

# Compilation of historical data on healthcare at Vall d'Hebron: first patient with stroke attended in 1607

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## ABSTRACT

**Introduction.** This article describes various historical aspects of healthcare at Hospital Universitari Vall d'Hebron.

**Methods.** Documentation was collected and reviewed from the historical archive of the city of Barcelona, the archives of the Diocese of Barcelona, and the historical archive of the Centre Excursionista de Catalunya, the manuscripts section of the Biblioteca de Catalunya, and the literature on the Hieronymite monastery of Saint Jerome in Vall d'Hebron and Hospital Vall d'Hebron. Data of healthcare and neurological interest were collected.

**Results.** Today's Hospital Vall d'Hebron stands on the site of a farm that belonged to the royal monastery of Saint Jerome in Vall d'Hebron. The monastery, of which only traces remain today, had an infirmary, pharmacy, hostelry, and a hospital for the poor, and provided healthcare to Hieronymite monks, guests, pilgrims, and poor people from the time of its foundation (1393) to its secularisation (1835). The monastery was used as a lazaretto during the yellow fever and cholera epidemics in Barcelona, in 1821 and 1834, respectively. The 1903 urban plan for greater Barcelona allocated the area for the "placement of a hospital." The fact that the land was owned by the state and the site's salutary characteristics made it ideal for the construction of a large healthcare complex outside of the city centre: the Residencia Sanitaria Francisco Franco (1955). With the transition to democracy, the name Hospital Vall d'Hebron was restored. The first record of neurological care was the admission and treatment of a patient with stroke at the monastery's infirmary in 1607.

**Discussion.** Vall d'Hebron has offered healthcare for centuries: under the auspices of the church in the Middle Ages, as a lazaretto or quarantine hospital in the 19th century, and as the Hospital Vall d'Hebron today.

## KEYWORDS

Healthcare, monastery of Saint Jerome in Vall d'Hebron, History of Hospital Vall d'Hebron

## Introduction

Hospital Universitari Vall d'Hebron stands on the mountainside in Collserola, overlooking the city of Barcelona. It was inaugurated on 5 October 1955 under the name Residencia Sanitaria Francisco Franco (with the transition to democracy, the name Vall d'Hebron was restored), built on publicly owned land as a healthcare complex to be run under the social security system during

the dictatorship. Before the ecclesiastical confiscations of Mendizábal, the site had been a farm (the Granja Nova) belonging to the Hieronymite monastery of Vall d'Hebron.<sup>1</sup>

The Hieronymite movement, of eremitic origin, was founded in Xàbia in the Crown of Aragon in 1374, and joined with other Spanish movements to create the reformatory, monastic Order of Saint Jerome, established



**Figure 1.** Shield of the monastery of Saint Jerome in Vall d'Hebron. Oriol de Fàbregues collection.

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by papal bull issued by Gregory XI and consolidated in 1414 by Benedict XIII, Pope Luna.<sup>2</sup> Members of the Order lived according to the Rule of Saint Augustine and the Hieronymite Constitutions.<sup>3</sup> While the Hieronymites are fundamentally a contemplative order, the brothers also built infirmaries, hospitals, and apothecaries at their monasteries, where they would cure sick monks and give charity to the poor and those with nowhere else to go.

This study was motivated by the 60th anniversary of the hospital, and addresses the history of healthcare activity at Vall d'Hebron from the foundation of the monastery to the construction of the modern hospital.

### Methods

A review was performed of documentation at the following archives: historical archives of the City of Barcelona, archives of the Diocese of Barcelona, historical archives of the Centre Excursionista de Catalunya, and the manuscripts section of the Biblioteca de Catalunya.

Information was also found in the literature on the history of Hospital Vall d'Hebron and the monastery of Saint Jerome in Vall d'Hebron. Data of neurological and healthcare interest were collected.

### Results

#### Saint Jerome in Vall d'Hebron

The monastery of Saint Jerome in Vall d'Hebron was founded in 1393 by Queen Violant of Bar,<sup>4</sup> second wife of John I of Aragon, at a peaceful, fresh, salutary mountainside site in the Collserola range; the site was already populated by hermits,<sup>5-10</sup> who referred to the valley as Hebron.<sup>11</sup> The initial community was made up of eight friars from the monastery of Saint Jerome of Cotalba in Valencia,<sup>5</sup> promoted by Queen Violant, and was subsequently expanded over time with the help of Queen Maria of Castile, wife of Alfonso V of Aragon. In the 17th and 18th centuries, the monastery





**Figure 2.** Convent of Saint Jerome near Barcelona. From the sketchbook *Apuntes de España*. Pencil drawing by George Vivian, 1833. (Biblioteca Nacional de España)

