing up process flowcharts based on how she thought the processes in the Health Archive should be if they were going to operate in accordance with the Health Archive Regulation (Aasen, 2020). The team then held a mutual workshop in September 2017 where the flowcharts were discussed:

There was a lot of discussion but the visualisation ensured that we at least knew what was being discussed and what we disagreed on. Hadn't we had any charts then, then we wouldn't have known whether we agreed or whether we were talking about the same thing (Aasen, 2020).

She then said that the charts were a useful tool to identify names and terms they didn't agree on and later they added charts with a value chain and core functions (Aasen, 2020).

When asked whether the long process could be described in terms of phases Aasen mentioned a few different ones related to her role. She described the "mapping phase" which consisted of charting the digital material found. Then they went into the "method-choice" phase in which they agreed an approach guided by the organisational architecture. Thereafter followed an "analysis phase" where they tried to analyse parts of the organisation, creating various diagrams and materials, including a policy document. Lastly they went into the "requirements specifications phase," during which they formed the basis for a competition for prospective providers of the DPS solution. She subsequently added:

In hindsight we can see that it's been like this but it was in no way planned. Because there was little planning in the Norwegian Health Archive. That was something that maybe happened for the first time in... the fall of 2018. And then a lot of us were quite frustrated – and anxious about not having much to hand over to the operating organisation (Aasen, 2020).

When asked about whether the lack of a mandate had played a role there, Aasen replied that the lack of a mandate and the long wait for the Health Archive Regulation must have made it difficult for the top leader of the project: "It wasn't easy, after all, to see what was to be done," then she said that the closest thing they had to a mandate really was

the NOU (Aasen, 2020). Regarding the project as a whole, Kolvig said: “We spent next to ten years on this [...], yes a little under 10 years, and we reached the goal, according to the Ministry of Health, in the time that was decided and under budget. So it was, that way it was a pleasant delivery I could say [...].” (Kolvig, 2020).

## 5 Two ministries

The two ministries of culture and health were elements that came up quite often and were somewhat intertwined with thoughts surrounding the Health Archive's position.

Asked why the Ministry of Health was the one funding the Health Archive, Fonnes replied that "as a matter of fact it was a prerequisite from the Ministry of Culture from the beginning" (Fonnes, 2020). He then mentioned recalling that the Ministry of Culture had already in 2002 been clear towards the Ministry of Health that they saw this need as a result of the Hospital Reform and were therefore of the opinion that the Ministry of Health should fund the organisation (Fonnes, 2020).

Fonnes mentioned the Health Archive's placement:

We were of course interested in having it in the National Archives because it [...] should be [an archival institution] and the Ministry of Health wasn't very interested in getting yet another institution under its wings. So what they considered was to tie it in with the Norwegian Institute of Public Health, [...] it was not [really] a desired solution (Fonnes, 2020).

It was clear, according to Sandbakken, that the National Archives wasn't necessarily on a culture minister's list of priorities when it came to having an easy matter to sell in the media (Sandbakken, 2020). He also expressed his view that the Ministry of Health had been somewhat more involved in the establishment of the Health Archive than the Ministry of Culture had been (Sandbakken, 2020).

Fonnes mentioned it was important for ministries to have control in matters concerning their respective fields. The Ministry of Health therefore had interest in retaining influence in matters regarding health information (Fonnes, 2020). He then said: "So it doesn't help to come and hit the table with the Archive Act..." (Fonnes, 2020).

Regarding the archive's placement between ministries, Bolstad said this wasn't the only institution that needed to adhere to several ministries. In her opinion everyone involved could then learn from one another, and she thought approaches like this could become more common in the future (Bolstad, 2020).

Regarding the organisation's placement within the framework, Sandbakken said:

So it [...] is a challenge that it lies like that in the administration. Realistically speaking, this here isn't an archive, it's really more of a registry and seeing it like that one can say [...] that it's possible to maintain that it should have lain within the Ministry of Health (Sandbakken, 2020).

He then added: "But that's how it is and it would have been a larger political task to [...] place it under the Ministry of Health, but ideally speaking it should have been" (Sandbakken, 2020). That being said, the positive aspect of having the Health Archive's representation within the leader group of the National Archives was mentioned (Bolstad, 2020; Sandbakken, 2020) and Sandbakken implied this influence was one of the upsides of being situated within the Ministry of Culture (Sandbakken, 2020).

