

# Museums of medicine in Europe – architecture, history, identity

ORIGINAL ARTICLE: <https://doi.org/10.35784/teka.7896>

Received 10.06.2025, accepted 19.12.2025, published 30.12.2025

**Rafał Strojny**

<https://orcid.org/0000-0002-2451-9152>

r.strojny@pollub.pl

Faculty of Civil Engineering and Architecture, Lublin University of Technology

**Abstract:** Museums of medicine are important centres for cultivating the history of medicine, its development over the centuries, but also the hospitals where breakthroughs were made and the people who contributed to them. The aim of the research was to characterize contemporary museums in terms of architecture, history and identity. The research area covered all of Europe. Statistical and quantitative research was used to determine the number and profiles of medical museums in Europe. The case study with in-situ research included 20 museums representing different profiles. A total of 279 museums were identified in 36 countries, which fall into groups with one of 6 profiles. They may focus on the general history of medicine, on anatomy, on pharmacy, on a particular hospital, on a person associated with medicine, or on a particular specialty or issue. Many of the museums surveyed have extensive attractions for different age groups, both on-site and online. Medical museums are also an excellent example of preserving valuable architectural heritage by giving a new function to disused hospitals in connection with their original medical function. This makes the story of medical history more authentic and attractive by strengthening local identity. Modern museums are taking advantage of modern technology by enriching their offerings and increasing accessibility to the content they present.

**Keywords:** medical museums, hospital museums, medical heritage in Europe

## 1. Introduction

The history of medicine in Europe, with its particular development in the 19<sup>th</sup> and 20<sup>th</sup> centuries, is a strong part of the Old Continent's identity. Historic hospitals representing design standards corresponding to the achievements of medicine from different periods are a valuable heritage. There are also a number of scientific centres of medicine in Europe that have made a lasting mark on the history of medicine and their breakthrough discoveries have influenced the separation of various medical specialties [1]. These centres were very often closely associated with specific hospitals, which gained a worldwide reputation. Among others, one can distinguish centres in London, Paris, Vienna and many other cities in Italy, Germany, etc. The history of medicine is also the people associated with it, thanks to whom medical breakthroughs have been made over the centuries. It is these scientific centres, hospitals, but also the people associated with medicine that are part of the European heritage of medicine, whose legacy is promoted in order to preserve the memory, identity, awareness, but also to educate future generations. Respecting this heritage has a dimension not only of cultivating history, but also a very practical one like developing local and regional tourism.

A medical museum is an entity that uses exhibition, bookkeeping, cultural, educational and research technologies to shape audiences' attitudes toward life and health as the highest social values, knowledge of scientific and practical activities to preserve and enhance health, as well as historical, modern tools for diagnosis, treatment and prevention of diseases [2]. Modern medical museums have different forms using modern technologies and thus reaching a wider audience. They document not only the historical heritage of medicine, but also the current one, since in the 21<sup>st</sup>

century, advances in medicine are happening extremely fast. In modern medicine, it is increasingly possible to find intangible artifacts that do not fit the traditional understanding of a museum artifact. With the help of technologies that affect modern medicine, such as those related to medical diagnosis or therapy become invisible and intangible for this reason they seem to have no value from a museum perspective [3]. Nowadays, medical museums, both general and with specific profiles, can be found in major cities around the world, especially in centres that have historically made a strong mark in the history of medical development [4].

Modern museums, through a wide range of activities, document the history of medicine in a particular place cultivating the identity of the place, conduct educational activities not only for medical students, but also for other age groups from schools [5]. Education is an important element in the cultivation of tradition and identity, and medical museums are an essential part of the science and culture of any nation. Museums of medicine, whose primary task is education, are most often established by medical faculties of universities. The number of such museums can increase the value of public awareness, promotion and protection [6].

The aim of the research was to characterize contemporary medical museums in Europe in an architectural, historical and identity context. The architectural context focused on issues of accessibility of medical museums and the use of digital technologies. The historical dimension included an outline of the history of medical museums in the European context. Identity in the study concerned the cultivation of local history and promoting it internationally, but also the preservation of monuments and artifacts that witnessed breakthroughs in medicine and reflected the context of different periods.

## 2. Materials and research methods

The subject of the research was medical museums in Europe. In the first step of the research, a research topic related to medical museums was identified, which touches on various aspects. In the second step, quantitative and statistical research was conducted to determine the number of medicine-related museums in Europe. In the next step, detailed profiles of medical museums were determined. The final stage of the research included case studies and site visits to 20 museums in 4 countries, which are among the leading centres of medical development that have made a lasting mark on medical history. The adopted research methods, materials and objectives are presented in Table 1.

**Table 1.** Stages of the research conducted, indicating the research methods used. *Elaborated by the author*

Stage	Materials	Methods	Aim of the study
1	Available literature (Scopus, Science Direct, Research Gate, Publons, Google Scholar)	Literature research (key words: medical museum; hospital museum)	Identify research topics related to medical/hospital museums
2	Available literature, website of medical/hospital museums (47 European countries)	Literature research, website overview (key words: medical museum; hospital museum + name of the country), quantitative and statistical research method	Determine how many medical-related museums there are in European countries
3	36 European countries 279 museums	Quantitative and statistical research method	Determination of detailed profiles of medical museums/hospitals found
4	20 medical museums (Austria, France, UK, Italy)	Case study Site visit	Identify the characteristics of museums in the context of architecture, history and identity

### 3. Results

#### 3.1. An outline of the history of medical museums in Europe

The first form of medical museums were places related to anatomy, especially involving various types of deformities and unusual diseases. The origins of pathology museums date back to the 15<sup>th</sup> century, when 'cabinets of curiosities' were created. It was not until the development of pathology at the end of the 18<sup>th</sup> century that separate collections were created as a result of direct research. At that time, didactics began to play a major role in the creation of such collections [7]. The first museums related to medicine in Europe were anatomical museums, which began to be established in the late 18<sup>th</sup> century and their main function was medical education. Pharmacy museums have a longer history dating back to the 17<sup>th</sup> century. The eighteenth and early nineteenth centuries were a time of private anatomical museums, exhibitions, and shows based on the growing status of medicine and surgery and the huge public demand for knowledge and entertainment [8].

Medical museums were central to the teaching of medical schools in the 19<sup>th</sup> century [9]. The late 19<sup>th</sup> century saw the emergence of new museums focused on health promotion (hygiene museums). In the twentieth century, medical history museums began to emerge, displaying medical instruments, pieces of equipment no longer in use in their collections [10]. In addition to collections of pathological anatomy, essential from a didactic point of view, medical museums also house various objects, medical devices, archival photos and materials, which are a valuable source of the history and development of medicine [11–12]. One example is the Vrolik Museum in Amsterdam, which presents both historical and contemporary aspects of medicine [13]. This museum has the oldest anatomical collection in the city with human and animal models [14].

