Uncovering the Unknown Patient. Exploring 19th-Century Patient Registers from Dutch Hospitals

By Nadeche Diepgrond

To cite this article: Diepgrond, N. (2026). Uncovering the Unknown Patient. Exploring 19th-Century Patient Registers from Dutch Hospitals. *Historical Life Course Studies, 16*, 402–419. https://doi.org/10.52024/hlcs26146

HISTORICAL LIFE COURSE STUDIES

Counting the Death.
Sources and Databases on Individual-Level Causes of Death in Historical Societies (1800–1950)

VOLUME 16, SPECIAL ISSUE 8

GUEST EDITORS
Tim Riswick
Michail Raftakis
Grażyna Liczbińska
Elena Crinela Holom

EHPS NETWORK

MISSION STATEMENT

HISTORICAL LIFE COURSE STUDIES

Historical Life Course Studies was established within *European Historical Population Samples Network* (EHPS-Net). The journal is the primary publishing outlet for research involved in the conversion of existing European and non-European large historical demographic databases into a common format, the Intermediate Data Structure, and for studies based on these databases. The journal publishes both methodological and substantive research articles.

Methodological Articles
This section includes methodological articles that describe all forms of data handling involving large historical databases, including extensive descriptions of new or existing databases, syntax, algorithms and extraction programs. Authors are encouraged to share their syntaxes, applications and other forms of software presented in their article, if pertinent.

Research articles
This section includes substantive articles reporting the results of comparative longitudinal studies that are demographic and historical in nature, and that are based on micro-data from large historical databases.

Historical Life Course Studies is a no-fee double-blind, peer-reviewed open-access journal supported by the European Science Foundation, the International Institute of Social History, the European Society of Historical Demography, Radboud University Press, Lund University and HiDO Scientific Research Network Historical Demography. Manuscripts are reviewed by the editors, members of the editorial and scientific boards, and by external reviewers. All journal content is freely available on the internet at hlcs.nl.

Co-Editors-In-Chief:
Joana Maria Pujadas-Mora (Open University of Catalonia & Center for Demographic Studies, Autonomous University of Barcelona)
&
Paul Puschmann (Radboud University)

Associate Editors:
Gabriel Brea-Martinez (Open University of Catalonia & Centre for Economic Demography, Lund University)
&
Wieke Metzlar (Radboud University)

HISTORICAL LIFE COURSE STUDIES
VOLUME 16 (2026), 402–419, published 05-11-2026

Uncovering the Unknown Patient

Exploring 19th-Century Patient Registers from Dutch Hospitals

Nadeche Diepgrond
Radboud University Nijmegen

ABSTRACT

This article explores the use of 19th-century patient registers for historical research, focusing on a case study of several hospitals in the Netherlands. These patient registers offer a unique combination of extensive personal data (e.g., name, age, sex, occupation, marital status, religion) and medical and clinical information (e.g., diagnosis, length of hospitalization, and treatment outcomes). Although these sources hold immense potential, they remain significantly underexplored. This article situates these registers within their historical context and evaluates their availability, structure, reliability, strengths and limitations. Building on experience with constructing and utilizing patient register databases for hospitals in Amsterdam, Groningen and Middelburg, the article explores both the challenges and opportunities involved in digitizing and analyzing data from patient registers. This article shows how these records can be used to broaden our understanding of institutional healthcare, patient demographics, health inequalities, disease patterns, and life courses. By doing so, it aims to demonstrate the value of these underexplored sources for advancing the study of the history of health, medicine and patient care.

Keywords: Hospitals, Patient registers, 19th Century, The Netherlands, Health, Database

e-ISSN: 2352-6343
DOI article: https://doi.org/10.52024/hlcs26146

© 2026, Diepgrond
This open-access work is licensed under a Creative Commons Attribution 4.0 International License, which permits use, reproduction & distribution in any medium for non-commercial purposes, provided the original author(s) and source are given credit. See http://creativecommons.org/licenses/.

1 INTRODUCTION

Traditionally, the history of hospitals focused primarily on healthcare architecture, famous physicians, and important medical breakthroughs. As a result, the patients residing in these institutions were seldom mentioned in historical studies at all (Querido, 1960, p. 97). However, since the 1970s, the rise of the social history of medicine has introduced new perspectives, shifting the focus from doctors and caregivers to the unknown patients (Warner, 1999). Through the use of various types of patient sources historians began to reconstruct the identities and the histories of "ordinary" patients. These sources include, for example, personal narratives (diaries, letters, and memoirs), visual materials (photographs and illustrations), case studies from medical journals and textbooks, as well as various types of hospital records (patient registers, case files, medical records). In this article the focus is on patient registers.

Terms like "patient registers," "patient files," and "patient records" are often used interchangeably, but have distinct definitions. The term "patient record" is more general, while "patient file" and "patient register" refer to specific categories. Patient files refer to collections of documentation relating to an individual patient. These records generally "identify the patient and document, in written and graphic forms, all details about his/her health history, clinical symptoms, diagnostic and treatment procedures, medications and justification for their use, and the follow-up continuity" (Lorkowski & Pokorski, 2022, p. 1). As source material, patient files have already been extensively studied. For instance, Risse and Warner (1992) explored the importance and problems particular to the use of these documents. Similarly, Warner (1999) examined how historians utilize these records, outlining the key questions and insights that have emerged in this area of research. For the Dutch context, Van der Burgh et al. (2022) created an overview of the legal frameworks, ethical considerations, and preservation practices related to patient files.

While patient files offer considerable potential for historical research, they also present significant limitations. Records are often fragmentary and incomplete, scattered across a few hospital archives, and lack consistency in both content and format. Moreover, not every patient had an individual file, which renders these sources inadequate for comprehensive and systematic analyses of entire hospital populations. Medical staff often recorded only a small and selective group of "interesting" and complex cases, resulting in an unrepresentative sample of patients, diseases, and treatments (Granshaw, 1985, p. 78; Risse & Warner, 1992, p. 188). Hospital archives also contain another important category of source material: patient registers, which offer a broader and more organized overview of hospital populations and are among the most valuable sources for historical research (Risse, 1987).

From the 19th century onward, hospitals began systematically maintaining patient administration in Western Europe and North America. In patient registers the admission and dismissal of all hospital patients was documented, providing an overview of hospital populations over time. The registers were first and foremost created for administrative purposes (Horrent et al., 1994, p. 226), documenting extensive personal details of patients, but also contained medical and clinical information such as diagnoses and treatment outcomes. Thus far these registers have received limited attention in historical research and almost never been the object of systematic analysis (Diepgrond & Riswick, 2026). In fact, only a small fraction of the patient registers that have been discovered have actually been researched (Lorkowski & Pokorski, 2022, p. 5).

The aim of this article is to explore the patient registers from a selection of Dutch hospitals — including institutions in Groningen, Amsterdam, and Middelburg — to assess their value and potential for historical research. It provides a critical overview of these sources, evaluating their availability, structure, reliability, advantages and limitations, while also reflecting on the possibilities they present for historical research. This is important as patient registers can reveal valuable insights into experiences of understudied groups and provide new perspectives to advance the study of the history of health, medicine and care.

2 PATIENT ADMINISTRATION: A SHORT HISTORY

Over the past centuries, patient administration has served multiple purposes within hospitals. In this article, the term "patient administration" refers to the practices and systems through which hospitals recorded, managed, and organized information about their patients. It is therefore used as an umbrella term for the various forms of documentation produced within these systems, including patient registers, patient files, and other forms of patient documentation. First, patient administration functioned as a practical tool for institutional management: hospitals used registers to track admissions and discharges,

monitor treatment outcomes, allocate resources, and manage bed availability (Risse & Warner, 1992, p. 204). Second, at the clinical level, physicians relied on patient documentation to follow the course of illness, evaluate treatments and outcomes, and make informed decisions about patient care. Third, hospitals were often supported by charitable organizations, religious institutions, or the state and were expected to validate the use of their resources. Patient registers provided evidence of the activities and achievements of the hospital to justify the institutional budgets and funding.

The earliest examples of patient administration can be found in institutions such as the Charité hospital in Berlin, the University Hospital of Paris, and the New York Hospital, where admission and discharge books were already in use by the late 18th century (Lorkowski & Pokorski, 2022). These registers were typically handwritten and inconsistent — varying in structure, length, and content — lacking uniform standards. Nevertheless, they marked an important step toward more organized and systematic patient administration in later centuries.

In the 19th century, hospitals underwent a significant transformation from charitable asylums providing care for the poor and chronically ill, into true medical centres attracting and supporting an ever-growing part of society (Diepgrond & Riswick, 2026). This transformation of hospitals was crucial for the emergence of a modern patient administration system (Craig, 1989; Craig, 1990; Howell, 1995), and simultaneously contributed to the expansion and increasing complexity of their administrative archives (Horrent et al., 1994, p. 226). In this period hospitals began systematizing, formalizing, and standardizing patient registration. Evidence from hospital archives indicates that similar developments were also taking place in the Netherlands during this period.