### **5.1 Archive vs. health registry**

Interviewees had different views on whether the organisation should be seen as an archive or as a health registry. Salbu mentioned how he and Kolvig, around 2013, had been working together in trying to facilitate the creation of an archival studies program:

At that time [...] the focus was on an "archive." Now the Norwegian Health Archive has maybe moved itself a lot from... there's some archive but it's mostly become a digitisation factory, but back then there was talk of massive [archive] competence when you were going to have a central repository (Salbu, 2019).

Kolvig mentioned that around the change of government in 2013 they had created plans for the Health Archive and had begun thinking about the building, IT systems and about the number of employees required. During that process they realised that they needed "not only" an archive, or as Kolvig put it "in fact we need to make a health registry, that is, structurally and catalog-wise rather like a health registry. And that is also what has been the result" (Kolvig, 2020).

Kolvig also described how pivoting towards something like a health registry affected the project:

To begin with we, of course, meant to digitise and make something other than the NOU had suggested; namely a digital archive. But we called it a digital archive. But in health-language it's called a health registry. And then, when we saw that, then a lot of bricks fell into place because then we could go to the other health registries. There's a law on health registries, the Health Registries Act. Then we could go there and see how they had done it. We had meetings with them to see how they had gone about adhering to the regulations and then our regulation started coming together (Kolvig, 2020).

He also talked about the different nature of the Health Archive Registry, which he described as both dynamic and static. Dynamic in the sense that it continually grows with the addition of new journals, but static in the sense that individual patient journals lie there without receiving new information, unlike the way other more common health registries grow (Kolvig, 2020).

Sandbakken mentioned the registry in connection to changes in the larger plans of a central repository: "And there were certain adjustments made, the archive part has been removed, so to speak. There's maybe not that many who are very sad about that now, but that's the archive as we know it today, or, it's rather a registry (Sandbakken, 2020).

Vøien said that the Health Archive could perhaps be likened to one of the regional state archives, which have "a local administration and serve different sectors in the community" (Vøien, 2020). He then said that what was most distinctive regarding the Health Archive was the special regulation that classifies this as a "Health Archive Registry" (Vøien, 2020).

Referring to terminology in health legislation, Fonnes said "there's something called the Health Archive Registry which is pretty much the whole Health Archive material. And that's terminology that doesn't fit into the archival context. We never wanted to call it that but we just had to, that wasn't something we could do anything about" (Fonnes, 2020).

When asked about whether the Norwegian Health Archive could rather be likened to a health registry than an archive, Fonnes replied: "In my view, no, actually" (Fonnes, 2020). He then described how the journals themselves, scanned from paper constituted the archive. Whereas that which the hospitals are required to create, such as date of

admission and discharge, name, date of birth and other such things lay within something that is archivistically speaking a registry. Fonnes then said: “But in this, in the terminology found in the health legislation and in the regulation for the Norwegian Health Archive, it is clearly a registry. It’s a difference in terminology (Fonnes, 2020).

When asked whether the organisation was rather a registry than an archive, Aasen, without hesitating, said: “Yes.” (Aasen, 2020). Asked why, she replied:

Eh... to begin with, because it IS to a wider extent provisioned in the Health Registries Act than in the Archive Act. In my opinion it’s the organisational [factor] that results in us being an archive, that is, that the Archive Act has [placed] us organisationally within the National Archives, whereas the Health Archive Registry is by definition a health registry and that’s surely what paragraph twelve in the Health Registries Act says (Aasen, 2020).

Bolstad was very clear about the matter when asked whether, due to its “health-orientation,” the Norwegian Health Archive might be better placed under another government entity:

This is an archive, certainly(!) It’s not “health-oriented,” it’s certainly not a health organisation, it’s an organisation that receives archives, that is to say journals from deceased persons. So it’s an archive, an archival institution. There’s a basis for research but that’s why we have archival institutions, to first and foremost get to know what happened [in the past]. [...]. The Health Archive is an archive (Bolstad, 2020).

## **6 Discussion**

When trying to discuss a process with roots dating back twenty years it is important to keep the wider context in mind. The discussion has been divided into a summary of two periods, as they are presented in the paper, and supported by a timeline (appendix 2) which can be used as a point of reference.

Topics are subsequently tied together in an overarching context in a third chapter.