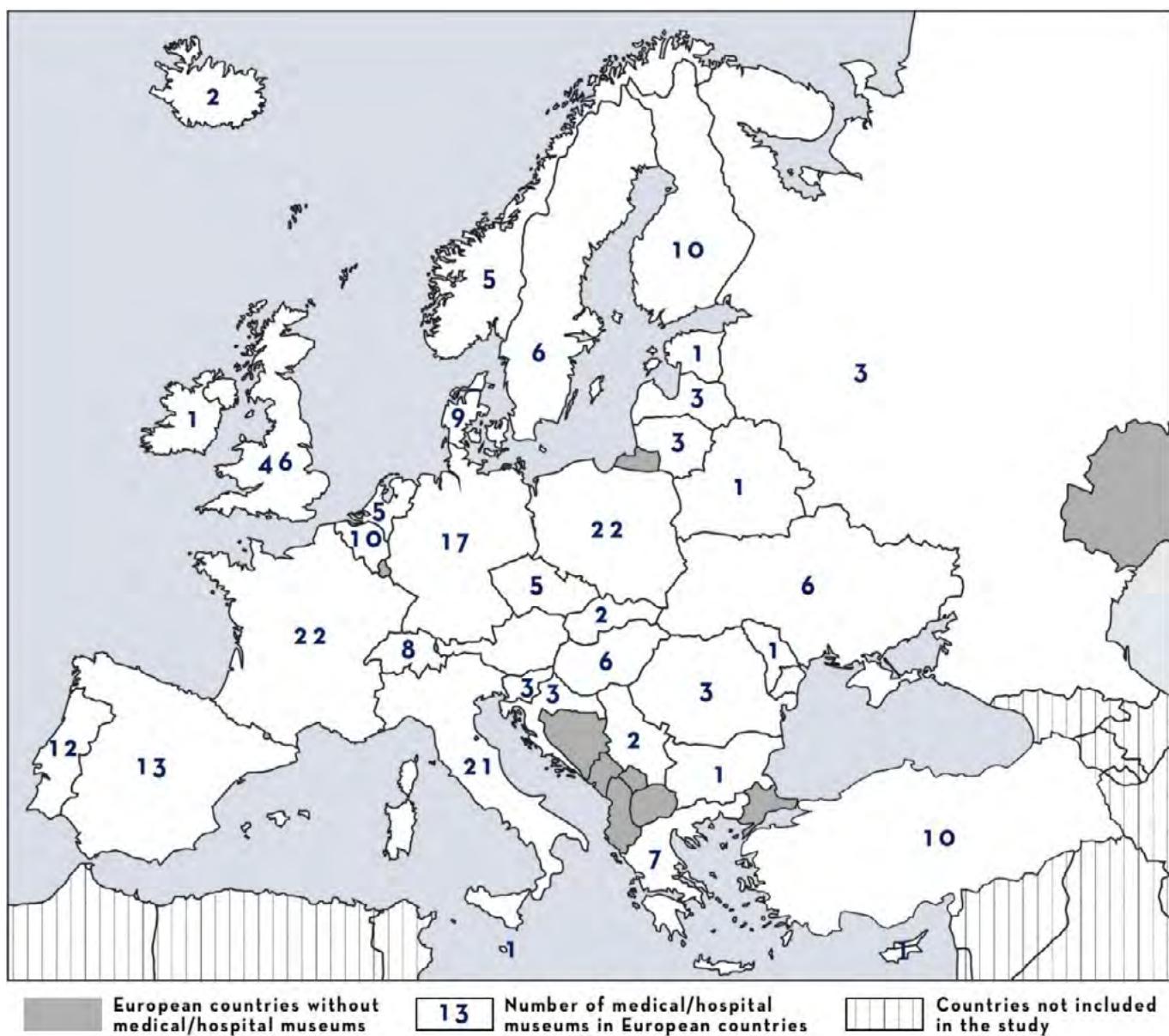
The beginning of the 20<sup>th</sup> century was the period of health and hygiene exhibitions and museums, which were a communication tool for public health around the world. Their main role was medical education [15]. Many modern museums were reconstructed after the destruction of World War II [16]. In 1944, the Museum of the History of Medicine was established in Croatia, which was the first of its kind in the southeastern part of Europe [17]. The first centre in Serbia collecting objects related to medicine and health care was established in 1844. In 1955, the Museum of Serbian Medicine was established, which depicted the development of Serbian medicine from the Middle Ages to World War II. In 1989, the museum moved to the building of the First City Hospital from the 19<sup>th</sup> century [18]. Germany's first medical history museum was established in 1973 in the former anatomical theatre of the University of Ingolstadt in a baroque building with a medical garden. The museum contains valuable collections from various fields of medicine, such as urology [19]. Museums allow students to learn about the history of their specialty by interacting with old instruments in an authentic setting [20].

With the professionalization of medicine and the separation of more medical specialties, the first medical museums dedicated to specific specialties began to emerge, such as the museum of the British Dental Association, the Association of Anaesthetists of Great Britain and Ireland, etc. [21]. The Museum of the History of Medicine, founded in Denmark in 1907, houses extensive collections in ophthalmology [22]. The German Museum of the History of Orthopaedic Surgery was founded in 1959 in Würzburg (now based in Frankfurt am Main). It also has a library with the largest public collection of books and publications on orthopaedics in Germany [23].

In 1983, The European Association of Museums of History of Medical Sciences (EAMHMS) was founded on the initiative of M.J. Sonolet. The earlier organization was the Société Internationale de l'Histoire de la Médecine (SIHM) [24]. Beginning in the 1990s, medical museums previously serving research and educational roles began to become venues accessible to a wider non-medical public [25]. Medical museums have always been subject to change in terms of ownership, purpose or audience. They are dynamic mausoleums that adapt to changing circumstances [26].

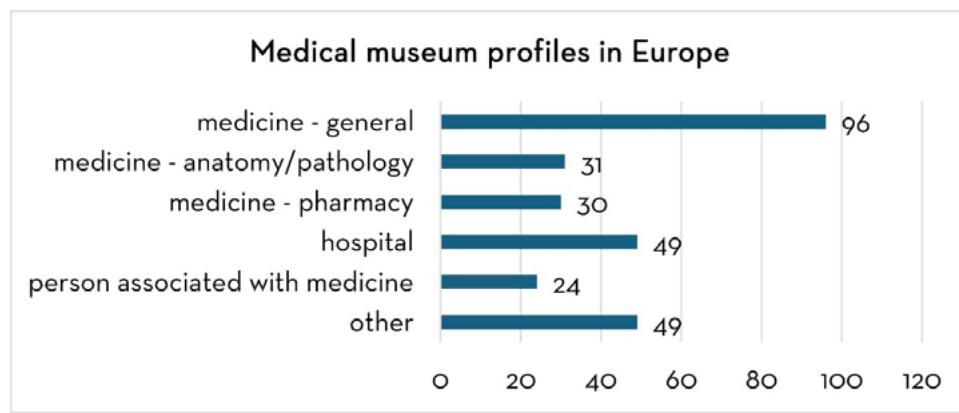
#### 3.2. Museums of medicine in modern Europe

The statistical and quantitative survey showed that in 2025 there were about 279 museums in 36 European countries (Figure 1). Countries with the highest number of museums defined included the United Kingdom, France, Poland, Italy, Germany and Spain. The profiles of medical museums were also defined (Figure 2).