- **Systematization.** Whereas earlier patient records were limited to a select number of individual cases, the 19th century marked a shift as doctors began to systematically record information for all hospital patients. This change led to the introduction of universal templates for patient administration, replacing the inconsistent and manually written formats (Lorkowski & Pokorski, 2022, p. 6).
- **Formalization.** Hospital boards began to set clear rules and protocols for maintaining patient administration. These regulations required registers to conform to certain standards of completeness and consistency (Lorkowski & Pokorski, 2022, p. 6). Previously, hospital ledgers and registers were typically customized by hand. By the mid-1800s, however, printed forms enabled the systematic recording of recurring information, facilitating greater consistency and standardization (Craig, 1989, pp. 60–61).
- **Standardization.** The introduction of pre-structured forms made it possible to collect data on admissions, discharges, treatments outcomes, and hospital expenditures. This not only allowed hospitals to document their activities and achievements, but also facilitated comparisons with other institutions. The initiative for standardization was therefore largely driven by growing involvement from public authorities and the state, which created a demand for reliable and comparable statistical reporting (Craig, 1989, pp. 73–74). In the early 20th century, efforts for standardization continued with tools like the International Classification of Diseases (ICD), which improved the monitoring of treatments and the comparison of medical data across hospitals (Lorkowski & Pokorski, 2022, p. 7).

Over the past decades, the transition to digital health marked a pivotal shift in the management of patient information. The advent of electronic health records (EHRs) transformed patient administration from static paper files into dynamic interoperable systems. In several European countries, nationwide eHealth infrastructures are now fully operational. These centralized systems provide comprehensive longitudinal patient administration that is accessible to a range of healthcare providers (Lorkowski & Pokorski, 2022, p. 9).

3 PATIENT REGISTERS AS SOURCES: STRENGHTS AND CHALLENGES

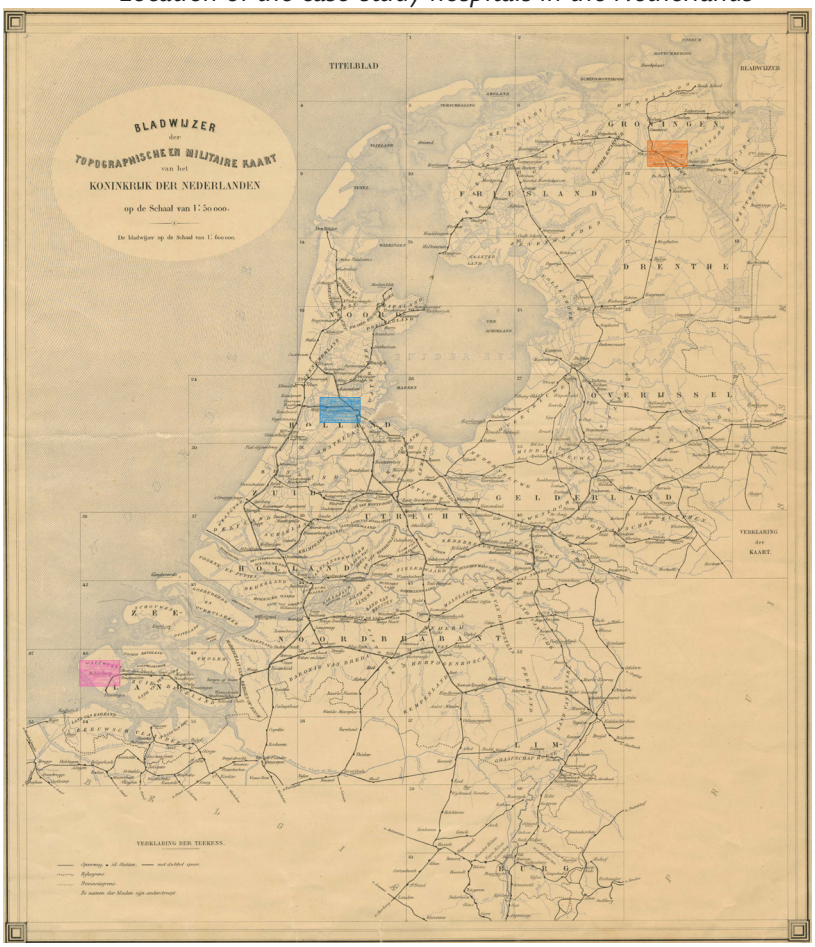
This section provides a critical overview of patient registers as historical sources, offering a detailed description and evaluation of their availability, (re)usability, reliability, strengths, and limitations. The analysis is based on archival research at four Dutch hospitals: the *Gasthuis* in Middelburg, the *Algemeen Provinciaal Stads- en Academisch Ziekenhuis* (APSAZ) in Groningen, and the *Binnengasthuis* and *Buitengasthuis* in Amsterdam. These hospitals were selected as case studies because they represent an optimal variety in status, size, and geographical location, and the hospital archives provide the essential sources: patient registers. Although this article focuses on these four hospitals, similar patient

registers have been preserved for other Dutch hospitals. Table A1 in the appendix lists a comprehensive overview of patient registers available in the archives.

Patient registers contain a wealth of information about the patient's social background, their medical condition, and their stay in the hospital. As such, they represent a hybrid form of documentation — merging administrative and clinical (medical) information — contrary to the more rigid separation between these domains observed in many hospitals of this period (Craig, 1990, p. 21). These registers include information on — for example — the name, sex, age, occupation, religion, marital status, place of birth and address of the patient, as well as dates of admission and dismissal (or death), and diagnosis. Furthermore, information concerning patients' families was also recorded, including the number of children, names of parents, their place of residence, and survival status.

However, the type and amount of information recorded varies over time and across institutions. Patient registers have not always been structured or maintained in a consistent manner (Craig, 1989, p. 63). Unlike for example civil registration or cause-of-death registers, patient registration was not prescribed by law, nor was it regulated by a central (national) authority specifying the content or format of the records. This explains the variations in registration practices across hospitals. For instance, whereas one hospital systematically documented diagnoses for all patients, another began doing so only in the late 19th century, and yet another documented diagnoses for only a limited and random subset of patients. Similarly, while some hospitals recorded a patient's age, others documented the date of birth instead. In other cases, certain types of information — such as hospitalization costs — were documented, while in other hospitals such details were not included in the patient registers. Table A2 in the appendix provides an overview of the available information in the patient registers of the case-study hospitals. Overall, these inconsistencies present challenges for comparative and longitudinal research. Although some issues can be mitigated by deriving certain information (e.g., age) from other variables (e.g., date of birth) or complementing patient registers with other sources.

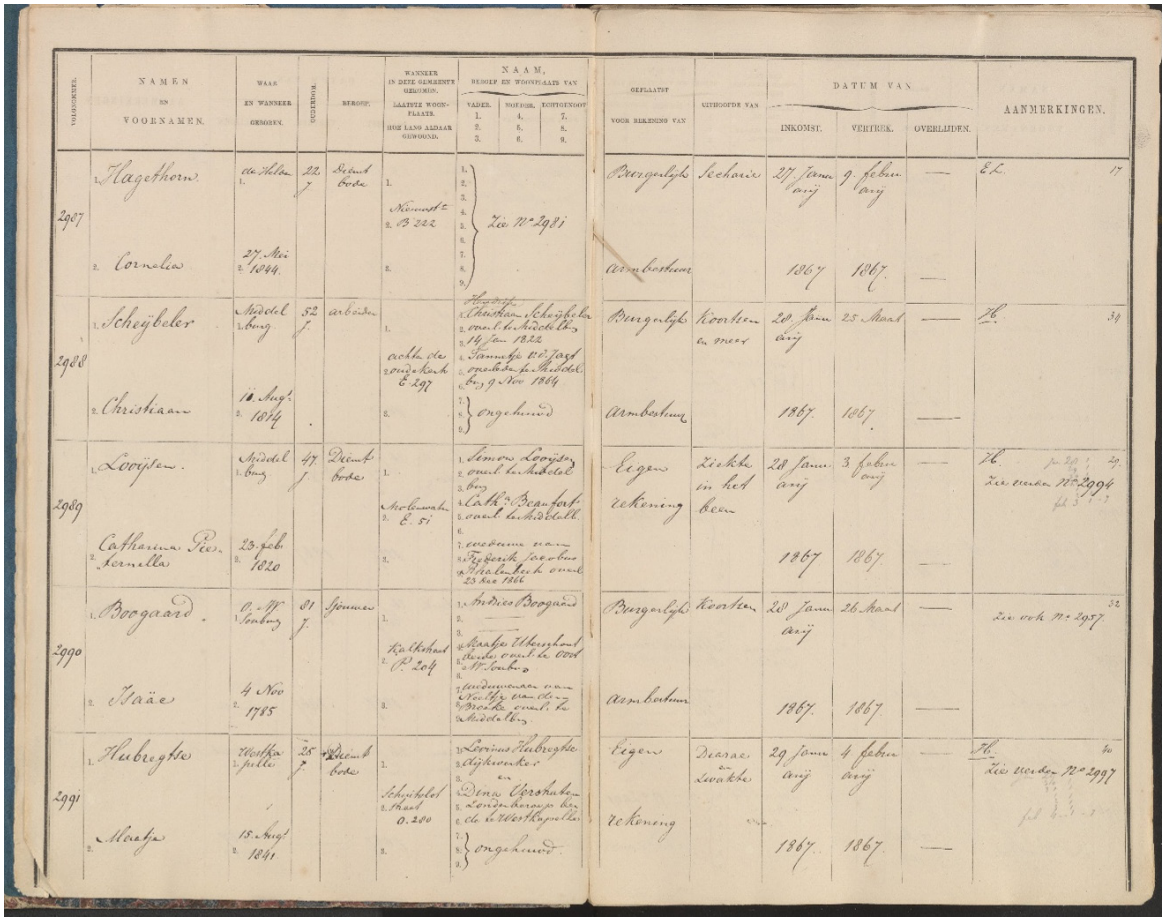
Figure 1 *Location of the case-study hospitals in the Netherlands*