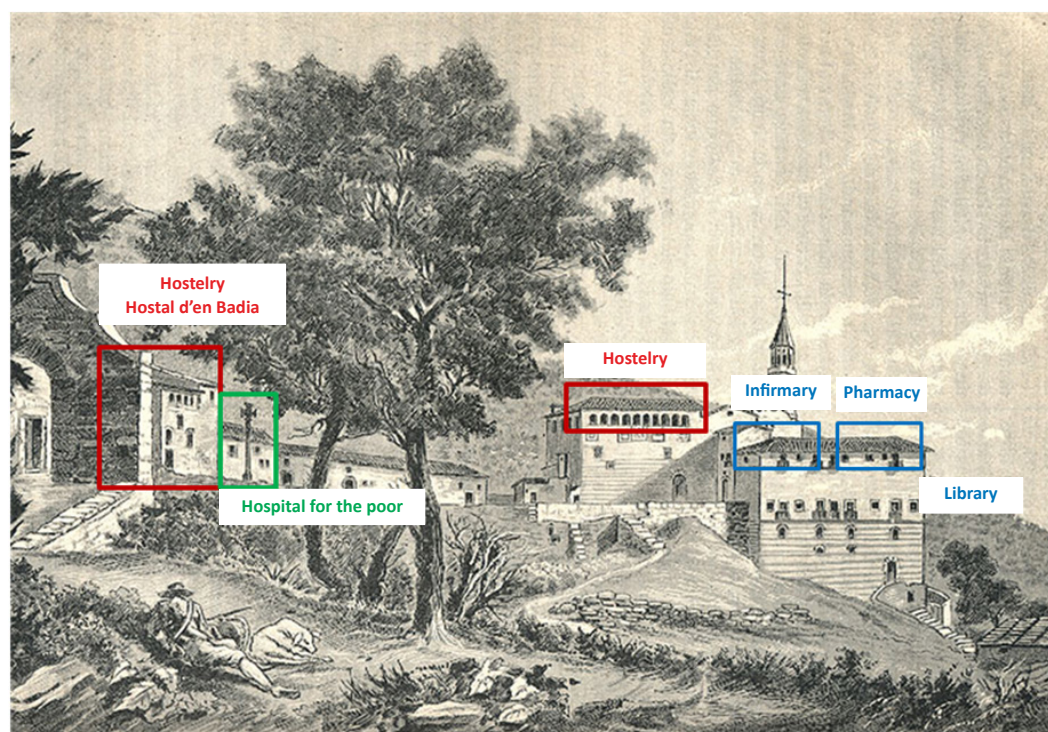
was constituted by more than 20 friars, lay brothers, and choir monks.<sup>12-16</sup> The monastery and its rooms also accommodated a number of administrators and labourers who were responsible for the livestock and agricultural tasks. The monks who professed between 1669 and 1805 include apothecaries (such as brother Carlos Senant, in 1745, and brother Joseph Rius, in 1780), a surgeon (brother Joan Puntí, son of the surgeon Joan Puntí, in 1789), and various sons of surgeons (such as brother Anton, son of Mateu Soguer, in 1715; brother Joseph, son of Jaume Soler, in 1780; brother Vicens, son of Baldiri Joana, in 1794; and brother Manuel, son of Pere Fontseré, in 1805).<sup>17</sup>

At the end of the Spanish Ancien Régime, the monastery was considered an anti-Napoleonic refuge and was set ablaze by the troop of General Lechi, on 12 August 1808. After the fire, the monastery was abandoned until the monks returned on 25 February 1811 and recovered their conventual life after the conclusion of the Peninsular

War.<sup>18</sup> In October 1820, mistrust of the clergy led the constitutional government to abolish monasteries of the monastic orders; the Vall d'Hebron monastery was secularised on 25 October. All its property and assets were confiscated by the State and sold at auction. In 1823, with the restoration of the monarchy, it was agreed that the property could be returned, and the community was reconstituted on 15 March 1824. On 26 July 1835, with the first *bullanga* revolt, the monastery was abandoned definitively; it was appropriated by the governing commission of Barcelona on 25 September 1835, and was auctioned for demolition in 1836.<sup>6</sup>

Today, only vestiges of the monastery remain, around the petrol station on Carretera de l'Arrabassada, situated above the modern hospital. The San Onofre chapel still stands in the forest. A stone carving of the royal shield and safeguard, the keys to the vault, capitals, gargoyles, and ceramic pieces<sup>19</sup> are preserved in the Vicenç Ros Municipal Museum (Martorell), the





**Figure 3.** Adaptation of a reproduction of Pau Rigalt's pencil drawing "Sant Jeroni de la Vall d'Hebron en 1820," published in *Butlletí del Centre Excursionista de Catalunya*, no. 59 (Barcelona, 1899), showing the buildings of healthcare interest<sup>24</sup>

Barcelona City History Museum, the Museu Nacional d'Art de Catalunya, the Masia de Can Soler-Col·lectiu Agudells, and private collections (Figure 1); a reliquary cross worked in precious metals is held at the parish of Sant Joan d'Horta.<sup>2</sup> The monastery's archive has been significantly damaged. Part of the documentation is held at the historical archives of the Centre Excursionista de Catalunya,<sup>20</sup> the archives of the Diocese of Barcelona,<sup>21</sup> the historical archives of the City of Barcelona, and the Biblioteca de Catalunya. Photographs exist of the building in ruins in the late 19th century and the 20th century, and illustrations show the monastery in the 18th and 19th centuries (Figure 2). The canon Cayetano Barraquer Roviralta, brother of Luis Barraquer Roviralta, the founder of Catalan neurology,<sup>22,23</sup> photographed the seal of the monastery.<sup>24</sup> An armorial dating from the 16th-17th centuries shows its shield, with the coat of arms of the queen who founded the monastery and the image of Saint Jerome curing a lion rampant, symbol of the Hieronymite order, pulling a thorn from its injured paw.

When it was founded in 1393, the monastery at Vall d'Hebron was equipped with an infirmary, a pharmacy, a library, and a hostelry, as was precisely described by Guerau de Requesens, the Bishop of Lleida, who was commissioned by Pope Clementine VII to construct the monastery in a scroll dated 27 August 1393.<sup>5</sup> The hospital was built on the mountain side of the monastery's courtyard, where there stood a line of houses: the first was the *Hostal d'en Badia*, the hostelry, which was followed by the hospital, the public refuge, a barn, and stables for visitors' horses and mules.<sup>6,24</sup> Opposite these stood the main convent building, containing the monastery's pharmacy and infirmary; the top floor of the building contiguous to the convent, dedicated to accommodation, contained the "inside" or "tower" hostelry (Figure 3).