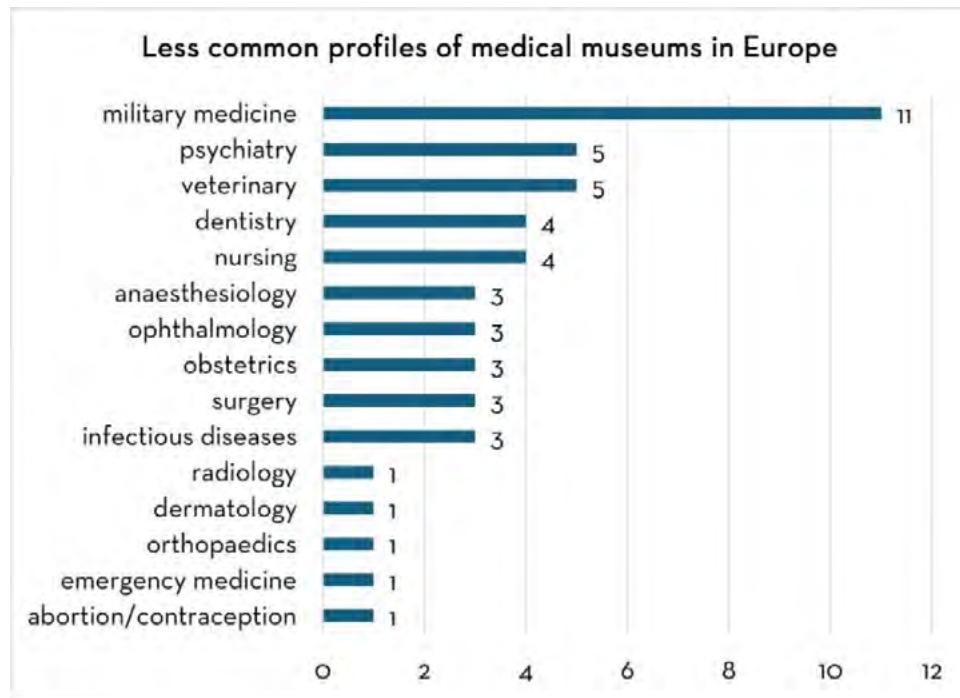
**Figure 1.** Number of identified medical museums in European countries compiled from available online sources.  
Compiled by the author

Among the most common are general medical museums (34.4%), which present the history of medicine, famous personalities, anatomical collections, artifacts and even hospital designs and models. They present a holistic view of medicine. 17.6% of museums are devoted strictly to hospitals. They can be museums occupying an entire former historic hospital – most often in the case of medieval hospitals or in the form of a separate space in a hospital still in operation. In the case of very old hospitals that are no longer usable, a popular solution is to turn them into a museum that tells the story of the hospital over the centuries and the context of medicine for the time period. This is an approach that protects the heritage also architecturally and an activity that strongly sustains the identity of the place, builds its recognition in the context of the history of medicine and thus is an activity that influences the development of tourism. Internationally significant hospitals in particular have museums that tell the story of the hospital's history and life, the discoveries and breakthroughs it has made, but often also its future. A slightly smaller number of museums include centres displaying anatomical collections (11.1%) or covering only pharmacy (10.8%). The most important figures who have made a special mark in the history of medicine are commemorated in museums dedicated to them (8.6%). These are most often located in the former places of residence of these personalities or the hospitals with which they were associated (e.g. Sigmund Freud, Florence Nightingale, William Hunter, Ignaz Semmelweis, Robert Koch, etc.). 17.6% of the museums surveyed represent special profiles that occur sparsely.



**Figure 2.** Major profiles of medical museums in Europe (in 2025). Compiled by the author

Medical museums in smaller numbers come in the form of specific profiles. The largest group are war-related establishments telling, for example, the history of medicine during World War I or World War II; they may be located, for example, in former shelters that served as hospitals during the war. Some of them present the history of the Red Cross, etc. The special profiles of medical museums stem from the history and identity of the place where the museums are located. They have a strong connection to a place that has made its mark in the history of medicine and, more specifically, to a particular specialty of medicine. They are located in former hospitals that were important to the development of medicine or are simply commemorative, such as some museums located in former psychiatric hospitals.



**Figure 3.** Other profiles of medical museums in Europe (occurring much less frequently than the main profiles). Compiled by the author

### 3.3. Museums of medicine – case study – architecture, history, identity

Many hospitals, especially those built before the 20<sup>th</sup> century, are difficult to adapt to modern standards in medicine. For this reason, they represent a difficult heritage, often with unique architecture. Because of the function they have served for centuries, they are not easy to adapt to new functions. However, from the point of view of preserving the memory of the former hospital and the people associated with it, but also the valuable architecture, one popular solution is to convert them into a medical museum. This is not only a solution that cultivates the identity of the place, but it is also a significant enrichment of the city's cultural and tourist offer. Adapting a historic hospital building to a museum function is relatively easy, and further enhances the authenticity of the facility. The main problem in terms of architecture is the difficulty of adapting the building for people with disabilities. This is often influenced by the form and architectural solutions themselves, but also by conservation requirements for historic buildings. Removal of various barriers in modern museums is a key issue in order to increase their accessibility. These activities generate

additional costs, but in the long run they bring financial benefits from increased visitor numbers. The main aspects of increasing accessibility include the elimination of architectural barriers, since most medical museums are housed in historic buildings. The main problem in eliminating barriers is lack of funding [27]. Accessibility includes not only accommodating people with mobility difficulties, but also people who are blind or visually impaired, deaf and dumb, the elderly, etc. Many of the issues of increasing accessibility are solved by the use of modern digital technologies and also by the appropriate finishing and interior design of the museum.



**Figure 4.** The Josephinum – Medical History Museum Vienna/Austria. Exterior view of the building, a mock-up of the former hospital establishment (now home to the university, and interior views of the museum with its collection of wax anatomical figures and ancient medical devices and instruments. *Photo by the author*

One example of general museums is The Josephinum – Medical History Museum in Vienna (Figure 4) located in a former military medical academy opened in 1785. The representative building, which dates back to the time of Joseph II, is considered the most important example of classical architecture in Vienna. The museum houses the collections of the Medical University of Vienna. It is a place for dialogue, teaching and research. The museum's collection includes artifacts dating back 650 years: books, archival materials and photographs, ancient medical instruments and tools, wax models (anatomical collection). In addition to the permanent collection depicting, among other things, anatomical wax models from the 18<sup>th</sup> century, the history of the First and Second Viennese Medical School, and the recent history of medicine, the museum holds temporary exhibitions. The museum also tells the story of the building itself by presenting architectural drawings, 3D models and photographs [28].



**Figure 5.** Pathological-anatomical collection in the Narrenturm, Vienna/Austria. Exterior view of the former psychiatric hospital building (now a museum) and the interior of one of the exhibition rooms. *Photo by the author*

Another example of the preservation of architectural heritage and a form of psychiatric hospital that was new for the time is the combination of two functions. The first function on the first floor includes a medical museum with a pathology and anatomy collection. The second is dedicated to the history of the hospital with the possibility of visiting the upper floors. The building, called Narrenturm, is a monument to the history of health care and medicine from the late 18<sup>th</sup> century (Figure 5). The classicist building designed by architect Josef Gerl was opened on April 19, 1784 as the first institution in Europe to treat only patients with mental illness. The 5-story tower housed 28 cells on the first floor, which were connected by a central corridor. The psychiatric hospital operated in the building until 1866. In later years, the building was used for business purposes, housing medical staff, students and employees of the General Hospital, among other things, and since 1971 it has housed a pathological-anatomical museum. The pathology-anatomy collection has served to document and study diseases for more than 200 years. After the building was renovated and reopened with a new collection in 2020, the exhibition was adapted not only for doctors, medical students, nurses, but also for elementary school students and all interested people [29]. The anatomical collection at the Narrenturm in Vienna is one of the largest collections of human specimens in Europe. It is an important source for the study of dysmorphology by presenting specimens of rare congenital anomalies. It is important for research and for preserving the heritage for future generations of researchers [30]. The example of the museum in Narrenturm is an excellent example of how to preserve valuable architectural heritage by introducing a new function that corresponds to the original function.