Note: pink = Middelburg, blue = Amsterdam, and orange = Groningen.

Source: Wikimedia Commons.

Figure 2 *Example of patient register from the Gasthuis in Middelburg (1867)*



Column headings (left to right): volgnummer *(registration number);* namen en voornamen *(surname and first names);* waar en wanneer geboren *(born when and where);* ouderdom *(age);* beroep *(occupation);* wanneer in deze gemeente gekomen, laatste woonplaats, hoe lang aldaar gewoond *(date of arrival, previous residence, and duration of residence);* naam, beroep en woonplaats van vader, moeder, echtgenoot *(name, occupation and residence of father, mother, and spouse);* geplaatst voor rekening van *(admitted at the expense of);* uithoofde van *(diagnosis);* datum van inkomst, vertrek, overlijden *(date of admission, discharge, death);* aanmerkingen *(remarks).*

Source: Zeeuws Archief, 24.3 Godshuizen Middelburg, file: 556, Naamlijsten van personen verpleegd in het Gasthuis, 1867.

Ethical and legal concerns regarding patient registers pose additional challenges with regard to sensitive medical data, particularly when dealing with identifiable patient information (Risse & Warner, 1992). As Jonathan Sadowsky and Kylie Smith (2024, p. 2) observe, "looking at patient records, though, is invariably and inevitably an invasion of privacy," given that neither the hospital staff nor patients anticipated historians scrutinizing these files. The patients did not give consent, informed or otherwise. However, the question of whether privacy concerns remain relevant when the patient is (long) dead can be raised. There are valid arguments on both sides of this debate. On one hand, historians such as Barbara Bates (1992) and Jacalyn Duffin (1993) have argued that anonymizing patients while naming physicians can reflect a form of disrespect or dismissal, privileging the physician as historical actor at the expense of the nameless patient. This approach conflicts with efforts to rewrite medical history from the patient's perspective (Porter, 1985). On the other hand, revealing patient names and the associated medical information — even from 19th-century registers — may infringe on family privacy and risks offending descendants (Warner, 1999, p. 110).

In the context of the Netherlands, these concerns have shaped archival policies. Medical information is regarded as sensitive data, leading to ethical and legal debates regarding access, storage, and disposal of patient records. Patient registers are subject to a 110 year non-disclosure period before becoming

accessible through archives: at present registers up to the year 1916 are open access to the public.[1] Nonetheless, exceptions can be made. Researchers can apply for special permission to access non-public archives, typically granted for well-justified scientific inquiries where consultation of restricted materials is essential (van der Burgh et al., 2022, p. 9). Another way for researchers to address these privacy concerns is to avoid focusing on individual patients and their specific medical histories, but instead focus on broader patterns and structures within hospitals and patient populations. A quantitative approach mitigates concerns regarding exposing sensitive personal data, as individuals are analysed within the context of a larger research cohort ("safety in numbers"), reducing the risk of personal identification.

Despite possible access restrictions, patient registers remain a valuable resource for historical research due to their overall availability, accessibility, and (re)usability. A significant strength lies in their substantial preservation across numerous hospitals and extended time periods, which significantly enhances their overall usability (see Table A1 in the Appendix). In general, the registers cover continuous and uninterrupted spans of time without substantial gaps or record losses, allowing for longitudinal analysis. Moreover, the wide availability of this source material also supports comparative and more comprehensive research. For example, it enables comparisons across different institutions, regions, and time periods, making the findings more accurate and reliable. However, it should be acknowledged that patient registers are not available for all historical hospitals in the Netherlands. In some cases, hospital archives remain in the possession of successor institutions of hospitals that have since ceased to exist, and are therefore untraceable (van der Burgh et al., 2022, p. 9). In contrast, the patient registers that are accessible have in general been transferred to local or regional archives, where the original documents are physically available for on-site consultation. In some instances, these registers have also been digitized and made accessible as scanned copies through archival websites. Furthermore, the overall clear structure of the source material (schematic like a table) improves their usability for systematic and large-scale analysis and facilitates straightforward conversion into a database. The accessibility and (re)usability of these sources for historical research will be further enhanced through ongoing efforts to digitize and publish patient register databases (see Section 4).

It is also important to consider the reliability of patient registers as historical sources. Three main factors must be taken into account: (1) the administrative practices, (2) financial purposes, and (3) interpretation of medical information.

First, from an administrative perspective, a positive aspect of the patient registers is their comprehensive coverage of the entire hospital patient population. For each year consistent administration was kept of which patients were already in the hospital at the start of the year, those admitted throughout the year, and those who were discharged or had died in the hospital. There is no evidence to suggest that patients were admitted without documentation and no apparent financial, social, or moral incentives existed to omit registrations. This conclusion is further supported by the meticulous recording of even those admitted while in a *moribund* (near death) state, despite their short-term hospitalization. Furthermore, cross-referencing with other archival sources, such as the annual municipal reports, confirms the reliability of these registers, as the total number of hospital patients aligns with figures derived from patient registers (Diepgrond & Riswick, 2026). Previous research, however, has revealed (small) inconsistencies in the accuracy of personal information recorded by the clerks responsible for patient administration. Variations in spelling and notation styles are particularly common. This is also due to the fact that hospital records differ fundamentally from civil register documents, both in nature and in the regulatory frameworks that govern them. While some inconsistencies — such as those in street names, occupations, diagnoses, or religious affiliations — can often be fixed through standardization, discrepancies in patients' (sur)names pose greater challenges, especially when attempting to link patient registers to other datasets.[2] Furthermore, it is important to recognize that the completeness of patient registers only concerns those who entered the hospital system. These records do not reflect of the overall burden of disease

1 Although these registers are more than a century old, some medical information may remain sensitive. In particular, diagnoses related to mental health, suicide, and hereditary or genetic conditions may carry social stigma or raise concerns for descendants who identify with these conditions. Especially records from the early 20th century may, in some cases, relate to individuals with living relatives.

2 Although it is not yet possible to quantify an exact margin of error — since no systematic linkage between the Dutch Patient Register Database and other sources has yet been attempted — our experience with the digitization of patient registers from multiple Dutch hospitals indicates that patients' (sur)names were not always recorded accurately. Misspellings, phonetic spellings, and name variants occur with some regularity, particularly when contrasted with the more formalised and legally standardized practices of civil registration.

in society, as hospital admission was shaped by factors such as institutional capacity, admission policies (e.g., in some voluntary hospitals in the UK pregnant women and children were excluded; Sigsworth, 1972), patients' ability or willingness to seek hospital care, and the availability of alternative forms of support, such as family care or poor relief. Hospital registers represent a selected patient population. This limitation should be taken into account when interpreting patterns of hospitalization, disease prevalence, and patient characteristics.

Secondly, financial considerations may have influenced the recording practices of patient administration. Hospitals during this period often relied on charitable donations, public funding, or fees from paying patients, which could have created incentives to underreport or omit certain data (e.g., length of hospitalization, unsuccessful treatment outcomes, or hospital deaths) to reduce perceived costs or to attract more funding (Nocera, 2010). For instance, it often remains unclear whether a patient's health improved during hospitalization or if they were discharged as cured, still sick, or deemed incurable. This practice may have involved the early discharge of costly patients whose conditions had not improved, as a way to minimize expenses. However, based on a historical study on the voluntary general hospitals in the English Provinces in the 18th and 19th centuries, "the overall impression is that the hospitals did not usually make false claims" (Cherry, 1980, p. 62). For example, hospitals acknowledged years with relatively low cure rates or periods in which hospital infections increased mortality rates.