#### Hospital for the poor

As was common in other monasteries, cathedrals, roads, and urban centres,<sup>25-27</sup> the Vall d'Hebron monastery had a hospital for the poor.<sup>12</sup> Christian religious orders

included hospitality and caring for the sick in their sense of charity and piety. The monastery offered care, hospitality, shelter, and food to the poor, pilgrims, passers-by, and the sick on the old Collserola road, which passed in front of the building.<sup>24</sup> It offered food and accommodation “according to the customary charity,” particularly at the celebration organised for the feast of Saint Jerome on 30 September, which was attended by large crowds, sometimes in excess of 100 people.<sup>12</sup>

The first mention of the hospital dates from 28 September 1471, when the novice Guillem Fuster professed, contributing the money from the sale of his clothing for the expansion of the hospital.<sup>28</sup> On 13 July 1615, construction started on the new hospital, a two-storey building with oak beams and several beds and linen. The project was funded with the assistance of brother Joan Fontanelles, who donated a sum of over 100 Catalan pounds, and was completed on 1 September.<sup>12</sup> The building gradually deteriorated, and by 1779 there were “two beams that threatened ruin”<sup>13</sup>; the community did not invest effort in its improvement. In fact, in 1780 the congregation took in an old, poor woman, Eulalia Muntells, offering “alms with her bread” and a room in another area, not in the hospital but below in the farm (where Hospital Vall d'Hebron would eventually be built).<sup>13</sup>

The hospital for the poor was run by one of the monks, the *pobrer* or *hospitaler* brother, who was responsible for keeping the hospital clean and for feeding and caring for poor people who arrived, according to the customs of the monastery of Vall d'Hebron, described by canon Barraquer.<sup>29,30</sup> These tasks were the responsibility of brother Juando Fabres in 1627 and the porter, brother Josep Soler, in 1790.<sup>12,13</sup>

### Hostelry

Beside the hospital, at the entrance to the courtyard, stood the *Hostal d'en Badia*,<sup>6,24,29</sup> a hostelry that remained active until the confiscation of the monastery, when members of the Sant Cugat militia, under the command of a certain Majó from Valldoreix, stripped it of all its bedlinens.<sup>6</sup> The hostelry is the only one of the monastery's buildings that remains standing.

The top floor of one of the main buildings, “the tower,”<sup>12</sup> also accommodated the community's guests.<sup>6</sup> In 1785, Francisco de Zamora<sup>31</sup> said of these rooms, also known as the “inside hostelry” or “the first lodging in the tower,”

that “there is a gallery that for its views and the columns supporting it deserves to be named,” and that it was under the charge of one of the monks, the *hostaler* or *porter* brother, whose obligations and responsibilities are summarised in the monastery's customary.<sup>30</sup> These tasks were performed by Agustí Serra in the 15th century as *hostatger*<sup>2</sup> and by Joseph Vinyals as *hospeder*, with the assistance of brother Jaume Camps, in 1627.<sup>12</sup>

Given the particular prestige of the Hieronymites, and the fact that the monastery was located in a salutary, protected location close to the city of Barcelona, it received kings and viceroys and was frequently visited by prominent individuals from the city, particularly in the hot summer. Some of the most noteworthy visitors were Queen Violant of Bar; the viceroy Queen Maria of Castile (in 1438 and 1447); King John II of Aragon, father of Fernando II (in 1454 and 1459); the Catholic Monarchs; Charles V (in 1519)<sup>6</sup> and his son Philip II (13 June 1583)<sup>32</sup>; and the *Lloctinents* (viceroys) of the principality of Catalonia, Héctor de Pignatelli, Duke of Monteleone (in 1606 and 1609), and Pedro Manrique, Bishop of Tortosa and Archbishop of Zaragoza (in 1611). Other noteworthy examples are Joan de Montcada, Bishop of Barcelona (in 1610); Francisco de Montcada, Count of Aitona (in 1619); Luis de Tena, Bishop of Tortosa (in 1620); Joan Gallego of the Royal Council of Catalonia<sup>12</sup>; and Francisco de Zamora, *alcalde del crimen* (an intermediate role between judge and police chief) of the Royal Audience of the Principality of Catalonia, who wrote of an excursion to Collserola on 19 March 1785 that “almost without following the path, we travelled to the monastery of San Jerónimo de Hebrón, which sits on the mountainside in a valley of the same name, and found ourselves overlooking the city of Barcelona, certainly an agreeable situation.”<sup>31</sup> The Baron of Maldà, in his book *Calaix de Sastre* (“The tailor's drawer”) also describes a visit to the monastery on 17 October 1801.<sup>33</sup> The site also received numerous pilgrims from the kingdoms of Spain (Castile, Aragon, and Valencia), France, and Italy.<sup>12</sup>

The monastery was used as a refuge from the spread of epidemics, thanks to its physical isolation and the cloistered lifestyle, which protected against infectious agents; these made the site an isolated enclave, away from sources of contagion, while being located relatively close to the urban concentration of Barcelona. The monastery was considered ideal as a place to shelter against these diseases: Benedict XIII, Pope Luna, fled from an outbreak of plague in Perpignan in 1409 and

stayed at the monastery on his trip from Avignon to Peñíscola<sup>6</sup>; John II postponed the Catalan Courts and took refuge at Vall d'Hebron on 5 July 1457, when death rates were soaring in Barcelona in the most lethal plague outbreak of the 15th century<sup>34</sup>; and the members of the Barcelona city council met there in 1507 to escape from an epidemic in the city.<sup>6</sup>