Beaune, a small town in the Burgundy-Franche-Comté region of France, is a phenomenon in terms of tourism. A strong part of the town's identity is the former Hôtel-Dieu hospital, which, despite the small scale of the town and its remote location, attracts crowds of tourists from all over the world (Figure 6). The former hospital – now a museum in the centre of Beaune – is an extremely valuable architectural heritage and history of a former hospital in a medieval building. Nicolas Rolin and Guigone de Salins founded the Hôtel-Dieu in 1443 on the model of Flemish hospitals, whose purpose was to provide care for the poor and disadvantaged. The building is an exceptional example of Burgundian architecture of the 15<sup>th</sup> century. The construction of the hospital was most likely overseen by Flemish architect Jacques Wiscrèze [31]. The hospital consists of two 2-conditional buildings situated by a stone courtyard. From the outside from the street, the building may not seem impressive due to its rather austere facade and grey roof. However, once inside, the stone courtyard shows considerable contrast and architecture that is breathtaking. The courtyard dazzles with the color of the varnished tiles, the lofty skylights, gables and galleries. The ornate roofs of specific glazed tiles are a hallmark of Burgundian architecture. The hospital's facade is an example of northern Renaissance urban architecture. Functionally, the hospital was divided into administrative, kitchen and pharmacy facilities. Nuns and patients were housed near the chapel in the centre of the establishment. The functional layout of the museum corresponds to the original arrangement of the functions of the former hospital. The largest space is occupied by the patients' ward in a hall layout ending in a chapel, which allowed sick patients to attend mass. The building is full of interesting details and art.



**Figure 6. Hôtel-Dieu – Hospices in Beaune, Beaune/France.** View of the main courtyard, bedroom for wealthy patients, garden and hospital kitchen. *Photo by the author*

Interestingly, the hospital operated in this building until 1971. Today there is a hospital museum, which offers many more attractions and is a major part of Beaune's tourism. Associated with the hospital is a tradition of an annual charity auction dating back to 1859. It is considered the most famous wine charity auction in the world. Every third Sunday in November, it hosts a three-day festival dedicated to the food and wines of Burgundy (Les Trois Glorieuses). Associated with the hospital and now the museum is a non-profit organization that owns 61 hectares of vineyards [32]. The museum tells the history of the hospital, transporting visitors back in time to the realities of a medieval hospital. It presents, among other things, a room for the poor with a chapel, a smaller room of a higher standard with art elements for wealthy patients, a hospital pharmacy with a hospital garden, and a kitchen arranged exactly as it functioned hundreds of years ago. Further down the museum, you can see old medical equipment as well as the finest works of art. It is in the Hospices de Beaune that the famous work The Polyptych of the Last Judgement by Roger Van der Weyden is located. The courtyard of the hospital is additionally the site of the monthly annual Baroque opera festival.

A similar example to the French hospital is represented on a smaller scale by the Spedale del Ceppo museum in Pistoia, Italy (Figure 7). Founded in 1277, the hospital operated until 2012, when it was moved to a new building. The museum illustrates historical, architectural and artistic events in the form of a Robbia frieze of polychrome glazed terra cotta – a composition that is the main dominant element of the front facade above the exterior loggia. It is a masterpiece of Renaissance sculpture. The museum presents through traditional as well as digital techniques the history of health care in Pistoia. It features, among other things, a collection of surgical instruments, artifacts from the field of psychiatry and biographies of famous doctors associated with the hospital. An 18<sup>th</sup>-century anatomical theatre is also an important feature. The museum also offers a short virtual tour [33].



**Figure 7.** Museo dello Spedale del Ceppo, Pistoia/Italy. View of the front facade and one of the museum's interior rooms. *Photo by the author*



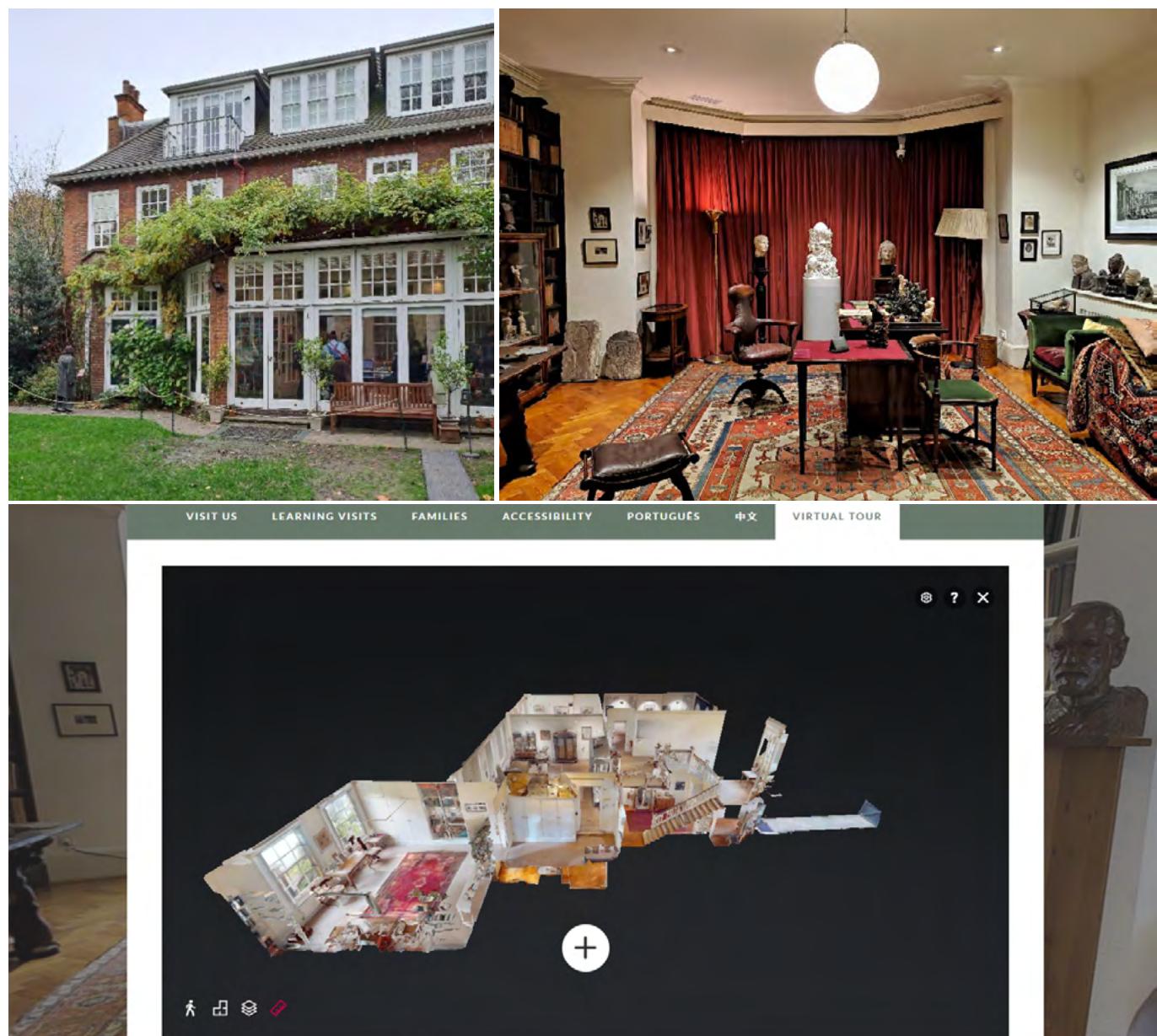
**Figure 8.** St Bartholomew's Hospital Museum, London/UK. Interior view of the museum. *Photo by the author*



**Figure 9.** Florence Nightingale Museum, London/UK. Interior view of the museum. *Photo by the author*

The museum at St. Bart's Hospital is a slightly different example of a museum that occupies a small part of a hospital that is still in use (Figure 8). The museum's exhibits include items (surgical and medical equipment, apothecary's tools, artwork) and archives dating back to the 12<sup>th</sup> century, which are drawn from the hospital's historical collections. The museum depicts the rich and long history of one of the oldest and most renowned hospitals in the world. The museum's narrative also features profiles of figures associated with the hospital, especially those who made significant contributions to the development of medicine, such as William Harvey (a doctor at St. Bartholomew's Hospital), who discovered the circulation of blood. The museum also tells stories about patients and staff members, as well as the hospital's role in educating medical students [34].