Lastly, from a medical perspective, limitations stem from both the historical evolution of medical knowledge and the challenges associated with documenting stigmatized conditions. First of all, diagnoses recorded in the 19th century often do not correspond to modern medical classifications (Imhof, 1977, p. 450; Lammertink, 2023, pp. 75–77; Risse, 1987, p. 178). At the time certain diseases could simply not be identified due to the lack of appropriate diagnostic tools. Moreover, inconsistent medical terminology used across hospitals and by different physicians further complicates analyses of diagnoses, as identical conditions may have been described using different terms, or conversely, a single term may have been applied to multiple distinct conditions. Additionally, illnesses associated with social stigma (such as venereal diseases and mental illnesses) may have been underreported or inaccurately recorded. This can be attributed to both social and institutional pressures: physicians may have sought to protect patients and their families from shame or social exclusion, while hospitals might have wished to avoid reputational damage associated with treating morally or socially disreputable conditions. In some cases, vague or euphemistic terminology may have been used to obscure the true nature of a diagnosis. Additionally, patients themselves may also have hidden or concealed symptoms out of fear of moral judgment. All these factors highlight the need for careful interpretation when studying historical diagnoses in patient registers. To address some of these challenges, over the past decade classification systems have been developed to translate historical medical terminology into standardized categories and enable comparisons across time and space. For example, ICD10h is a research tool that provides a coding system for historical causes of death (Reid et al., 2025).

One of the most important advantages of patient registers as historical sources is their extensive individual-level detail. This marks an important shift from earlier historical studies that primarily relied on aggregated annual statistics (number of admissions, discharges, and deaths) in which patients remained anonymous. Access to individual-level data enables more nuanced and precise analyses, allowing for advanced statistical examination and the identification of patterns that would otherwise remain hidden in aggregated figures. For instance, while an average length of stay may suggest a uniform patient experience, individual-level registers can reveal significant variations, identifying cases where some patients remained hospitalized for exceptionally short or long periods. Moreover, individual-level data in patient registers make it possible to examine questions like: Who was admitted or excluded from hospital care? Were certain demographic or socioeconomic groups more or less likely to be hospitalized? How did certain factors (such as age, sex, occupation) influence treatment outcomes? Did certain groups experience higher mortality rates or better recovery chances? Patient registers are of great potential value for studying the complex interrelations between variables at the individual level (Horrent et al., 1994, p. 227).

Although these registers shed light on previously understudied patient populations, it is essential to acknowledge their institutional nature. The records primarily reflect the priorities and administrative concerns of hospital authorities, rather than the subjective or lived experiences of the patients themselves (Rosenberg, 1977, p. 428) . Patient registers are not personal testimonies, so they offer limited insight into patients' experiences, perceptions, or emotions (Henderson et al., 2007, p. 45; Jacyna, 2004, pp.18–19). Recognizing these limitations is crucial for future research on hospital patients.

4 THE DEVELOPMENT OF A DUTCH PATIENT REGISTER DATABASE

The digitization of patient registers is still in an early stage. Although several historical studies have used patient registers as sources, comprehensive and accessible databases of patient registers remain scarce. This does not imply that historical hospital records have not been digitized. Numerous archives and institutions have made digitized records or archival scans accessible online. However, comprehensive searchable databases that facilitate systematic analysis of large numbers of patient registers remain limited. An important exception is the Historic Hospital Admission Records Project (HHARP), which provides access to 140,213 admission records from four British children's hospitals (1852–1921) (via https://hharp.org/).[3] Another example is London Lives, which includes St Thomas's Hospital admission and discharge registers, but as part of a broader collection of institutional records rather than a dedicated hospital database (via https://www.londonlives.org/). Another example is the ongoing digitization of the patient journals of Copenhagen's Blegdam Hospital (1879–1910), which contain detailed individual-level information on diagnoses, treatments, and outcomes, expanding opportunities to study historical morbidity alongside mortality (Perner & van Wijhe, in press). While existing studies (see Section 5) demonstrate that digitized datasets have been created, these are difficult to locate or access beyond their original research context.

This section outlines the construction of the first Dutch patient register database, which compiles data extracted from patient registers of the aforementioned Dutch hospitals. The source-oriented database is still under development and will be released as an open-access database in the coming years.[4] The intended repository for the database is DataverseNL, a data repository platform to deposit and share research data openly with anyone (https://dataverse.nl/). The database will be made available for researchers, students, and other interested users, facilitating further research on histories of hospitals and patients.

Digitization efforts began in 2020 as part of a master's thesis project (Diepgrond, 2021). The initial focus was on one institution — the *Binnengasthuis* in Amsterdam — using a sampling approach for three selected years (1856, 1876, and 1896). Afterwards, two additional sample years (1866 and 1886) were incorporated to provide a more complete picture of long-term developments during the second half of the 19th century. In the following years, the patient registers of the Amsterdam *Buitengasthuis* were also digitized for the same sample years with 10-year intervals, and two additional sample years (1836 and 1846). This enabled the first comparative research between two major hospitals within the same urban context. In 2024, the project was expanded to include hospitals in other Dutch regions, with the aim of constructing a more comprehensive view of patient populations and institutional healthcare practices across the country.[5] Further digitization efforts began with the *Algemeen Provinciaal Stads- en Academisch Ziekenhuis* (APSAZ) in Groningen and the *Gasthuis* in Middelburg. For the APSAZ, the same 10-year sample intervals were applied to ensure comparability across institutions. In contrast, the yearly number of patients at the Middelburg hospital was relatively low, rendering sampling methods less effective.[6] Hence, patient registers for all available years were digitized. An overview of the digitized sample years is presented in Figure 3. Given the scope of the project, a 10-year sampling strategy was adopted as a practical approach to identify long-term developments across multiple institutions while keeping the digitization process feasible. This approach, however, may overlook short-term fluctuations, such as epidemic outbreaks or economic crises. Nevertheless, the selected sample includes exceptional periods, such as 1866, which coincided with a major cholera outbreak in the Netherlands. Furthermore, in the future, the project aims to expand by including additional sample years and hospitals from other regions of the Netherlands.

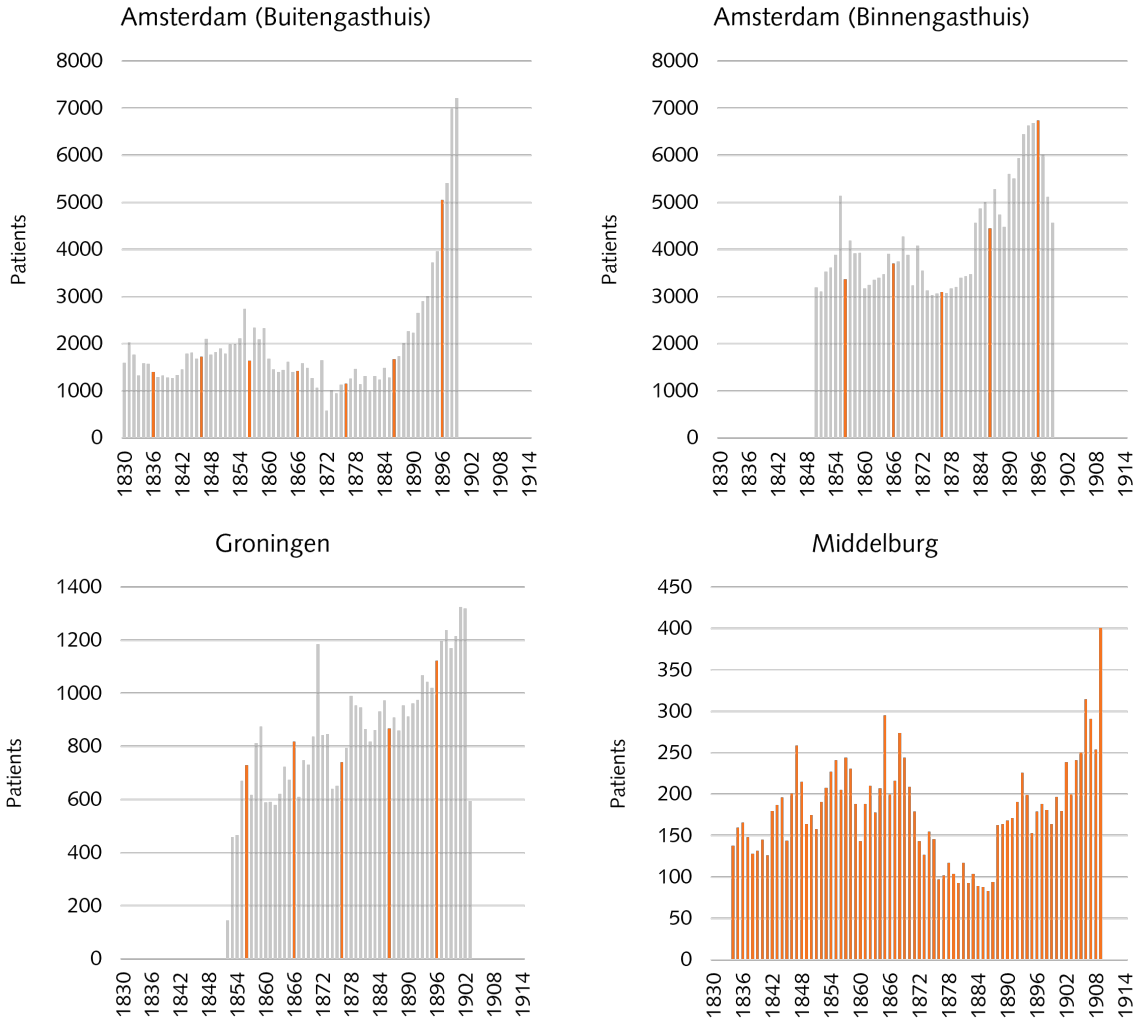
3 The database is freely accessible for online searches, but access to larger datasets for research purposes is subject to approval.