Furthermore, the enclave's "salutary and good" conditions<sup>35</sup> made it a good place for convalescence. For this reason, the prior of the neighbouring Hieronymite monastery of San Jerónimo de la Murtra stayed there to recover from the sequelae of the epidemic "catarrh" of 1580.<sup>36</sup> Setantí, secretary to the viceroy, stayed there for 15 days' convalescence in 1609, and was very grateful for the care he was given.<sup>6,12</sup> The viceroy's confessor, the Jesuit Vicente Matres, decided to move to the monastery when he was terminally ill, and was cared for by two physicians who travelled there twice weekly from Barcelona.<sup>12</sup> The *Lloctinent General* of Catalonia, viceroy Héctor de Pignatelli, retired there for 13 days in February 1609 to grieve his mother, Jerónima Colonna.<sup>6,12</sup> The ailing brother Damia March of the monastery of Nuestra Señora de la Murta in Alzira arrived at Vall d'Hebron on 9 January 1611, having "begudgingly" left Alzira in early November 1610.<sup>12</sup> The governor of Tamarit castle, Jaume-Cristòfor de Guimerà, enjoyed the community's hospitality after arriving "infirm and fatigued" in 1613, eventually dying of his disease.<sup>12</sup> On 17 April 1688, the convent's baker Pedro Amaro, of French birth, became sick and died "in the second chamber of the hostelry."<sup>12</sup> On 19 July 1775, the monastery denied the request of the Marquis of Cuadra to send his son "to recover health lost due to a chronic illness" when they were aware that the disease in question was tuberculosis and there was a risk that "the house could become infested with the disease."<sup>13</sup> The water at the monastery was particularly well regarded. The book *Historia breve de la fundación del monasterio de Sant Hierónymo de Val de Hebrón y de algunas cosas notables d-él y de las personas señaladas que en la casa ha avido hasta el año de 1595* ("A brief history of the foundation of the Monastery of Saint Jerome in Vall d'Hebron and noteworthy events and persons at the house until the year 1595") notes that "the physicians never stop praising the water."<sup>36</sup> The viceroy the Duke of Alcalá sent for water from the monastery in 1619,<sup>12</sup> and Francisco de Zamora<sup>31</sup> wrote in 1795 that: "near to the monastery is a spring named Font Grogga, which is medicinal."<sup>6</sup> Bernardo Bransí<sup>37</sup> says of that water that

"many people both inside and outside the capital city take it for different diseases." The tranquil, peaceful surroundings of the monastery, and its music, with organ and chant in particular being cultivated, probably would have had beneficial therapeutic effects for convalescent patients.

### Infirmary

The top floor of the main building housed the infirmary,<sup>6,29</sup> where monks and the community's employees would stay when they fell ill. Efforts were made to build an infirmary since the time the monastery was first founded in 1393 by Queen Violant.<sup>5</sup> It was a relatively spacious room, large enough for four patients with "side pain and drowsiness"<sup>12</sup> in 1610, and three patients (father Viñals, father Puntí, and brother Geroni Oms) in 1804,<sup>13</sup> and its hygiene and sanitation measures included a window for ventilating the space, through which the novice Francisco Beltran escaped on 30 August 1614.<sup>12</sup> The space was prepared and equipped for appropriate care of patients. According to brother Baltasar de Areny, in 1579 it had an annual allowance of ten Catalan pounds for the purchase of medicine, jams, and other gifts for patients, plus another ten for linen and woollen items and ceramics and glassware needed in patient care.<sup>28</sup> For example, the infirmary received two new blankets in 1627.<sup>12</sup> On 31 December 1804, the chapter ordered that patients be assisted with all they needed, and offered chocolate for breakfast.<sup>13</sup>

At that time, and especially in the monastery, helping the sick was considered a fundamental element of religion.<sup>27</sup> With the maxim that the health of the body, *sanitas corporis*, was linked to the health of the soul, *salus animae*, and vice-versa, and to enable the sick to give themselves to God or to follow liturgical services from bed, a chapel was built beside the infirmary in 1614 "so that the sick may comfortably hear Mass."<sup>12</sup>

The infirmary was subsequently expanded, and in the 18th century it occupied two floors: the "upper infirmary" for members of the monastery and other individuals with the express permission of the prior and his deputies, and the "lower infirmary" for sick guests.<sup>30</sup>

According to documentation reviewed by Nuria Téllez, currently being catalogued, the infirmary and other parts of the monastery needed repair in 1753; the work needed was evaluated and included in the community's budget. The infirmary continued functioning throughout the





**Figure 4.** Pharmacy jars from the monastery of San Jerónimo de la Murtra. Museum of Badalona. Josep M. Cuyàs archive. *Carrer dels arbres*, 3/2018

existence of the community. There is a record of brother Francisco Almirall dying of stroke (apoplexy) on 13 October 1834 in “the first room of the infirmary”.<sup>18</sup>