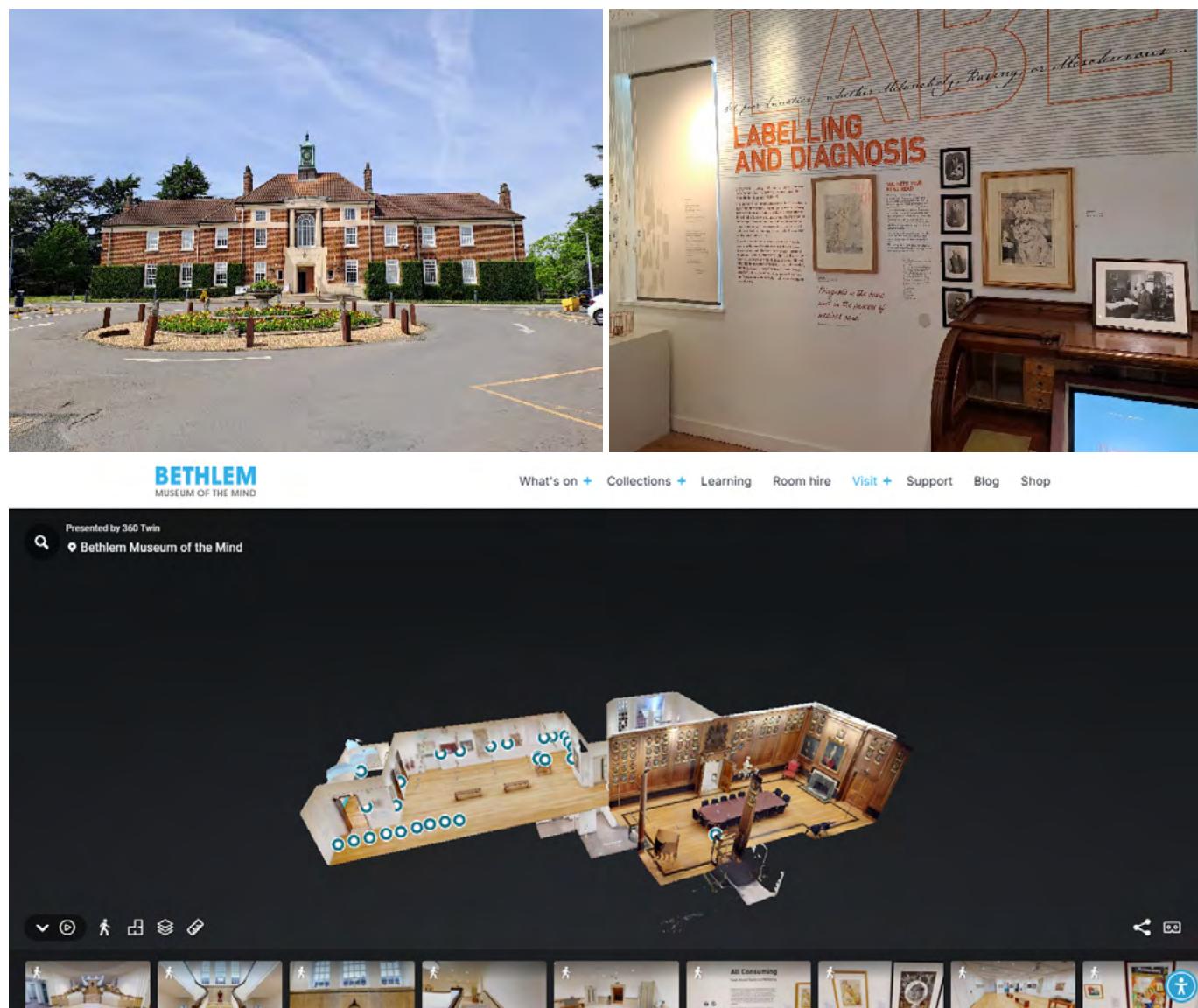
Another large group of medical museums is dedicated to people who have made a permanent mark on medical history. The best example of this is Florence Nightingale the most famous figure in the history of nursing, whose museum is located in Istanbul and London. The Florence Nightingale Museum in London (Figure 9) tells the story of the life of the founder of modern nursing, her work during the Crimean War and her fight for better health care for ordinary people. The small museum is attractive to visitors of all ages. The museum hosts various thematic events. Education is an important part of the museum's activities. The museum offers educational events "Meet Miss Nightingale" for elementary, secondary and higher schools as well as families. The goal is to spread knowledge about the life, activities and achievements in nursing of Florence Nightingale [35].



**Figure 10.** The Freud Museum, London/UK. View of Freud's home in London, his original study and the digital free 3D version of the museum. *Photo by the author*

An equally recognizable person who has contributed to another field of medicine – psychiatry – is Sigmund Freud. A museum dedicated to Freud is located in Vienna in the apartment where he lived before World War II, and a second museum is located in his former home in London, where he lived during and after the war (Figure 10). The museum tells the story of the life of psychoanalysis founder Sigmund Freud and his daughter Anna Freud (a pioneer of child psychoanalysis). The museum also offers philosophical workshops for children, intimate temporary and permanent exhibitions (also available online), film screenings, online courses, research seminars and artistic performances (plays recounting medical cases from the life of Sigmund Freud). Various events also include thematic meetings, such as "Freud Sessions" which are led by therapists (e.g., Jeremy Sachs at 2025, author of a book about male survivors of sexual abuse) [36].

The interior of the museum reflects the original design and contains items from Freud's life. The highlight is Freud's study with its famous couch. The museum is also available in virtual form to anyone. A detailed 3D model (using 3D scanning and point cloud) allows exploration of the museum from anywhere in the world.



**Figure 11.** Bethlem Museum of the Mind, London/UK. View of the exterior and interior of the museum and the virtual 3D model of the museum. *Photo by the author*

The last group of museums are those dedicated to a specific specialty or issue. Bethlem Museum of the Mind focuses on the history of Bethlem Royal Hospital, the facility's program and patients. The history of this hospital dates back to 1247, which moved to its current location in 1930. The museum holds archives from Bethlem Hospital dating back to the 16<sup>th</sup> century. The museum opened in 2015 in an art deco style building in one of the buildings of the hospital complex in a London suburb (Figure 11). The museum is a new form of the previous small museum established in 1970,

which mainly displayed the hospital's art collection. The museum is accessible to people with disabilities, the use of guide dogs, assistance dogs and therapy dogs. An additional amenity is a permanent loop accessible to hearing aid users. In addition to restrooms and an elevator for people with disabilities, prints about the exhibitions are available in large print. As at the Freud Museum, free online tours of the museum are also possible through the use of an interactive 3D model. As an added convenience, a digital guide to the museum is available in the form of a free art and culture app, which allows a deeper experience of the museum visit. The museum hosts exhibitions of contemporary artists who are or have been patients. In addition to exhibitions, events, the museum also provides educational group visits for schools, adults and families. It also offers rental of some rooms [37].