4 The publication format of the database is still under consideration. It remains to be determined whether the data will be made available as one integrated database covering all hospitals, or as separate hospital-specific editions.

5 This further expansion of the database emerged in the context of the start of a PhD project in 2024.

6 Annual patient numbers varied between hospitals due to differences in location, size, status, and reputation of the hospital, as well as the presence or absence of competing hospitals in the surrounding area. For example, hospitals in densely populated or industrial regions generally attracted more patients, while smaller institutions in regional areas admitted a smaller number of patients.

Figure 3 *Overview of number of patients in patient register database at present (1830–1914)*



Coloured bars are digitized in database (sample years). Amsterdam Binnengasthuis (N = 21,372 patients), Amsterdam Buitengasthuis (N = 14,080), Groningen (N = 4,280 patients), Middelburg (N = 13,767 patients).

Note: The digitized information from sample years refer to a sample of all patients who were admitted to the hospital during that specific year, and therefore not those who were still present but had been admitted in previous years. Furthermore, missing data of patients admitted to the hospitals — a significant proportion of the patients admitted in the sample years was not dismissed from the hospital, or deceased, until the following years — was completed by collecting data from the patient registers of subsequent years.

Source: Dutch Patient Register Database (unpublished).

The structured format of historical patient registers — typically consisting of pre-printed tables supplemented with handwritten entries — offers a promising foundation for Handwritten Text Recognition (HTR). However, several challenges complicate this process. First, due to the long temporal range of the sources, handwriting styles vary significantly over time, posing difficulties for consistent automated recognition. Additionally, the layout of the registers evolves throughout the decades, requiring HTR algorithms to repeatedly adapt to new formats. Further complications arise from inconsistent data entry. Information is not always confined to the appropriate fields, with text occasionally spilling into adjacent columns, marginal notes being added, or data being recorded in the wrong column under the wrong heading. The frequent use of abbreviations and repetition symbols (such as quotation marks) adds another layer of complexity. While future advances in HTR and AI might offer improvements, the aforementioned issues hinder automated extraction at this moment. Consequently, the data from the patient registers of the case study hospitals were digitized through a crowdsourcing project with the help of citizen scientists from the Radboud Group Citizen Science Community for the History of Health. Over the past few years, around 20 experienced volunteers contributed to the digitization, a process that I supervised together with Tim Riswick.

In this crowdsourcing project each patient entry was transcribed directly from the original archival sources into a digital database by a citizen scientist (volunteer). Each hospital admission was assigned a unique identification number (ID). However, since individual patients may have been hospitalized multiple times, it is plausible that some individuals appear multiple times under different IDs. To ensure accuracy and consistency in data entry process, volunteers followed detailed instructions and manuals (including examples of the original sources and corresponding transcription), which provided guidance on how to transcribe specific information from the patient registers. Volunteers were instructed to reproduce the data as literally and accurately as possible, without interpretation or modification of information. Throughout the transcription process, volunteers were supported by a team of historians and had access to an online forum where they could seek advice and exchange information, also with other volunteers (via DoodinAmsterdam.nl/forum/). In the next phase, each transcription was independently verified by a second volunteer who cross-checked the entry against the original patient register and corrected any discrepancies. This double-checking procedure was implemented to minimize inaccuracies and ensure the reliability of the database. Following transcription and verification, a standardization process was applied to specific variables in the database — e.g., dates, religious affiliations, ages, occupations, addresses, and diagnoses — in order to reduce variation (e.g., eliminating inconsistent spelling) and improve the comparability and reusability of the data. It is important to state here that all original transcribed values were preserved in the database, with standardized versions stored in separate fields to ensure data integrity.

5 AN OVERVIEW OF RECENT RESEARCH

As mentioned before, the emergence of social history of medicine from the 1970s onwards introduced new perspectives: historians began to reconstruct the identities, experiences, and social backgrounds of hospital patients. However, much of this scholarship has focused predominantly on psychiatric patients (Maeda, 2016; Radkau, 2001; Rosenberg, 1977, p. 428) and is often based on other types of patient sources, such as case files, diaries, and medical journals. As a result, the histories of patients in general hospitals remain underrepresented in the historiography. Addressing this gap requires engaging with other sources that may not contain rich narrative detail, but offer a unique source of comprehensive individual-level data on large patient populations: patient registers. Thus far they have received limited attention in historical research and, in the Dutch context, almost never been the object of systematic analysis (Diepgrond & Riswick, 2026).

Several international studies have demonstrated the potential of patient registers as sources. One of the earliest examples is Arthur Imhof's comparative study (1977), which used 18th-century patient registers from three types of hospitals in Berlin (clinic), Copenhagen (military), and Kongsberg (medieval) to find an answer to the question "The hospital in the 18th century: For whom?" In his analysis, he examined the social and demographic profiles of hospital patients — including their geographic origins, socio-economic status, age, sex, and diagnoses — as well as the duration of hospitalization and mortality outcomes, to conclude that the 18th-century hospital embodied a complex intersection of social status, medical purpose, and evolving attitudes toward care and death. Guenter Risse (1986, 1987) used Edinburgh Infirmary's General Register of Patients (1770–1800) to study how the hospital functioned both as a place of patient care and as a centre for medical teaching in 18th-century Scotland. He emphasized the importance of utilizing new types of records, such as patient registers, to gain deeper insights into the social, medical, and administrative aspects of hospitals over time. In Sweden, Anders Brändström (1988) examined patient registers from Härnösand County Hospital (1814–1864) to investigate patient characteristics, disease profiles, and treatment outcomes. A similar analysis was later conducted by Brändström and Göran Broström (1989) for Sundsvall County Hospital. (1844–1900). Marguerite Dupree (1993) used hospital admission registers from the Glasgow Royal Infirmary as a primary source to investigate the social and familial backgrounds of (relapsing) fever patients in 1871, linking this data with census household information. This study demonstrated both the possibilities and pitfalls in studying hospital patients' backgrounds through linking admission registers with other sources. Isabelle von Bueltzingsloewen's study (1994) challenged the traditional view of hospitals as places of misery in the past by conducting a thorough sociological analysis of hospitalized individuals. Drawing on systematic research of admission registers from German academic hospitals during the first half of the 19th century, the article offers a nuanced understanding of patients' experiences and the social realities within these institutions. At the

same time, Yves Horrent et al. (1994) synthesized research on Belgian university hospitals in Ghent, Liège, and Leuven, emphasizing both the strengths and limitations of hospital and medical records for analysing institutional structures and patient demographics. Signild Vallgårda (1999) used patient registers from Copenhagen's first general hospital (1770–1880) to show that most patients were young, working-class men who lacked alternative care, and argues that hospitalisation, despite its risks, was likely beneficial given the patients' circumstances. Lastly, Luminița Dumănescu and Nicoleta Hegedűs (2025) used the 1877 patient registry from Carolina Hospital in Cluj (Transylvania) to explore the shift to modern medicine, focusing on patients' demographics, illnesses, hospital stays, costs, and payment.