### **6.1 From 2000 to 2010**

Fonnes mentioned that the hospital archives had been a problem for a long time and that the National Archives were aware of the need for a good solution.

The Hospital Reform (no. 2, appendix 2) was the trigger for the whole process, but it wouldn't, at least immediately, have created the need for a health archive if it hadn't been influenced by the National Archives. The reform has its roots in the Health Enterprise Act (Helseforetaksloven, 2001) and that wouldn't have classified hospital archives as official ones, had, as Fonnes describes it, the National Archives not taken up discussions with the Ministry of Health to get them classified as official archives within the new law (no. 1, appendix 2), as opposed to what is usually the case with archives in other types of state enterprises.

The NOU study (2006) then laid the groundwork for further planning (no. 7, appendix 2), and remained a relatively important document throughout parts of the process, despite its becoming outdated due to shifts in technology and focus. This is supported by Aasen, for example, who said the NOU was the closest thing to an official mandate the interim organisation had, and by Tronbøl who described its lacking impact towards the hospitals when negotiating with them.

The NOU quantified the enormous number of physical archives in the hospitals and found that it exceeded the total volume of archives stored within the whole National Archives Services at the time. The NOU's finding of only 10,000 shelf metres of hospital archives in official repositories, while a sizeable 10 kilometres of material, shows how inadequate the existing solutions were in comparison to the total of 200,000 shelf metres in hospital archives. This is further supported by Fonnes, who led the committee, when

he said that neither the county-level archives, nor larger city archives had any way of receiving health records in a serious way.

Although, as Kolvig said, not much happened with the plans from 2006, when the NOU was presented, and until the summer of 2009, when Tynset was chosen (no. 12, appendix 2), many occurrences had taken place along the way, most notably a somewhat frenetic race (nos. 8-10, appendix 2) between prospective hopefuls, within the backdrop of a regional-political response to a global recession (no. 11, appendix 2), as well described by both Salbu and Sandbakken.

Sandbakken, who was in the fortunate position (no. 5, appendix 2) of state secretary had, way back in 2006 and two months prior to the presentation of the NOU, received a draft for a white paper concerning the establishment of a health archive (no. 6, appendix 2).

This allowed the Tynset team to start right away (no. 8, appendix 2) and with a new council chair from the SV party soon thereafter, the team managed to gain attention and charge through to the decision-makers with their proposals. This is quite evident from how Salbu describes their “asymmetric” guerrilla-like tactics, born out of necessity due to their small size. Salbu’s account also shows their burning desire for getting the archive while faced with much stronger competitors, whose advantages can be seen in Fonnes’ comment on DORA’s having room available from day one as well as in Salbu’s, and Aasen’s, words on the Trondheim area’s strong professional and political stature.

The final decision to place the archive in Tynset (no. 12, appendix 2) was spurred on, according to Fonnes, by the response to the financial collapse of 2008 (no. 11, appendix 2). Both Salbu and Sandbakken clearly described how the ensuing difficulties, at least within some industries, as per Salbu’s descriptions, led to a seemingly crisis-driven round of discussions. According to both of them, a solution was found to meet the economical needs of other areas and this then led to a decision in government to establish the Norwegian Health Archive in Tynset (no. 12, appendix 2).

## **6.2 From 2010 to 2020**

A new decade was ripe for action. The budding interim organisation got started (no. 17, appendix 2), and gradually reached its full size within a year (no. 18, appendix 2). The idea to expand the project (no. 15, appendix 2) arose very soon after Tynset was chosen.

Almost surprisingly so. Fonnes said the ideas around a large central repository were first floated in early 2010, which is even before the interim organisation was formed. This shows somewhat how the external environment affected the project of the Norwegian Health Archive from the start. Although this must have seemed like being a good idea at the time, it derailed the project from the outset and when viewed in relation to the events surrounding the KS2 quality assurance (nos. 23, 28; appendix 2) and change of government (no. 26, appendix 2), it was possibly the deciding factor that led to years of delays.

The interim organisation started their work on mapping the hospital archives around the year 2012 (no. 21, appendix 2). Kolvig mentioned that approaching the hospitals with respect to both physical and electronic archives, through archivists and IT people, respectively, had to be done separately due to organisational structure. For the archival group it seemed to be, judging from how Vøien described it, a relatively straightforward albeit large task of going through the hospitals, listing, counting and assessing the situation. Vøien's account shows that the situation was diverse within the hospitals, with archives dating back a long time which ultimately needed to be archived with the same purpose in mind as newer ones. There was also a generational gap between hospital staff, where the younger generation was more unfamiliar with older registries. The development of the software NHAREG, a bridge between the physical and digital for registering metadata in a controlled way, was therefore a good decision, although, as Vøien said, it was difficult to put physical archives into a structured, electronic stall.