According to the monastery’s customary, the infirmary was run by the infirmarian, who was assisted by novices when necessary.<sup>30</sup> In the 18th century, a distinction was noted between the upper-floor and lower-floor infirmarians. In 1613, the infirmarian was brother Joan de Santa María, who alongside brother Martín de Santiago also helped the neighbouring monastery of San Jerónimo de la Murtra in the autumn of that year when it was devastated by a disease presenting with prolonged fever, which infected numerous members of the community and caused the deaths of nine brothers, seven professed monks, and two novices.<sup>12</sup> In 1627, brother Francesch Mora was responsible for the infirmary, with the novice brother Joan as his assistant. In 1789, brother Juan Puntí, son of the surgeon Joan Puntí, professed. Before entering the monastery he was a Latin collegiate at the Royal College of Surgery of the city of Barcelona; at Vall d’Hebron, he ran the monastery infirmary until his death in 1831.<sup>18</sup> In the 19th century,

the infirmarian was brother Ascenci María Pastor, from Valencia, who was well-versed in medicine and was the last monk to abandon the monastery in 1835.<sup>6</sup>

### Pharmacy

The apothecary or pharmacy was built beside the infirmary.<sup>6,29</sup> Francisco de Zamora wrote in 1785 that: “In the apothecary we saw a collection of herbs from these mountains and from Montserrat, collected by Father Josef de Santa María, labelled according to the old system; but it is curious.”<sup>31</sup>

A photograph is preserved of the jars from the pharmacy at the neighbouring monastery of San Jerónimo de la Murtra (Figure 4), which we can imagine would have been similar to those at Vall d’Hebron. The pharmacy was managed by the apothecary, who would prepare physicians’ prescriptions wherever possible, or otherwise procured them in Barcelona. According to the customary, the apothecary was also responsible for storing honey, sugar, jams, and other products that may be needed in the infirmary, and for making wafers and nougat for certain religious feasts.<sup>30</sup>

Regarding the purchase of medicines and spices from pharmacies in Barcelona, the monastery paid 46 of the 90 Catalan pounds of the Tortosa *lezda* tribute to Antoni Pellisser on 3 November 1492, and another 22 pounds on 11 January.<sup>2</sup> In March 1619, the monastery needed 340 pounds to pay a seven-year-old debt for medicines from an apothecary in Barcelona.<sup>12</sup> Probably in an effort to reduce these costs, the community began to incorporate apothecaries, such as the monks Manuel Moliner, who professed in 1769,<sup>13</sup> brother Joseph Rius y Ximenez, who professed on 13 June 1780 and died in 1809,<sup>17</sup> and brother Vicens Joana, son of the surgeon Baldiri Joana, who as well as being the monastery's apothecary also served as the head pharmacist at Hospital de la Santa Creu in Barcelona until his death in 1821.<sup>18</sup>

### Library and study

While the order was mainly dedicated to worship and prayer, and did not particularly promote study or letters, let alone scientific or theological study, the monastery had an important library.<sup>6,29</sup> The library was planned from the time the monastery was founded, and was established before 1471.<sup>28</sup> The collection mainly contained books on theology and religion, including Ramón Llull's *Arbor scientiae* (the Catalan edition printed in 1482) and a work by brother Pedro de Castrovol addressing Aristotle's work on physics (*Incipit tractatus super libros Phisicorum compliatus*, published in Lleida in 1489).<sup>6</sup> The majority of the collection was lost when the French set fire to the monastery in 1808.<sup>6</sup> In the 16th century, brother Guillem Fuster<sup>2</sup> stood out as a keen bibliophile, and in 1627 a monk, brother Francisco Baro, was appointed as librarian.<sup>12</sup>

Before professing, novices underwent a training period under the charge of the *Mestre de novicis*. Early in the life of the monastery, this instruction was not a priority and there is no evidence of a relationship with universities. Guillem Fuster professed in 1471; the most educated member of the community, Guillem had humanistic training and kept correspondence with figures as significant as Pere Miquel Carbonell.<sup>2</sup> In 1579, brother Baltasar de Areny wanted to promote education; in his will, he bequeathed funds for the creation of a novitiate for eight novices and ordered the construction of a study with desks and chairs for six novices and a master to provide training in grammar, the arts, theology, and the Scripture.<sup>28</sup> Monks at Vall d'Hebron may have studied further at other Hieronymite monasteries, such

as the San Bartolomé monastery in Lupiana, the San Lorenzo monastery in El Escorial, which had important apothecaries, or the Guadalupe monastery, which was licensed to perform anatomy studies; this hypothesis is not yet confirmed. There is evidence, however, that the 25-year-old monk brother Miquel Sola was sent to study at the San Lorenzo monastery in El Escorial in 1610.<sup>12</sup>

### Medical care

Caring for the sick was one of the obligations of members of the community. The isolated setting of Vall d'Hebron meant that provision of healthcare to the monks required organisation. The community was served by physicians who would travel up the mountain. The chapter's records from 31 January 1788 show that the monastery had its own ordinary physicians and a pharmacy and that "sick monks were cured at the monastery."<sup>13</sup> According to Pere Balç's ledger, brother Vicens Moro was attended by the monastery's physicians in 1615,<sup>12</sup> and the sick guest Vicente Matres, confessor to the viceroy, was treated by two physicians who travelled from Barcelona. However, there were also occasions when patients travelled to Barcelona for treatment where needed, if their condition allowed this. Examples include brother Vicens Joana, who died at Hospital General de la Santa Creu in Barcelona in 1821,<sup>18</sup> and the former prior brother Joseph Verges, who died in Barcelona in November 1830, at the age of 68 years, under the care of a physician and a surgeon who were performing tests to remove a suspected bladder stone.<sup>18</sup>