**Figure 12.** The Old Operating Theatre Museum & Herb Garret, London/UK. Interior views of the museum with the oldest surviving operating theatre. *Photo by the author*



**Figure 13.** Museum of Contraception and Abortion, Vienna/Austria. View of the exhibition inside the museum. *Photo by the author*

The Old Operating Theatre Museum & Herb Garret in London is a unique museum located in the attic of the early 18<sup>th</sup> century Old St Thomas' Hospital church (Figure 12). It focuses on the history of medicine and surgery. Originally, the attic space was used to dry and store herbs for medicine for patients. In 1822, an operating room was located there, which is the oldest surviving operating theatre in Europe for female patients. The museum offers a range of activities such as performances, family and thematic workshops, outdoor filming, photo shoots, creative projects, educational programs, competitions (e.g., Writing Competition, Theme: Anatomy), and private rental of the museum and its collection is also possible. The museum also offers a number of online activities: articles, interactive games (e.g. Step into the role of a surgeon), thematic and educational apps, educational videos, etc. [38].

A recent unusual example of a museum is the Museum of Contraception and Abortion, founded in 2003 in Vienna by gynaecologist Christian Fiala. The museum is housed in premises in a historic building. It describes historical forms of birth control in detail and the purpose of its establishment was to promote the use of contraceptives and family planning techniques. The museum's three rooms present the history of contraception from ancient Egypt to methods that will be used in the future and many other threads. The museum is interactive and the museum's website provides extensive information greatly expanding the scope presented in the stationary museum [39].

### 3.4. Contemporary challenges and the future of medical museums

In addition to their educational value to medical students, pathology museums provide tremendous biological value used for scientific research, but preserving and maintaining anatomical specimens is difficult and expensive [40]. Advances in online technology and cost reductions have enabled their use by museums. This makes it possible for Internet users from all over the world to visit these museums. This is an activity that increases the accessibility of medical museums and attracts more visitors. An example of such a museum is the multimedia anatomy museum in Thessaloniki [41].

The development of technology, but also the experience of lockdown during the Covid-19 pandemic, resulted in the need to expand the offerings of the stationary museum with the possibility of virtual tours through the museum's digital collection. Medical museums are evolving by expanding their collections to include contemporary items, as exemplified by the museums' collection and display of testimony of the Covid-19 pandemic [42]. The need for medical museums to expand their audiences through digital means has increased, especially in the wake of the Covid-19 pandemic [43]. State-of-the-art medical museums ensure that stationary collections are available in virtual form as high-quality 3D models, which, in the case of anatomical objects, allow researchers and educators to use, analyse and even 3D print models from anywhere [44]. The modern form of museums has evolved with a digital version – accessibility at any time and from anywhere. But the digital transformation of museums also includes stationary activities through interactive exhibitions, among others [45].

The contemporary experience of cultural heritage can be enhanced by immersive technologies such as virtual reality, augmented reality and mixed reality. In museum spaces, they allow to improve the conditions for learning and understanding [46]. The use of digital technologies in modern museums manifests itself in four forms. The first is the on-site approach to improving cultural heritage preservation. The second is an on-site approach aimed at improving the museum experience. The third is manifested in an online approach to extend the museum experience beyond the museum. The last is an approach based on multisensory and interactive technologies to create broader, accessible and hybrid museum experiences [47].

## 4. Discussion

In the case of medical museums related to anatomy, a controversial issue is the dehumanization of specimens often reduced to specific diseases or injuries. Particularly controversial are museum specimens obtained from former patients of psychiatric centres, who experience additional dehumanization due to the stigma associated with a mental illness diagnosis. The Indiana Museum Medical History Museum has applied measures to rehumanize human specimens in medical museums. To this end, historical records and other documents were used to develop narratives describing the lived experiences of individuals whose tissues were used in the museum's collection [48].

Former psychiatric hospitals that were symbols of oppression are nowadays being transformed into new functions like residential areas, business parks or hotels. This approach helps to erase a troublesome past and give a new quality to the space. However, preserving the heritage and memory of the facility's former patients is an essential component of the identity of such a place. Modern technologies make it possible to create a digital museum without a stationary

location. Such an example is the Långbro Hospital in Sweden converted into a residential area. The former institution has been memorialized in a digital museum, by which a former place with negative connotations has been preserved in a non-place in a virtual form preserving the memory, but also playing a popularizing role drawing attention to past, but also current injustice and oppression, with the goal of contributing to changing such a state of affairs [49].

In the past, the medical museum was a teaching source as important in medical schools as its library. Today, most medical museums are obsolete or extinct [50]. The lack of interest of the Polish medical community in its own material medical heritage was pointed out at the beginning of the 21<sup>st</sup> century by Z. Podgórska-Klawe [51]. After 25 years, it can be seen that this trend has reversed, and medical museums are found in almost every European country, and Poland is in the lead in terms of the number of such institutions.

Modern museums are a very important part of culture, cultivating the heritage of medicine, but also preserving the precious architecture of ancient hospitals that witnessed medical breakthroughs. The offerings of museums are extremely rich, encompassing not only a simple tour of the facility, but also offering a variety of events for every age group, interactive applications, 3D models and much more. In addition to the primary purpose of these museums – awareness and memory of history, education, but also entertainment – medical museums can have a therapeutic function. Some of them, especially those dedicated to psychiatry, offer events, meetings and support activities. However, just visiting museums can have a therapeutic effect.

According to a study by Grub and Martin, for most of the public, museums have high value from an individual, social and economic perspective. This is an argument for maintaining this type of public organization, which makes a valuable contribution to society [52]. Brussels implemented an innovative program in 2022 that offers prescription visits to museums for people struggling with anxiety, stress and depression. In 2024, the program was expanded by offering free admission to museums for people with neurological, cardiac, oncological and Alzheimer's diseases. It is recognized that activities of this type can be a therapeutic tool to complement traditional therapies. A side value of these activities is to promote going to museums, among people who have not previously done so. It is also the prevention of self-stigmatization and social isolation, which brings a number of benefits, such as feelings of relaxation, well-being or reduced stress and anxiety [53]. Swiss doctors have expanded prescriptions for patients with mental disorders and chronic diseases to include walks in public gardens, museums and art galleries. The initiative is to be tested for a year, with the possibility of expanding to include further activities such as theatre [54]. According to a survey conducted by the Finnish Museum Association, as many as 99% of respondents stated that visiting a museum has a positive impact on their long-term well-being [55].

## 5. Summary and conclusions

Modern medical museums in Europe represent various fields of medicine, but most often present the history of medicine in general. The number of such institutions is very large, which may be an indication of their popularity. The rich offerings of medical museums, the use of modern digital technologies and adaptation to current conditions keep this type of entertainment combined with learning attractive and in demand. Museums of medicine are an important part of the cultural resource of any country building recognition of the place, protecting unique heritage and identity by cultivating the history of medicine, hospitals and people who have contributed to the progress of medicine over the centuries.