Aasen described how, again, the organisational structure of hospitals presented challenges. That way, access to technical information about electronic patient journals was hindered by the fact that much of the IT functions were outsourced, leading to difficulties in retrieving information since those with technical access did not have permission to release the information, and vice versa which corresponds in some ways to Saffady's description of such difficulties in taking inventory of electronic archives (2016, p. 50).

Shortly after the hospital mapping began (no. 21, appendix 2), the KS2 quality analysis was also begun (no. 23, appendix 2), having been necessitated by the fact that the plans for the central repository slid over a certain threshold in budget. Eventually, the

KS2 analysis (Holte Consulting, 2014) spanned a two-year-period (nos. 23, 28; appendix 2) and overlapped a change of government, which put a sudden stop to the building project (no. 26, appendix 2). The results from the KS2 analysis (no. 28, appendix 2) then revealed some technical issues, as both Fonnes and Salbu remarked, and they both noted that the results were used by other interest groups in order to relocate the project to Trondheim. This shows well how drastic the decision was to combine the Health Archive with the central repository. The whole project then went through a long period of uncertainty with respect to final location, ultimately as the result of an initial delay of one year. As seen on the timeline, the Norwegian Parliament (Stortinget, n.d.), in 2013, asked the new government to confirm the placement of the Health Archive and central repository in Tynset (no. 27, appendix 2). The timeline also shows that the project did not get placed on budget until late 2015, for the budget of 2016 (no. 29, appendix 2). At the end of 2015, the official focus on the budget had shifted to digitisation, and the central repository was no longer in the picture for Tynset (nos. 30, 31; appendix 2).

Even though the building project was delayed, the interim organisation had carried on with their work on other fronts. The team had done a lot of very extensive equipment testing and other things to optimise the whole production process, like Kolvig and Bolstad mentioned.

The Health Archive Regulation (Helsearkivforskriften, 2016) gradually took form, inspired by other health registries and then largely written by the interim organisation, guided by their now deeper insight into what it needed to address, as Kolvig pointed out. This was done in cooperation with the Ministry of Health who essentially borrowed one employee from the interim organisation for a few months, as described by Vøien.

A second round of hospital mapping took place around this time (no. 32, appendix 2) and having the regulation partially adopted then (no. 33, appendix 2) was no doubt helpful for the team, although it was not specifically addressed in the interviews regarding the second mapping round.

The timeline suggests that events started happening a little more rapidly after 2016, and in the summer of 2017 construction finally started (no. 35, appendix 2), a full five years after the main contractor had been chosen (no. 22, appendix 2).

It must have been a relief to have the regulation to adhere to, finally, because it gave the organisation a framework on which to base their preparations during the final stages. As Aasen described, in mid-2017, she started working on some process sketches, guided by the Health Archive Regulation (no. 34, appendix 2). This was then taken further by the organisation later in the year (no. 36, appendix 2), providing an effective platform for discussion on important definitions, resulting in additional organisational documents that laid the groundwork for how the archive should function internally.

In the beginning of 2018 the Health Archive Regulation was fully adopted (no. 37, appendix 2) and, in spring, the organisation started preparations for the digital preservation system which, according to Kolvig, was innovative and a novel investment, even in Nordic context (no. 38, appendix 2). As Aasen described, the requirements specifications were done in cooperation between the National Archives Services, the Norwegian Health Archive and the National Library, leading to rather generic specifications that later needed some adjustments to fit the needs of the Health Archive. The competition for the contract (no. 40, appendix 2) then took place over the period of a few months and a winner announced in early 2019 (no. 41, appendix 2).

The Norwegian Health Archive finally opened on 4 June 2019 with a planned number of 58 positions (no. 42, appendix 2).

### **6.3 Tying it together**

*How did the Norwegian Health Archive come to be?*

The Norwegian Health Archive became a legal necessity after the Health Enterprise Act of 2001 (Helseforetaksloven, 2001) and Hospital Reform of 2002 (Braut, 2020), a process that was affected by the National Archives Services in order to get hospital archives classified as official, as described by Fonnes.