Several studies have focused on specific groups of hospital patients, particularly pregnant women and children. Charles Savona-Ventura (1995) examined hospitalization at the Victoria Hospital in Gozo between 1876 and 1893, showing that admissions were largely limited to impoverished women from lower socioeconomic backgrounds. These women often faced significant medical or obstetric complications, contributing to higher maternal and perinatal mortality rates compared to the general population. Alison Nuttall (2007) investigated the Edinburgh Royal Maternity Hospital (1850–1912), using patient registers to trace its evolution from a refuge for destitute women giving birth into a centre of professional medical care. Furthermore, Paul Cullis and Daniel Young (2013) examined records from the Royal Hospital for Sick Children in Glasgow during the 1890s, revealing how mortality patterns varied across age, gender, length of stay, and travel distance to the children's hospital.

Patient registers have also remained an underexplored source within historical research in the Dutch context. Notable exceptions include the work of Pim Kooij (1986, pp. 265–278), who provided a brief analysis of the socio-economic background and geographical origins of patients admitted to the APSAZ hospital in Groningen between 1870 and 1910. Riswick et al. (2024) examined the social backgrounds of expectant mothers admitted to the *Binnengasthuis* and *Buitengasthuis* hospitals in 19th-century Amsterdam through an analysis of patient registers and patient files. Jessie van Straaten Master's thesis (2024) provides an in-depth study of the *Stadsziekenhuis* in Hoorn between 1867 and 1915, focusing on its institutional role, patient admissions, and mortality patterns to answer who was admitted, who died, and what kind of institution it was. Similarly, Diepgrond and Riswick (2026) used patient registers to examine the population and mortality at Amsterdam's Binnengasthuis in the second half of the 19th century, aiming to provide insight into the development of hospitals and care from a patient's perspective in the Netherlands. Overall, these international and national studies underscore the untapped potential of patient registers as rich, albeit complex, sources for understanding the evolving role of hospitals and the social profiles of their patients across time and space.

6 RESEARCH POSSIBILITIES FOR PATIENT REGISTERS

As Guenter Risse (1987) noted "Hospital archives contain a wide range of source materials, but general registers of patients [patient registers] are among the most valuable sources for historical research." These patient registers offer unique insight into the lives of individuals often absent from traditional historical narratives — such as the poor, working class, migrants, and women — those who left few written traces of their own (Sadowsky & Smith, 2020). This section outlines the research potential of patient registers, highlighting key themes and how they can be studied, demonstrating that these sources allow for diverse approaches: from statistical studies and quantitative approaches to microhistories of individual patients (Risse & Warner, 1992). In addition to the scientific value of this source material, historical patient registers are also important for genealogy because they often contain detailed personal information that can help trace ancestors, fill gaps in civil records, and provide insight into an individual's life and health.

First of all, patient registers provide valuable insight into the development of institutional patient care. One way to study this is by looking at treatment outcomes, such as overall cure, discharge and mortality rates (Risse, 1987; Risse & Warner, 1992). While this type of analysis can also be done using aggregated hospital data, patient registers allow for a more detailed breakdown of these rates, for example by gender, hospital wards, or age groups. These indicators can — for example — help trace the hospital's transformation from "gateways to death" with high mortality rates to "places of healing" with low mortality rates (Diepgrond & Riswick, 2026). Another way to study changes in patient care is by examining how long patients stayed in the hospital. Shifts in the average length of hospitalization can

reflect broader transformations. For example, in earlier times, patients often stayed in the hospital for long periods, indicating that hospitals focused on providing long-term care for the chronically ill or poor. In contrast, in later periods a growing emphasis on acute and short-term curative treatments resulted in average stays became shorter and patient turnover increased (Risse, 1987). Finally, the types of illnesses (diagnostic profiles) recorded in the patient registers can also reveal shifts in patient care over time. For example, a rise in admissions for acute, short-term, and curable conditions (e.g., infections, injuries, or surgical cases) can indicate a transition toward more proactive and interventionist hospital care. This reflects a shift toward maximizing treatment outcome efficiency within shorter timeframes.

Patient registers can also be used to examine the composition and transformation of hospital populations over time. Once systematically standardized and coded, these registers can provide detailed demographic profiles of patients, including age, sex, occupation, and diagnosis (Warner, 1999, p. 103). This data allows historians to reconstruct who was considered a patient, who sought hospital care, and how patterns of hospitalization evolved over time and place (Risse & Warner, 1992). When examining hospital patient populations, it is essential to take into account the factors that influence patient demographics, such as hospital admission policies, the institution's location, size, and status, as well as the financial mechanisms available to patients for covering the cost of hospitalization. For instance, admission policies sometimes excluded pregnant patients or stigmatized patients, hospitals in overcrowded cities might see more patients admitted with infectious diseases, and financial systems influenced who could afford treatment and who qualified for financial support. Overall, patterns and shifts in patient populations can uncover broader societal dynamics, including (inequalities in) healthcare access, trust in medical institutions, and shifting attitudes toward institutional care.

Patient registers provide a unique opportunity to explore the historical roots of health inequalities and the broader determinants of health as well: "Because patient records document the behaviour of physicians dealing with large and varied patient populations, they offer singularly rich access to knowledge about how such variables as ethnicity, class, gender and geography shaped clinical behaviour" (Risse & Warner, 1992, p. 197). By analysing these variables and factors it becomes possible to uncover how individual characteristics influenced access to hospital care, diagnostics, treatments, and health outcomes. This allows us to ask important questions, such as how did gender affect the likelihood of hospitalization? Did patients from lower socioeconomic backgrounds experience different treatments and outcomes than wealthier individuals? Were diagnostics influenced by the ethnic or religious identity of patients? Through information on hospitalization costs and who paid for care, we can also study the financial burden of healthcare, funding mechanisms, and the effect of public versus private payment on hospitalization. The patient registers hold immense potential to contribute to our understanding of historical healthcare disparities and the long-term development of inequalities in healthcare access and quality of medical care.

Patient registers are a valuable source for reconstructing historical disease patterns and tracking the prevalence and distribution of specific diagnoses over time. For example, historians can use these registers to identify seasonal trends in diseases, such as higher rates of respiratory infections like influenza during the winter months, or increased cases of gastrointestinal illnesses in the summer (Risse, 1987). By analysing admission dates alongside diagnoses, researchers can observe how certain diseases peaked during specific times of the year, revealing seasonal patterns. Moreover, patient registers enable epidemiological research: the study of how often diseases occur in different groups of people and why. This helps us understand long-term changes in disease incidence and occurrence. For example, by examining patient registers, researchers can track how diseases like tuberculosis affected certain age groups, occupations, or social classes more than others. In general, patient registers shift the focus from mortality (causes-of-death) to morbidity (diagnoses and diseases), which can generate new insights. For instance, these registers allow us to examine the characteristics of those who were infected with infectious diseases but survived, shedding light on factors that may have contributed to recovery such as immunity, medical treatments, and overall living conditions.

Using patient registers, researchers can build more complete and comprehensive life-course histories, revealing how individuals moved through different stages of life in relation to health, family, and social position. These registers often contain information on marital status, number of children, and the survival status and residence of patients' parents, providing insight into family composition, household structures, and support networks. This data makes it possible to study how family structures and the presence or absence of family support influenced hospitalization. For example, were people without nearby or surviving relatives more likely to be admitted? Who stepped in to provide care when a family member became ill? And how did a parent's hospitalization affect the well-being and care of children left at

home? Furthermore, by linking patient registers to additional sources, such as vital event registers (birth, marriage, death) or datasets as Historical Sample of the Netherlands (HSN) or LINKS, it is possible to reconstruct more complete life histories. This allows researchers to examine how health and hospitalization influenced major life events — marriage, childbirth or changes in occupation — and vice versa: how life course events, like widowhood or the loss of a parent, might have impacted vulnerability to sickness and hospitalization. For example, the death of a parent in a large working-class family could precede the hospitalization of a child, suggesting how loss of household income or maternal care shaped their early life experiences and need for institutional care. Or consider a young unmarried woman admitted to the maternity ward that might not appear in later marriage records, suggesting she may have faced social stigma or economic hardship that impacted her chances of marrying. Ultimately, patient registers can help us reconstruct the complex ways in which health and family intertwined to shape individual life paths.

7 CONCLUSION

This article has demonstrated the significant potential of historical patient registers as valuable, yet underutilized, sources for studying the history of health and medicine. While traditional hospital historiography focused on institutions, architecture, and elite medical figures, patient registers allow for a shift in perspective: one that centres the lives of the "ordinary" and often overlooked patients. Patient registers are important historical sources that combine extensive administrative and medical data, offering detailed insights into the social backgrounds, health conditions, and hospital experiences of patients.

Despite certain limitations — such as administrative inconsistencies, historical medical terminology, and ethical concerns related to privacy — patient registers remain valuable due to their availability, long-term continuity, and individual-level and detailed structure. As the case studies from Dutch hospitals in Groningen, Amsterdam, and Middelburg have shown, these sources enable researchers to explore diverse topics: institutional care practices, patient demographics, healthcare inequalities, disease patterns and life courses.