Medical museums have a number of advantages in terms of architecture, history and identity (Tab. 2). The examples presented here can serve as inspiration for medical facilities that have a history of achievements in medicine, if only on a smaller scale. Especially hospitals from the 20<sup>th</sup> century, whose history may not seem very long and interesting, yet in the perspective of future generations, it is worth appreciating the architecture of 20<sup>th</sup> century hospitals and their equipment, which reflect the state of medicine at that time. They are a valuable heritage of the 20<sup>th</sup> century that should be protected. Some facilities, due to the great progress that has been made in the 21<sup>st</sup> century, are struggling with a number of functional and technical problems [56] by which they may require the construction of new facilities and the adaptation of old ones for other functions in the near future. One possible function, especially for smaller facilities, could be a medical museum, which greatly expands the cultural offer of a city or region.

**Table 2.** Advantages of medical museums from the point of view of architecture, history and identity. Compiled by the author

	<b>Architecture</b>	<b>History</b>	<b>Identity</b>
1	Preservation of the architectural heritage of historic hospitals (giving a function related to the original function)	Cultivate history of place, medicine through collecting, documenting heritage	Strengthening social identity – local and regional heritage, achievements in medicine
2	Enriching the cultural and tourist offer of the city – building recognition of the region and the architecture of valuable health care facilities	Educational activities of different age groups – various methods of history promotion	Integrating the local community by organizing workshops, events, etc.
3	Use of digital technologies (3D scanning, interactive 3D models, VR)	Interactive applications and games – learning history through play	Promotion of local identity internationally

## References

- [1] Strojny R. *Contemporary design trends in specialist hospitals in Europe*. Lublin: Lublin University of Technology Publishing House; 2024.
- [2] Chizh NV, Slyshkin GG, Zheltukhina MR, et al. Concept "medical museum" as a sociocultural phenomenon. *International Journal of Environmental & Science Education*. 2016;11(17):10529–10538.
- [3] Söderqvist T, Bencard A, Mordhorst C. Between meaning culture and presence effects: contemporary biomedical objects as a challenge to museums. *Studies in History and Philosophy of Science Part A*. 2009;40(4):431–438. doi:10.1016/j.shpsa.2009.10.010.
- [4] History of Medicine Museums. *Guides.lib.uwo.ca*. Available from: <https://guides.lib.uwo.ca/c.php?g=732066&p=5259553> [cited 2025 Jun 7].
- [5] Yetimoğlu S, Akyol AA. Medical and health museums in Turkey and educational activities. *European Journal of Research on Education*. 2013;(Special Issue: Art in Education):16–24.
- [6] Döger FK, Kurum M. Museums of medical history. *Meandros Medical and Dental Journal*. 2012;13(1):43–46.
- [7] Paluchowski P, Gulczynski J, Szarszewski A, et al. Anatomopathological museums. Part 1: from casual assemblages to scientific collections. *Polish Journal of Pathology*. 2016;67(3):207–215. doi:10.5114/pjp.2016.63771.
- [8] Barnett R. Lost wax: medicine and spectacle in Enlightenment London. *The Lancet*. 2008;372(9636):366–367.
- [9] Reinartz J. The age of museum medicine: the rise and fall of the medical museum at Birmingham's School of Medicine. *Social History of Medicine*. 2005;18(3):419–437. doi:10.1093/shm/hki050.
- [10] Delicado A. The past and present of medical museums in Portugal. *Museum History Journal*. 2014;7(1):18–35. doi:10.1179/1936981613Z.00000000019.
- [11] Winter E, Teschler-Nicola M, Macfelda K, Vohland K. The pathological anatomical collection of the Natural History Museum Vienna. *Wiener Medizinische Wochenschrift*. 2024;174:265–278. doi:10.1007/s10354-022-01001-5.
- [12] Alberti S. Medical museums past, present and future. *The Bulletin of the Royal College of Surgeons of England*. 2011;93(2):56–58. doi:10.1308/147363511X552548.
- [13] Lafleur A. Present(ed) bodies, absent agency: patients' perspectives at the Museum Vrolik of the body and medicine. *Frontiers in Sociology*. 2024;9:1410240. doi:10.3389/fsoc.2024.1410240.
- [14] Catchpole J. A museum of the human body. *The Lancet*. 2025;405(10481):e-loc. doi:10.1016/S0140-6736(25)00409-X.
- [15] Tunç U. Museums of medicine and health: curating public health. *Infectious Diseases and Clinical Microbiology*. 2023;5(1):69–81. doi:10.36519/idcm.2023.195.

[16] Turk JL. The medical museum and its relevance to modern medicine. *Journal of the Royal Society of Medicine*. 1994;87(1):40–42. doi:10.1177/014107689408700117.

[17] Fatović-Ferencić S, Tahirović H. Foundation of the museum for the history of health in 1944 and role of its first curator Stanko Sielski. *Lječnički Vjesnik*. 2015;137(11–12):377–385.

[18] Simic JJ. Serbian Medical Society's Museum of Serbian Medicine. *Acta Medico-Historica Adriatica*. 2006;4(2):323–330.

[19] Ruisinger MM. The German Museum for the History of Medicine: a museum tour from the perspective of urology. *Der Urologe A*. 2012;51(8):1117–1121. doi:10.1007/s00120-012-2850-5.

[20] Mekas TA. The Museum of the History of Lithuanian Pharmacy and Medicine. *Medicina Secoli*. 2009;21(1):245–254.

[21] Handley N. Museums of the 'new' medical professions in the twentieth century [PhD thesis]. London: Birkbeck University of London; 2022. doi:10.18743/PUB.00048939.

[22] Norn M. Objects relating to the Danish Ophthalmological Society at the Medical History Museum. *Acta Ophthalmologica Scandinavica Supplement*. 2002;(234):31–38. doi:10.1034/j.1600-0420.80.s234.6.x.

[23] Rauschmann MA, Scale D, Thomann KD, Zichner L. The German Orthopedic History and Research Museum: a museum for research and public health. *Der Orthopäde*. 2000;29(12):1000–1007. doi:10.1007/s001320050555.

[24] Wikström-Haugen I. The history of the European Association of Museums of History of Medical Sciences (EAMHMS). *Papers on Anthropology*. 2013;22:330–334. doi:10.12697/poa.2013.22.36.

[25] Parry MS. Reproducing bodies in the medical museum. In: Björklund E, Jülich S, editors. *Rethinking the Public Fetus: Historical Perspectives on the Visual Culture of Pregnancy*. Rochester: University of Rochester Press; 2024.

[26] Alberti SJMM, Hallam E. *Medical Museums: Past, Present, Future*. London: Royal College of Surgeons of England; 2013.

[27] Šebová L, Nazurová I, Marčeková R. Socio-economic aspects of accessibility to museums and galleries in Europe by removing barriers. *Theoretical and Practical Research in Economic Fields*. 2024;15(2):375–391. doi:10.14505/tpref.v15.2(30).17.

[28] The Josephinum – History of Medicine. *Josephinum*. Available from: <https://www.josephinum.ac.at/en/> [cited 2025 Jun 9].

[29] Pathological-anatomical collection in the Narrenturm. *Naturhistorisches Museum Wien*. Available from: <https://www.nhm-wien.ac.at/en/narrenturm> [cited 2025 Jun 9].

[30] Boer LL, Kircher SG, Rehder H, et al. History and highlights of the teratological collection in the Narrenturm, Vienna (Austria). *American Journal of Medical Genetics Part A*. 2023;191(5):1301–1324. doi:10.1002/ajmg.a.63153.