Tynset was chosen as the location for the archive after its team led a very dedicated campaign involving several contenders. Ultimately, the town was picked as a location in a political decision during an economic crisis, involving alternative solutions for at least one other contender, as described by Salbu and Sandbakken. Regional politics was an important factor, according to them, and this ultimately helped Tynset due to its rural placement.

The archive building saw great delays due to changes in scope, and because of political changes that caused it to lose funding for years (appendix 2), resulting in frustration and pessimism in Tynset due to the uncertainties associated with the projects.

There were differences of opinion within the interim organisation, especially regarding digitisation. Vøien described the focus on digitisation as a type of shock, seeing that the objective had first revolved around the preservation of physical archives (NOU 2006:5). Kolvig's comments support that this was an issue, as he discussed how digitising, and then disposing of, physical archives was something that presented a challenge to the fundamental views of people coming from a traditional archival background.

Criticism surrounding matters of confidentiality were voiced in some interviews. The matter has been interpreted differently by the two organisations, as clearly seen on the National Archives' website (Arkivverket, 2020d) where the confidentiality of old patient journals does not hinder the National Archives from giving access to them under certain conditions. This is contrary to how the Health Archive operates, as the interviews with Aasen and Kolvig indicate.

When it came to plans on how to approach the project, Kolvig said, stressing it was not at all a complaint, that they didn't get a mandate showing what it was they were supposed to deliver. Instead they figured it out, for themselves, while having "good and continuous communication" with the ministry. Aasen said that the closest thing they had had to a mandate was the NOU and that the lack of a mandate had probably made it difficult to lead the project.

Kolvig described how not having the Health Archive Regulation (Helsearkivforskriften, 2016) from the start resulted in a better regulation. Aasen said that it was positive that the regulation got time to mature, and that this had led to the creation of a digital health registry as opposed to just a large archive building.

Those interviewed had very opposing views on whether the organisation should be considered an archive or a registry. That is worth looking into, perhaps inviting a study on what causes this difference in opinion and whether it has any meaning for current or future archives.

Aasen mentioned a lack of planning until the later stages in the project and Tronbøl said decisions sometimes hadn't been made because they always had so much time,

leading to a hectic final year before the delivery. Kolvig on the other hand said that he was pleased with having, according to the Ministry of Health, as he noted, reached the goal on time and under budget. Bolstad, the Director General commented that the interim organisation had been dedicated and had done a very good job. She also said that today one couldn't have projects lasting this long. That, of course, implies that things perhaps would be done differently today. It is reasonable to assume that, when Kolvig mentioned a timely delivery, it was in the context of plans made somewhere along the way, but not at the start because they, after all, didn't have a mandate and the external environment was volatile and inconducive to a smooth project phase, as the timeline supports (appendix 2).

There is a good amount of conflict in the Health Archive's story; political, as seen all over; professional, as seen in the interim organisation; and organisational, as seen in the upstart organisation's early dealings with its parent-institution. Politics thrives in conflict, that much is certain. But other conflicts evident in the interviews should be viewed in light of our changing environment.

How else could this have been in the interim organisation - with two different groups meeting at a juncture in time where the undisputed importance of the newcomers, (IT), is represented not only in the health research environment (Direktoratet for e-helse, 2018), but also in the future vision (Kulturdepartementet, 2019a) of the venerable National Archives? This, of course is confirmed by Bolstad in that one needs digital competency, first and foremost, to start an archive today.

Kolvig's account of the hospital archive staff being situated in the lower parts of the corporate hierarchy also brings to mind the illustrious past of archivists as members of the upper echelons in ancient societies (Gunnlaugsdóttir, 2006), where they guarded their rulers' interests (Szekely, 2017). This supports that archivists perhaps no longer operate from the place of power they once occupied, possibly in contrast to the gatekeepers of information technology today.

Quite striking is the perseverance shown by the Tynset team as the small town managed to win the archive – not once, but essentially twice; first aided by economic turbulence, as the interviews with Fonnes, Salbu and Sandbakken revealed, and again as

the whole project stood in danger of not becoming a reality for the community, as they also mentioned.