The development of a Dutch patient register database marks an important step toward unlocking the broader research potential of these sources. As digitization progresses and access improves, patient registers will allow scholars to conduct large-scale and comparative studies across regions and time periods, while also enabling genealogical research.

ACKNOWLEDGEMENTS

I would like to thank my supervisors Tim Riswick, Sanne Muurling, and Jan Kok (Radboud University Nijmegen) for their guidance and feedback throughout the development of this research paper. I am also grateful for the help of the citizen scientists from the Radboud Group Citizen Science Community for the History of Health for their ongoing efforts over the past years in digitizing these patient registers. I would also like to thank the anonymous reviewers for their valuable comments and suggestions, which helped improve the quality of this article.

REFERENCES

Bates, B. (1992). *Bargaining for life: A social history of tuberculosis, 1876–1938*. University of Pennsylvania Press.

Brändström, A. (1988). The silent sick. Life-histories of the 19th century Swedish hospital patients. In A. Brändström & L.-G. Tedebrand (Eds.), *Society, health and population during the demographic transition* (pp. 343–368). Almqvist and Wiksell International. https://umu.diva-portal.org/smash/record.jsf?pid=diva2%3A1111583&dswid=7591

Brändström, A., & Broström, G. (1989). Life-histories for nineteenth-century Swedish hospital patients: Chances of survival. *Journal of Family History*, *14*(3), 195–209. https://doi.org/10.1177/036319908901400302

Cherry, S. (1980). The hospitals and population growth: Part 1 The Voluntary General Hospitals, mortality and local populations in the English provinces in the eighteenth and nineteenth centuries. *Population Studies*, *34*(1), 59–75. https://doi.org/10.2307/2173695

Craig, B. L. (1989). Hospital records and record-keeping, c. 1850–c. 1950, Part I: The development of records in hospitals. *Archivaria*, *29*, 57–87. https://archivaria.ca/index.php/archivaria/article/view/11609

Craig, B. L. (1990). Hospital records and record-keeping, c. 1850–c. 1950, Part II: The development of record-keeping in hospitals. *Archivaria*, *30*, 21–38. https://archivaria.ca/index.php/archivaria/article/view/11660

Cullis, P. S., & Young, D. G. (2013). Nineteenth century mortality at the Royal Hospital for Sick Children, Glasgow. *Scottish Medical Journal*, *58*(3), 182–187. https://doi.org/10.1177/0036933013496937

Diepgrond, N. (2021). *Een poort naar de dood en verblijfplaats van 'ongelukkigen'?. Een onderzoek naar de patiënten en sterfte in het Amsterdamse Binnengasthuis in de tweede helft van de negentiende eeuw* [A gateway to death and abode for the 'unfortunate'? A study into the patients and mortality in the Amsterdam Binnengasthuis in the second half of the 19th century] [Unpublished master's thesis]. Radboud University Nijmegen.

Diepgrond, N., & Riswick, T. (2026). From sick bed to death bed? Patient composition and mortality in the Amsterdam Binnengasthuis, 1856–1896. *Social History of Medicine*, *39*(1), 206–234. https://doi.org/10.1093/shm/hkaf046

Duffin, J. (1993). *Langstaff: A nineteenth-century medical life*. University of Toronto Press.

Dumănescu, L., & Hegedűs, N. (2025). From the patient registry to the patient history: Individuals and diseases in a Transylvanian hospital in 1877. *Social History of Medicine,* hkaf027. https://doi.org/10.1093/shm/hkaf027

Dupree, M. W. (1993). Family care and hospital care: The 'sick poor' in nineteenth-century Glasgow. *Social History of Medicine*, *6*(2), 195–211. https://doi.org/10.1093/shm/6.2.195

Granshaw, L. (1985). *St Mark's Hospital, London: A social history of a specialist hospital*. Oxford University Press.

Henderson, J., Horden, P., & Pastore, A. (2007). Introduction. The world of the hospital: Comparisons and continuties. In J. Henderson, P. Horden, & A. Pastore (Eds.), *The impact of hospitals, 300–2000* (pp. 15–56). Peter Lang.

Maeda, H. (2016). The discovery of mental hospital patients: A historical epidemiology of institutionalization in the American North, 1880–1920. *Social Science History*, *40*(3), 463–490. https://doi.org/10.1017/ssh.2016.14

Horrent, Y., Oris, M., Servais, P., & Velle, K. (1994). La population des grands hôpitaux universitaires belges du début du XIXe à la fin du XXe siècle [The patient population of Belgium's major university hospitals from the early nineteenth to the late twentieth century]. *Annales de Démographie Historique*, *1994*, 217–236. https://doi.org/10.3406/adh.1994.1869

Howell, J. D. (1995). *Technology in the hospital: Transforming patient care in the early twentieth century*. Johns Hopkins University Press.

Imhof, A. E. (1977). The hospital in the 18th century: For whom? The Charite Hospital in Berlin, the Navy Hospital in Copenhagen, the Kongsberg Hospital in Norway. *Journal of Social History*, *10*(4), 448–470. https://doi.org/10.1353/jsh/10.4.448

Jacyna, L. S. (2004). The localization of disease. In D. Brunton (Ed.), *Medicine transformed: Health, disease and society in Europe 1800–1930* (pp. 1–30). Manchester University Press.

Kooij, P. (1986). *Groningen 1870–1914: Sociale verandering en ecnonomische ontwikkeling in een regionaal centrum* [Groningen 1870–1914: Social change and economic development in a regional centre] [Doctoral thesis, University of Groningen]. https://hdl.handle.net/11370/837be39e-42ce-48eb-a162-131bfd0187a2

Lammertink, O. (2023). *De opkomst van het moderne ziektepatroon? Doodsoorzaken, degeneratieve aandoeningen en sociale ongelijkheid in Amsterdam, 1854–1926* [The rise of the modern disease pattern? Causes of death, degenerative diseases and social inequality in Amsterdam, 1854–1926] [Doctoral dissertation, Radboud University Nijmegen]. https://repository.ubn.ru.nl/handle/2066/292090

Lorkowski, J., & Pokorski, M. (2022). Medical records: A historical narrative. *Biomedicines*, *10*(10), Article 2594. https://doi.org/10.3390/biomedicines10102594

Nocera, A. (2010). Performance-based hospital funding: A reform tool or an incentive for fraud? *Medical Journal of Australia*, *192*(4), 222–224. https://doi.org/10.5694/j.1326-5377.2010.tb03483.x

Nuttall, A. (2007). 'Because of poverty brought into hospital: ...' A casenote-based analysis of the changing role of the Edinburgh Royal Maternity Hospital, 1850–1912. *Social History of Medicine*, *20*(2), 263–280. https://doi.org/10.1093/shm/hkm042

Perner, M. V., & van Wijhe, M. (in press). Hospital records as a source on morbidity and mortality in the past. Copenhagen's epidemic hospital and its patient journals, 1879–1910. *Historical Life Course Studies*, *16*.

Porter, R. (1985). The patient's view: Doing medical history from below. *Theory and Society*, *14*(2), 175–198. http://www.jstor.org/stable/657089

Querido, A. (1960). *Godshuizen en Gasthuizen* [Almshouses and Hospices]. Em. Querido's Uitgeversmaatschappij.

Radkau, J. (2001). The neurasthenic experience in Imperial Germany: Expeditions into patient records and side-looks upon general history. In M. Gijswijt-Hofstra & R. Porter (Eds.), *Cultures of neurasthenia. From Beard to the First World War* (pp. 199–218). Brill.

Reid, A., Garrett, E., Hiltunen Maltesdotter, M., & Murkens, M. (2025). *Historic cause of death coding and classification scheme for individual-level causes of death - Manual*. Apollo - University of Cambridge Repository. https://doi.org/10.17863/CAM.109960.2

Risse, G. B. (1986). *Hospital life in Enlightenment Scotland. Care and teaching at the Royal Infirmary of Edinburgh*. Cambridge University Press.

Risse, G. B. (1987). Hospital history: New sources and methods. In R. Porter & A. Wear (Eds.), *Problems and methods in the history of medicine* (pp. 175–203). Routledge.

Risse, G. B., & Warner, J. H. (1992). Reconstructing clinical activities: Patient records in medical history. *Social History of Medicine*, *5*(2), 183–205. https://doi.org/10.1093/shm/5.2.183

Riswick, T., Murkens, M., & Diepgrond, N. (2024). Aanstaande moeders in nood. Patiënten op de kraam- en gynaecologieafdelingen van het Amsterdamse Binnen- en Buitengasthuis, 1856–1896 [Mothers-to-be in distress. Patients in the maternity and gynaecology wards of Amsterdam's Binnen- en Buitengasthuis, 1856–1896]. In A. Leemans & C. van Tilburg (Eds.), *Geschiedenis van de geboorteregeling en familieplanning* (Cahiers Geschiedenis van de Geneeskunde en Gezondheidszorg). Antwerpen: Garant.