[31] Lecat JP. *Beaune*. Beaune: Éditions Ouest-France; 2009.

[32] Hôtel-Dieu – Hospices de Beaune. *Beaune Tourism*. Available from: <https://www.beaune-tourism.com/explore-discover-the-hospices-de-beaune/> [cited 2025 Jun 9].

[33] Museo dello Spedale del Ceppo. *Comune di Pistoia – Musei*. Available from: <https://musei.comune.pistoia.it/rete-museale/museo-dello-spedale-del-ceppo/> [cited 2025 Jun 9].

[34] St. Bart's Hospital Museum. *Museums London*. Available from: <https://www.museumslondon.org/museum/94-st-barts-hospital-museum> [cited 2025 Jun 9].

[35] Florence Nightingale Museum. *Florence Nightingale Museum*. Available from: <https://www.florence-nightingale.co.uk/> [cited 2025 Jun 9].

[36] Freud Museum London. *Freud Museum London*. Available from: <https://www.freud.org.uk/> [cited 2025 Jun 9].

[37] Bethlem Museum of the Mind. *Bethlem Museum of the Mind*. Available from: <https://museumofthemind.org.uk/> [cited 2025 Jun 9].

[38] The Old Operating Theatre. *The Old Operating Theatre Museum*. Available from: <https://oldoperatingtheatre.com/> [cited 2025 Jun 9].

[39] Museum of Contraception and Abortion. *Museum of Contraception and Abortion (MUVS)*. Available from: <https://muvs.org/en/> [cited 2025 Jun 9].

[40] Santi R, Ballestriero R, Canzonieri V, et al. Voices from the past: results of the ESP history of pathology working group survey on pathology museums. *Virchows Archiv*. 2022;480:1231–1238. doi:10.1007/s00428-022-03284-w.

[41] Kiourexidou M, Antonopoulos N, Kiourexidou E, et al. Interactive multimedia information for digital anatomy museum. In: *Proceedings of the 2<sup>nd</sup> International Conference on Cultural Informatics, Communication & Media Studies*; Mytilene, Greece; 2019.

[42] Bud R. In a global health crisis, science museums have a lot to offer – even while shut. *Apollo: The International Art Magazine*. Available from: <https://www.apollo-magazine.com/science-museums-global-health-crisis/> [cited 2025 Jun 7].

[43] Kalochristianakis M, Tsiaoussi E, Koliarakis J, Tsiaouassis J. Online tours for a museum of medicine. In: *Proceedings of the 27<sup>th</sup> Pan-Hellenic Conference on Progress in Computing and Informatics*; Lamia, Greece; 2023. doi:10.1145/3635059.3635086.

[44] Pearlstein KE, Simmons-Ehrhardt T, Spatola BF, et al. Modernizing medical museums through the 3D digitization of pathological specimens. In: Rea PM, editor. *Biomedical Visualization. Advances in Experimental Medicine and Biology*. 2021;1334. doi:10.1007/978-3-030-76951-2\_9.

[45] Taub L. On the role of museums in history of science, technology and medicine. *Endeavour*. 1998;22(2):41–43. doi:10.1016/S0160-9327(98)01121-1.

[46] Komianos V. Immersive applications in museums: an analysis of the use of XR technologies and the provided functionality based on systematic literature review. *International Journal of Informatics Visualization*. 2022;6(1):60–73. doi:10.30630/jiov.6.1.708.

[47] Simone C, Ceruetti M, La Sala A. Museums in the infosphere: reshaping value creation. *Museum Management and Curatorship*. 2021;36(4):341–422. doi:10.1080/09647775.2021.1914140.

[48] LaFollette K. Rehumanizing rhetoric, recuperative ethos, and human specimens: a case study of the Indiana Medical History Museum. *Rhetoric of Health & Medicine*. 2025;8(1). doi:10.5744/rhm.2025.2242.

[49] Punzi E. Långbro Hospital, Sweden – from psychiatric institution to digital museum: a critical discourse analysis. *Space and Culture*. 2021;25(2):282–294. doi:10.1177/12063312211066543.

[50] Connor JTH. Medical museums. *Canadian Medical Association Journal*. 2014;186(3):215. doi:10.1503/cmaj.131392.

[51] Podgórska-Klawe Z. European medical history museums: preserving our heritage. *Modern Medicine: Studies in the History of Medicine*. 2001;8(2):199–208.

[52] Grüb B, Martin S. Public value of cultural heritages: towards a better understanding of citizen's valuation of Austrian museums. *Cultural Trends*. 2020;29(5):337–358. doi:10.1080/09548963.2020.1822142.

[53] Brussels expands its successful 'museum prescriptions' programme beyond mental health patients. *The Bulletin*. Available from: <https://www.thebulletin.be/brussels-expands-its-successful-museum-prescriptions-programme-beyond-mental-health-patients> [cited 2025 Jun 7].

[54] Art as therapy: Swiss doctors prescribe museum visits. *Reuters*. 2025 Mar 12. Available from: <https://www.reuters.com/business/healthcare-pharmaceuticals/art-therapy-swiss-doctors-prescribe-museum-visits-2025-03-12/> [cited 2025 Jun 7].

[55] Study shows that the wellbeing effect of Finnish museums is worth millions. *Network of European Museum Organisations*. Available from: <https://www.ne-mo.org/news-events/article/study-shows-that-the-wellbeing-effect-of-finnish-museums-is-worth-millions> [cited 2025 Jun 7].

[56] Przesmycka N, Strojny R, Życzyńska A. Modernisation of hospital buildings built in the 20<sup>th</sup> century in the context of architectural, functional and operational problems. *Architectus*. 2023;74(2):59–67. doi:10.37190/arc230206.

## Muzea medycyny w Europie – architektura, historia, tożsamość

**Streszczenie:** Muzea medycyny są ważnymi ośrodkami kultywującymi historię medycyny, jej rozwoju na przestrzeni wieków, ale także szpitali w których dokonywały się przełomy oraz osób które się do nich przyczyniły. Celem badań była charakterystyka współczesnych muzeów w kontekście architektury, historii i tożsamości. Obszar badań obejmował całą Europę. Zastosowano badania statystyczne i ilościowe w celu określenia liczby oraz profili muzeów medycyny w Europie. Studium przypadku z badaniami in-situ objęły 20 muzeów reprezentujących różne profile. W 36 krajach zidentyfikowano 279 muzea, które dzielą się na grupy o jednym z 6 profili. Mogą one skupiać się na ogólnej historii medycyny, na anatomici, farmacji, konkretnym szpitalu, osobie związanej z medycyną lub konkretnej specjalizacji czy zagadnieniu. Wiele z badanych muzeów posiada rozbudowaną ofertę atrakcji dla różnych grup wiekowych, zarówno w formie stacjonarnej oraz online. Muzea medycyny są także doskonałym przykładem ochrony cennego dziedzictwa architektonicznego poprzez nadanie nowej funkcji nieużytkowanym szpitalom w powiązaniu do ich pierwotnej medycznej funkcji. Dzięki temu opowieść o historii medycyny nabiera większej autentyczności i atrakcyjności wzmacniając lokalną tożsamość. Współczesne muzea wykorzystują nowoczesne technologie wzbogacając swoją ofertę oraz zwiększając dostępność do prezentowanych przez nich treści.

**Słowa kluczowe:** muzea medycyny, muzea szpitali, dziedzictwo medycyny w Europie