The interim organisation had a tough time getting this project together. In fact, when looking at it from afar and in hindsight, this was likely a tremendously difficult task. As Tronbøl said, she was hired for two years and they planned on finishing the project in 2014. Like Kolvig described, the team started thinking about digitisation early, and it has to be said that this was a step in a most fortunate direction. The only guiding document they had, early on was the NOU (2006) which, through no fault of its creators, had become completely outdated with respect to the external technological environment and the national, digital goals that followed just a few years later in the archive environment (Fonnes, 2017, pp. 410-411).

All these efforts produced an organisation that currently digitises (appendix 1) over two million pages a month; an organisation whose near-term goals, as described for 2020, indicate that it's not just getting started, but is deeply engaged in strategic and operational goals.

Figuring things out like Vøien said was most likely going to be the case.

**And that was how the Norwegian Health Archive came to be.**

*How suitable is the Norwegian Health Archive's placement under the Ministry of Culture?*

The Norwegian Health Archive is placed organisationally in the archive environment. It is, however, regulated through health legislation and also funded by the Ministry of Health. Today, the archive already has access to infrastructure being developed for health registries (Direktoratet for e-helse, 2018) and the archive is a member of their group, set to take active part in the Health Data Programme in the future. That way, it already exists within the health sphere.

Meanwhile, the National Archives Services is well supported by the Ministry of Culture (Kulturdepartementet, 2019a) on the journey towards digitalisation of the Norwegian archival environment, which will soon receive, as Szekely (2017) stated was important for archives in the digital age, a modernised legislation (Kulturdepartementet & Kommunal- og moderniseringsdepartementet, 2019) that will address the needs of future archives and other institutions, making them ready for a new paradigm.

The Ministry of Health has, from the outset, had profound influence on the Norwegian Health Archive. It had a leading role during the era of the interim organisation and today it is instrumental through its funding and support, as well as being the ministry of many future collaborators of the Norwegian Health Archive.

But there doesn't seem to be a need to change anything.

The Health Archive seems to have it all.

Perhaps the Norwegian Health Archive is indeed a new type of archive; necessarily regulated through health legislation but serving the global population archivistically, like a good and modern archive should.

**There's no need to move it. At least not from Tynset.**

## 7 Conclusion

This study has shown how the Norwegian Health Archive came to be, and it has also reached a tentative conclusion regarding the archive's placement within the Norwegian government framework. The answers were attained through qualitative research methods, by interviewing eight individuals who all have knowledge of the organisation's beginnings, as well as by reading external material and using personal experience from within the organisation to guide the work. Thematic analysis allowed emerging themes to be extracted, compared and arranged in such a way that they reveal a whole story, supported by a timeline that helps the reader see two decades' worth of events in a clearer light than before.

Opportunities for further studies include: The Health Archive's digitisation process; whether and how other countries are planning their own health archives, and how the Norwegian Health Archive affects Tynset. Comparing institutions with respect to the archival paradigms described is also a possibility.

Making sense of this long project required a wide perspective as focusing on a single aspect wouldn't have presented the big picture. It's clear that there were many contributing factors in the origins story of the Norwegian Health Archive. It's evident that all of those interviewed played an important role at some point in the archive's beginnings and, of course, many others had great impact not covered here.

The setting of the story is also at a crossroads between two archival paradigms, where one is represented by traditional archival characteristics, whereas the other one – the new one, is all about the internet and related technology; whose influence is bound to change how even this modern health archive will operate in the not-too-distant future.



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Kristinn Leifsson

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## Appendix 1 – Production numbers

Hei Kristinn

Per i dag så har vi skannet 8,8 millioner sider, og 67.000 journaler så langt i 2020. Målet for hele året er 24 millioner sider.

Med vennlig hilsen

Guro Svae  
Fagdirektør  
Norsk helsearkiv  
ARKIVVERKET  
Digitalisering  
mobil: [xxx xx xxx]  
www.norskhelsearkiv.no

Fra: Kristinn Leifsson <[xxxxxx]@arkivverket.no>  
Sendt: torsdag 7. mai 2020 09:28  
Til: Guro Svae <[xxxxxx]@arkivverket.no>  
Emne: Opplysninger om produksjon i DIGI

Hei Guro,

er det mulig for deg å sende meg opplysninger om produksjonen i DIGI i 2020, for bruk i masteroppgaven min? Jeg ville da sitere eposten i oppgaven og sette den i vedlegg.