In the 18th century and earlier, being appointed by the monastery's chapter as physician to the community was seen as an honour, and came with no greater reward than the gift of "white wine and a bundle of shoots."<sup>13</sup> Dr Joseph Pahissa was appointed surgeon to the monastery for "cures of the entity"; in 1760 he was selected to collaborate with Pere Virgili, the newly appointed director of the Royal College of Surgery in Barcelona. Pahissa was the first lecturer at Barcelona's new Army College of Surgeons to die, in 1765. Antoni de Gimbernat took over his position as chair.<sup>38</sup> After Pahissa's death, the monastery appointed his successor, the master surgeon Pau Andreu, who had already taken charge of the late doctor's "pharmacy and parishioners."<sup>13</sup> The monastery contracted the professional services of a physician in exchange for a fixed annual sum, known as a *conducta*. The physicians employed by the monastery before it was abandoned during the Peninsular War had died by the



time the monks returned, in 1811, and the community employed Dr Joseph Puig for 20 Catalan pounds per year, and the surgeon S. Jph N. for 13 *duros* per year.<sup>39</sup>

#### Diseases treated at the monastery

The monks at Vall d'Hebron showed remarkable good health and longevity: according to José Sigüenza, brother Valerio Bernardo lived to the age of 120 years.<sup>40</sup>

However, despite the community's isolation and the measures taken to prevent the spread of disease, the monastery, unfortunately, was not always able to avoid the greatest scourges of the day: plagues and epidemic catarrhs. In 1431, during the reign of Queen Violant, it was suggested that the Vall d'Hebron and San Jerónimo de Belén (or de la Murtra) monasteries be moved to Leonor de Cervelló's Bellesguard palace.<sup>35</sup> Subsequently, the plague of 1465 decimated the community, causing the deaths of half of the monks at Vall d'Hebron<sup>2</sup>; the outbreak that affected the region from 1588 to 1590 also led to the deaths of two or three members of the monastery.<sup>29,36</sup> The master and his novices took refuge in the nearby, separate hermitage of Sant Cebrià i Santa Justina, avoiding the disease.<sup>41</sup> During the 1652 siege of Barcelona by John of Austria the Younger and the Marquis of Mostara, the plague caused high death tolls in the surrounding area, and the monastery was sacked and vandalised.<sup>6</sup>

There are records of other diseases being treated at the monastery, such as that contracted by a monk and a lay brother who travelled to San Jerónimo de la Murtra to assist with widespread poisoning at that monastery due to poor water quality as a result of the 1570 drought; the monks from Vall d'Hebron also contracted the disease, and had to return after four days.<sup>36</sup> A syndrome of "drowsiness" claimed the lives of brother Joan Rius on 19 November 1605, brother Jaume Carbonell on 21 April 1610, and brother Jaume Cassellas on 26 April 1610. In 1607, brother Miquel Sola suffered general discomfort at the age of 25, having had to leave his studies at the San Lorenzo monastery in El Escorial and return to Vall d'Hebron, where he died after spending eight days confined to bed. Brother Baltasar Arenys died on 8 August 1609 after suffering with "melancholia." Brother Vicens Moro presented haematemesia or recurrent haemoptysis, and was attended by the monastery's physicians; he died in January 1616.<sup>12</sup>

According to records from the 19th century, brother Ignasi Puigdollens presented acute gout and brother Joseph Verges suffered from cramps due to "a stone he was thought to have in his bladder." Joseph Soler presented *brianisme*, ulcers, and gangrene; brother Genis Maria Moner developed pulmonary tuberculosis, and brother Francisco Almirall presented an attack of apoplexy.<sup>18</sup> During the yellow fever epidemic, the monastery's apothecary and head pharmacist of Hospital de la Santa Creu, brother Vicens Joana, contracted the disease and died at the Hospital de Barcelona in 1821, aged 49 years.<sup>18</sup> In 1834, the monastery's gardener died during the cholera epidemic. He was cared for by brother Ascenci Maria Pastor, who also contracted the disease but subsequently recovered, despite permanent sequelae. The perpetual curate of the parish of Sant Genís dels Agudells, *mosén* Joaquín Guiu, also died of cholera on 19 October.<sup>6</sup>

#### First report of a stroke attended at Vall d'Hebron

According to the prior Pere Balç's ledger, the monastery's gardener Antoni Cases, brother of the monk Jaume Cases, presented recurrent strokes. With the first stroke, in February 1607, he required medical attention and care for two months in the infirmary, and recovered with residual left-sided hemiplegia:

He was struck by an apoplectic accident, which made him fall below the gate to the patio of the stables, at the beginning of the staircase. He was invalid and unable to stand, and he was carried to his room and then to the infirmary where he was cured with two months of care and treatment. He recovered and was cured, but one side remained lame, with no strength in the left hand or leg. He used a wooden cane, but was so spirited that he often walked without it. With this improvement, he returned to tend his garden.<sup>12</sup>

A year later, on 24 March 1608, he presented another cerebrovascular accident: "He had suffered a blood clot or some other stroke or propellant that made him fall... and died suddenly while climbing the garden ladder"; he did not survive this second accident.<sup>12</sup>

This description, recorded in the ledger of the monastery of Vall d'Hebron, predates the first studies of stroke published in Catalonia in the *Dictamen de la Academia Médico-Práctica de la Ciudad de Barcelona dado al mui Ilustre Ayuntamiento de la misma, sobre la frecuencia de las muertes repentinas y apoplegias que en ella acontecen* ("Judgement of the medical-practical academy of the