Rosenberg, C. E. (1977). And heal the sick: The hospital and the patient in the 19th century America. *Journal of Social History*, *10*(4), 428–447. https://doi.org/10.1353/jsh/10.4.428

Sadowsky, J., & Smith, K. (2024). Reflections on the use of patient records: Privacy, ethics, and reparations in the history of psychiatry. *Journal of the History of the Behavioral Sciences*, *60*(1), Article e22260. https://doi.org/10.1002/jhbs.22260

Savona-Ventura, C. (1995). A maternity unit in Gozo a hundred years ago. *Maltese Medical Journal*, *7*(1), 55–61. https://www.um.edu.mt/library/oar//handle/123456789/680

Sigsworth, E. M. (1972). Gateway to death? Hospitals and mortality, 1700–1850. In P. Mathias (Ed.), *Science and Society 1600–1900* (pp. 97–110). Cambridge University Press.

Vallgårda, S. (1999). Who went to a general hospital in the eighteenth and nineteenth centuries in Copenhagen? *European Journal of Public Health*, *9*(2), 97–102. https://doi.org/10.1093/eurpub/9.2.97

van der Burgh, E., Bolt, T., & Futselaar, R. (2022). *Patiëntendossiers en privacy in de medische geschiedschrijving* [Patient files and privacy in medical historiography]. History, Health & Healing, Stichting Historia Medicinae, Erasmus University and Erasmus MC.

van Straaten, J. (2024). *The Stadsziekenhuis and its patients. Patterns in patient admission and mortality between 1867 and 1915 in Hoorn* [Unpublished master's thesis]. Leiden University.

von Bueltzingsloewen, I. (1994). Pour une sociologie des populations hospitalisées: Le recours à l'hôpital dans l'Allemagne du premier XIXe siècle [Towards a sociology of hospitalised populations: The use of hospitals in early nineteenth-century Germany]. *Annales de démographie historique*, *1994*, 303–316. https://doi.org/10.3406/adh.1994.1874

Warner, J. H. (1999). The use of patient records by historians — Patterns, possibilities and perplexities. *Health and History*, *1*(2/3), 101–111. https://doi.org/10.2307/40111336

APPENDIX

Table A1 *Overview of archival patient registers in the Netherlands*

Municipality	Institution	Period	Archive	Register
Alkmaar	Mannen- en Vrouwengast en Proveniershuis (later: Stadsziekenhuis)	1833–1929	Regionaal Archief Alkmaar	0046
Amersfoort	Sint Elisabeth Gasthuis/ Ziekenhuis	1776–1912	Archief Eemland	0102
Amsterdam	Binnengasthuis	1850–1899	Stadsarchief Amsterdam	5268
Amsterdam	Buitengasthuis (later: Wilhelminagasthuis)	1818–1899	Stadsarchief Amsterdam	5268
Amsterdam	Emma Kinderziekenhuis	1874–1970	Stadsarchief Amsterdam	1063
Amsterdam	Vereniging voor Ziekenverpleging (Prinsengrachtziekenhuis)	1917–1938	Stadsarchief Amsterdam	30117
Arnhem	St. Elisabeths Gasthuis	1900–1949	Gelders Archief	2394
Breda	Diaconessenhuis	1914–1954	Stadsarchief Breda	ARC0390
Breda	Sint Laurensziekenhuis	1956–1960	Stadsarchief Breda	ARC0465
Delft	Oude en Nieuwe Gasthuis	1736–1885	Stadsarchief Delft	97
Den Haag	Gemeenteziekenhuis	1954–1955	Haags Gemeentearchief	0424-01
Den Haag	Oogziekenhuis	1884–1980	Haags Gemeentearchief	0687-01
Deventer	Sint Geertruiden Gasthuis	1920–1985	Collectie Overijssel	0794
Deventer	Sint Jozef Ziekenhuis	1875–1953	Collectie Overijssel	0950
Dordrecht	(Grote) Gast- of Ziekenhuis	1816–1954	Regionaal Archief Dordrecht	21B
Dordrecht	Kinderziekenhuis	1915–1920	Regionaal Archief Dordrecht	363
Gouda	Sint Catharinagasthuis	1699–1938	Streekarchief Midden-Holland	0074
Groningen	Diakonessenhuis	1919–1931	Groninger Archieven	1741
Groningen	Rooms Katholiek Ziekenhuis	1941–1952	Groninger Archieven	1741
Groningen	Algemeen Provinciaal Stads- en Academisch Ziekenhuis	1852–1903	Groninger Archieven	53
Haarlem	Sint Elisabeths Gasthuis/ Groote Gasthuis	1677–1854	Noord-Hollands Archief	3305
's-Hertogenbosch	Groot Ziekengasthuis	1778–1811	Erfgoed 's-Hertogenbosch	0393
's-Hertogenbosch	Stichting Het Protestants Ziekenhuis	1915–1984	Erfgoed 's-Hertogenbosch	0436
Hoorn	Stadsziekenhuis	1867–1890 1900–1919	Westfries Archief	0415
Hoorn	St. Jansgasthuis	1913–1938	Westfries Archief	0543
Leeuwarden	Sint Bonifatius Hospitaal	1883–1920	Historisch Centrum Leeuwarden	1275
Leeuwarden	Diaconessenhuis	1886–1982	Historisch Centrum Leeuwarden	1281
Leiden	Caeciliagasthuis	1825–1875	Erfgoed Leiden en Omstreken	0504
Leiden	Vereenigde Gast- en Leprooshuizen	1848–1873	Erfgoed Leiden en Omstreken	0504
Lochem	Vereniging Het Ziekenhuis	1890–1915	Stadsarchief Zutphen	1030
Maastricht	Calvariënberg	1815–1920	Historisch Centrum Limburg	20.129A

Municipality	Institution	Period	Archive	Register
Middelburg	Gasthuis	1814–1928	Zeeuws Archief	24.3
Nijmegen	Oud Burgeren Gasthuis	1821–1958	Regionaal Archief Nijmegen	1675
Rotterdam	Sint Franciscus Gasthuis	1901–1956	Stadsarchief Rotterdam	687
Rotterdam	Stedelijk Gasthuis aan de Hoogstraat	1732–1851	Stadsarchief Rotterdam	93
Tilburg	Sint Elizabethziekenhuis	1855–1945	Regionaal Archief Tilburg	676
Utrecht	Algemeen Ziekenhuis	1872–1925	Het Utrechts Archief	810
Utrecht	Wilhelmina Kinderziekenhuis	1888–1966	Het Utrechts Archief	1130
Vlissingen	Sint Joseph Ziekenhuis	1905–1970	Zeeuws Archief	7245
Zutphen	Algemeen Ziekenhuis	1889–1955	Stadsarchief Zutphen	0110
Zutphen	Oude en Nieuwe Gasthuis	1666–1841	Stadsarchief Zutphen	0407
Zwolle	Sophia Ziekenhuis	1884–1892	Collectie Overijssel	1528

Note: This table includes only regional archives and similar sources. Archives from religious hospitals, among others, are not represented here, which may result in incomplete coverage.

Source: Indie van Lieshout, Overzicht archiefbronnen en patiëntenregistratie Nederland. *YORY https://www.yory.nl/overzicht-archiefbronnen-patientenregistratie-nederland/ (enriched by author with new archival sources derived from archival research).*

Table A2 *Overview of information in the patient registers of case-study hospitals*

	Amsterdam		Middelburg	Groningen
	Binnengasthuis	Buitengasthuis	Gasthuis	APSAZ
Hospitalization				
Department (ward)			not available	
Date of admission				
Date of discharge/death				
Length of stay			*	*
Hospitalization costs	not available	not available		
Physician	not available	not available	not available	
Patient				
Name				
Sex	**	**	**	**
Religion				
Date of birth / age				
Occupation				
Marital status				
Birthplace				
Place of residence			1868–1909	
Adress			1868–1909	inconsistent
Diagnosis	1885–1899	not available		not available
Patient's parents				
Name				
Occupation				
Residence				
Living status				inconsistent

Note: blue = information available, orange = not available, grey = inconsistently (not) available.

** The length of stay can be determined by calculating the interval between the date of admission and the date of discharge or death.*

*** The sex of the patients of the hospitals in Groningen and Middelburg are not explicitly mentioned, but can be derived from the names (and professional titles) of the patients.*

Source: Dutch Patient Register Database (unpublished).