Antall sider  
Antall journaler  
Tidsspennet av målingen

Mvh. Kristinn

Kristinn Leifsson  
Rådgiver  
Norsk helsearkiv  
ARKIVVERKET  
Brukerkontakt  
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## Appendix 2 – Timeline

Event	Time	Reference
1. Health Enterprise Act - Provides the foundations for the Hospital Reform	2001	(Fonnes, 2020)
2. The Hospital Reform	2002	(Salbu, 2019)
3. Committee appointed to research the need for a Health Archive - Produced the NOU report	December 2004	(Fonnes, 2020)
4. Red-green coalition government formed in Norway	2005	(Salbu, 2019)
5. Former Tynset council chair becomes state secretary	October 2005	(Sandbakken, 2020)
6. State secretary (from Tynset) gets a draft for a white paper regarding the establishment of a health archive	February 2006	(Sandbakken, 2020)
7. NOU presented/delivered	April 2006	(Fonnes, 2020; Kolvig, 2020)
8. Work starts in Tynset - prospect made	2006	(Salbu, 2019)
9. Tynset team has many meetings	2007	(Salbu, 2019)
10. Tynset team has meetings with the parliament	2008	(Salbu, 2019)
11. Economic crash of 2008	2008	(Salbu, 2019)
12. Government decision to start and Tynset chosen	June 2009	(Fonnes, 2020; Kolvig, 2020; Salbu, 2019)
13. Norwegian Health Archive gets placed on the 2010 budget	2009	(Salbu, 2019)
14. First visit to Tynset by Ministry of Health, Ministry of Culture and the National Archives Services	February 2010	(Salbu, 2019)
15. Ideas of expanding the project with a central repository - led to KS1 survey	Early 2010	(Fonnes, 2020)
16. KS1 survey started	Summer 2010	(Fonnes, 2020)
17. Interim organisation formed	Fall 2010	(Kolvig, 2020; Salbu, 2019)
18. Interim organisation fully manned	June 2011	(Salbu, 2019)
19. KS1 survey completed	August 2011	(Fonnes, 2020)
20. Tynset given message that NHA AND central depot will rise there	September 2011	(Fonnes, 2020)
21. Mapping hospital archives	2012	(Tronbøl, 2019)
22. Main contractor chosen	Summer 2012	(Statsbygg, 2012)
23. KS2 survey started	May 2012	(Holte Consulting, 2014, p. 2)

24. First ground broken in Tynset	Fall 2013	(Salbu, 2019)
25. Funding in 2014 budget	2013	(Salbu, 2019)
26. Parliamentary elections - Project set aside by new government	2013	(Kolvig, 2020; Salbu, 2019)
27. Parliament asks the government to confirm the placement of central repository and Norwegian Health Archive in Tynset	December 2013	(Stortinget, n.d.)
28. KS2 survey finished	March 2014	(Holte Consulting, 2014, p. 2)
29. Ministry of Culture says it will report on the follow-up to the decision regarding placement of central repository and Health Archive in Tynset, in state budget for 2015 (due 26 September 2014). Did not report.	August 2014	(Stortinget, n.d.)
30. State budget for 2016 presented. Focus on digitisation.	October 2015	(Fonnes, 2020; Salbu, 2019)
31. Ministry of Culture announces government decision to continue with a simpler and more efficient form of the Health Archive in Tynset. Central repository function not included anymore.	December 2015	(Stortinget, n.d.)
32. Mapping of hospital archives - 2nd pass	2016	(Tronbøl, 2019)
33. Health Archive Regulation partially adopted	March 2016	(Helsearkivforskriften, 2016)
34. Process flowcharts	May 2017	(Aasen, 2020; Arkivverket, 2020b)
35. Start of construction work	June 2017	(Statsbygg, 2017)
36. Workshop on flowcharts and other diagrams	September 2017	(Aasen, 2020)
37. Health Archive Regulation fully adopted	January 2018	(Helsearkivforskriften, 2016)
38. Preparations regarding procurement competition for Digital Preservation System (DPS) finalised	Spring 2018	(Aasen, 2020)
39. Discussion with some prospective vendors of DPS system	May 2018	(Aasen, 2020)
40. Procurement competition announced within an EU procurement portal	June 2018	(Proactis Tenders Limited, 2018)
41. Contract award notice - DPS system	February 2019	(EU-Supply, 2019)
42. The Norwegian Health Archive opens with planned 58 job positions	4 June 2019	(Statsbygg, n.d.)