City of Barcelona, issued to its most excellent Council, on the frequency of sudden apoplectic deaths occurring there"; 1784) and Josep Falp i Plana's *Estudio original de la apoplejía (feridura) en Solsona* ("Original study of apoplexy [stroke] in Solsona"), published in 1901 in *Topografía médica de Solsona y distritos adyacentes* (Clariana, Llobera, Riner, Navés, Pinell, Lladurs, Castella, Olius) *subseguida por vía de apéndice de un estudio original clínico y etiológico de la apoplejía en Solsona y una sucinta reseña de las principales epidemias de cólera y paludismo ocurridas en dicha ciudad* ("Medical topography of Solsona and adjacent districts [Clariana, Llobera, Riner, Navés, Pinell, Lladurs, Castella, Olius] and an original clinical and aetiological study of apoplexy in Solsona and a succinct review of the main cholera and malaria epidemics in the city"). Falp describes 44 cases of *feridures* or apoplexy, corresponding to lacunar infarcts, brain haemorrhages, cardioembolic infarcts, and transient ischaemic attacks, which were treated with bloodletting and leeches in some situations, and were associated with high acute-phase mortality rates.<sup>42</sup> The case of stroke presented in the manuscript also predates the specialisation of medicine and the development of neurology in Spain beginning in 1882, when Dr Lluís Barraquer Roviralta created the neurology and electrotherapy dispensary at the Hospital de la Santa Creu in Barcelona.<sup>22</sup>

### Lazaretto

In the 19th century, the social hygiene movement changed the conception of health. The monastery was sensitive to the severe yellow fever epidemic that struck Málaga from 1803 until 28 November 1804; on request of the Captain General of the Principality of Catalonia, the Count of Santa Clara, the community resolved on 15 October 1804 to donate ten *duros* to a fund established to maintain a cordon sanitaire to isolate the population.<sup>13</sup>

The monastery's isolation and its geographical proximity to the city of Barcelona meant that in the 19th century it was no longer used as a refuge from the city's transmissible diseases, as it had been in earlier times; rather, it was used to transfer and isolate the focus of contagion from the city.

Isolation centres had been used since the 16th century in Barcelona to prevent the spread of diseases; travellers and goods from overseas were quarantined at the Casa de Sanitat, located outside the city walls between the

beach and the Portal del Mar gate. In the 19th century, numerous severe epidemics led to the creation of camps for patients, equipped with tents, in unpopulated areas near the city, such as on the slopes of the Montjuïc hill or the area surrounding the monastery of Pedralbes.<sup>43</sup> The Vall d'Hebron monastery also became a lazaretto or infectious diseases hospital, for the isolation of infectious patients at the monastery and to prevent transmission of the disease in the city.<sup>8</sup> On 20 September 1821, the Board of Health resolved to transfer patients with yellow fever from a boat at Port Vell in Barcelona and from the La Barceloneta district to the monastery to prevent the spread of the infection. The community took in 220 people, even using the church building, and tents were pitched in the courtyard until the end of the epidemic in June 1822; the cleanliness and the whitewash of the monastery's walls were verified when the camp was removed.<sup>6</sup>

The monastery was once more requisitioned for use as a lazaretto during the cholera outbreak in Barcelona in 1834. Patients transferred from the Casa de Caritat in Barcelona occupied the cloisters, the novitiate, and a large part of the convent.<sup>18</sup> The disease spread among the patients, killing many, and affected the monastery's gardener and the curate of Sant Genís dels Agudells.<sup>6</sup>

### Today's Hospital Vall d'Hebron

The slow pace of rural life began to change in the early 19th century as a result of the Industrial Revolution, in which Barcelona and the surrounding towns, particularly Pla de Barcelona, were active participants. The early effects of population growth, the transport revolution, and the new demands of industrialisation on the slopes of Collserola were mild, but marked the beginning of a gradual but unstoppable transformation of the landscape. This completely rural setting began to see the construction of small flour and carpentry businesses, as well as houses.

The asphyxiating social and health conditions of the city of Barcelona led to the demolition of the city walls in 1852. Industrialisation displaced some of Barcelona's most important infrastructure and general industry to the outskirts of the city; examples include the railway workshops and later the Montcada pumping station and high-voltage electricity pylons, as well as healthcare infrastructure, such as the sanatorium. In 1889, the Hospital Mental de la Santa Creu was opened





**Figure 5.** Part of the Jaussely Plan, published in *La Il·lustració Catalana* in 1911, showing the planned placement of a hospital in Vall d'Hebron, on the slope near mount Tibidabo

in today's Guineueta; the hospital was directed by Dr Emili Pi i Molist, a pioneer in the treatment of mental health conditions in Spain.<sup>43</sup> The imposing building was built according to a “reasoned medical plan” and included the most modern hospital techniques of the day. The progressive construction of the algebraic, geometric district of Eixample was planned by the engineer Ildefons Cerdà in 1860 and included the new university, the Hospital Clínic (1888-1906), and the new Hospital de la Santa Creu i Sant Pau (1902-1933); with the addition of other municipalities in 1897, the need arose to harmonise planning with the development of an urban plan for greater Barcelona.<sup>44</sup> Pressured by the urban planning policy of the Regionalist League, the city council promoted an international tender for the project, which was won by the architect and urban planner Léon Jaussely in 1903. The plan was promoted thanks to the Noucentisme of Josep Puig i Cadafalch, and was approved in 1905; in 1917, it was legalised by the Commonwealth of

Catalonia, due to the administration's special sensitivity to public works to integrate the territory. This was an ambitious, globalising project that took into account urban factors in its economic and social forecasts, the tram and bus network, the construction of the metro, the sewerage and water supply network, healthcare centres, and cultural and education infrastructure, with effective links between the centre and peripheral hubs of the city. The plan for linking Barcelona to neighbouring towns (the Jaussely Plan), which became the main reference for urban planning in the early 20th century, was subsequently reproduced in the journal *La Il·lustració Catalana* in 1911.<sup>45</sup> The plan established the Vall d'Hebron site for the “placement of a hospital,” as shown in Figure 5.

Francisco Franco's victory over the Second Republic in the Spanish Civil War, with the instauration of the military dictatorship, led to developmentalism, and progressive construction began in Barcelona, with the





**Figure 6.** Postcard: Barcelona. Residencia Sanitaria Francisco Franco. Ediciones ARA. (Property of the author). In the upper left of the image, the monastery's Granja Nova farm can still be seen opposite the recently built hospital.

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arrival of thousands of immigrants to the city. In these circumstances, the Vall d'Hebron site seemed ideal for the construction of a large healthcare complex outside the city centre. It was no longer to be used as a health refuge away from the urban centre, or to isolate infectious diseases from the city: now, sick people from the city would be sent there, in accordance with the healthcare ideas of the day.

The hospital, which at the time was known by the pompous name Residencia Sanitaria Francisco Franco (the term “residence” did not carry the connotation of high mortality rates associated with the name hospital), was the first built in Spain to provide care under the regime's mandatory health insurance. The first patients were admitted in May 1955. It was officially opened on 5 October 1955 by General Franco and his minister for work, José Antonio Girón de Velasco, the same day that he opened the SEAT car factory and delivered the keys to 4000 homes developed under the Union Organisation for Housing.

The hospital's early days were very difficult, as it was initially established as an open centre, particularly for surgical patients, without a fixed medical staff; bureaucracy and geographical isolation also represented challenges. These factors meant that despite the magnificent building and resources, the hospital was barely able to compete with Barcelona's other hospitals. However, its status improved when the prestigious professor Agustín Pedro Pons joined the staff as head of the internal medicine department, after retiring from the chair of the Hospital Clínic medical school in 1968.<sup>46,49</sup> An heir to the secular and regenerationist scientific, experimental, and clinical positivism that in 1907 had led the faculty of medicine and surgery of the Hospital de la Santa Creu to break away and move to the Hospital Clínic, and to the faculty's organisation under chairs, professor Pedro Pons promoted the hierarchical organisation of the hospital with internal medicine departments and medical specialties in a period of just two years, thanks to his consolidated experience. He

was also assisted by the competent army surgeon Ángel Díez Cascón,<sup>48</sup> who was head of the surgery department. The hospital successfully adopted the hierarchical model promoted by Carles Soler Durall and Fernando Alonso Lej de las Casas at the Hospital General de Asturias and by José María Segovia de Arana and Vicente Rojo at Clínica Puerta del Hierro.<sup>49,50</sup>

The early implementation of the internal medicine residency system (it was the second Spanish hospital authorised to adopt the system, after Clínica Puerta del Hierro in Madrid), in 1968, helped to consolidate the hospital's position as a reference in care provision, as well as the incorporation in 1971 of the Universidad Autónoma de Barcelona as a teaching centre.<sup>42</sup>

Subsequently, the maternity and children's hospital and the traumatology and rehabilitation hospital were opened, in 1966 and 1967, respectively<sup>42</sup>; the latter was directed by Ramón Sales Vázquez, also from the Hospital Clínic. Sales Vázquez was the first head of the neurology department, from 1966 to 1971. When Agustín Pedro Pons died, the neurology department was merged with the neurology unit of the Hospital General's internal medicine department, and was associated with the neurology outpatient service at the Atarazanas health centre, which was also directly run under the internal medicine department at Vall d'Hebron. In 1981, the neurology department returned to the Hospital General, with the neurological rehabilitation beds remaining in the traumatology and rehabilitation hospital. The department had three heads of section: Nolasac Acarín, Juan Zunzunegui, and Agustín Codina. The latter, who was a student of professor Agustín Pedro Pons and received neurology training from Ramón Sales Vázquez and professor Lluís Barraquer-Bordas, and had worked with professor Raymond Garcin at the Salpêtrière in Paris, led the neurology department from 1984 to 2004.<sup>1</sup>

Today's Hospital Vall d'Hebron is a modern healthcare complex with high levels of technology and complexity, and contains 1400 beds in 4 buildings at the site of the former Vall d'Hebron monastery. Urbanisation and improved transport links have enabled the integration of the hospital into the urban network, and it is no longer isolated on the mountainside. It has become a reference centre both in Catalonia and on the national and international levels. The story of this hospital is the history of public health in Catalonia.

## Discussion

With some interruptions, healthcare has been provided at the Vall d'Hebron site on the Collserola mountain for centuries: under the auspices of the church in the Middle Ages; as a health refuge for convalescence and to shelter from transmissible diseases in a salutary monastery setting; after the end of the Ancien Régime in the 19th century as a lazaretto or quarantine hospital, and as the Hospital Vall d'Hebron in the contemporary period.

## Conflicts of interest

Part of this study was presented in the oral communication "Primera noticia histórica de ictus atendido en Vall d'Hebron en 1607" at the 68th Annual Meeting of the Spanish Society of Neurology, held in Valencia between 15 and 19 November 2016. This study received no funding of any kind. The author has no conflicts of interest to declare.

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