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Summary

The late medieval health care system of Leiden, 1400–1600

This study deals with the health care system of the city of Leiden in the fifteenth and sixteenth centuries. It aims to show how municipal administrators and medical professionals shaped the need for care, in reaction to illness and injury. The central question is which professionals and institutions played a leading role in providing medical care for inhabitants of Leiden, the urban region and passers-by.

Leiden was one of the major cities in the county of Holland. Around the year 1400, it had a population of about 5,000. The economy of Leiden was increasingly dominated by the textile industry. During periods in which that industry flourished, the city endured a strong growth through the influx of immigrants. In the fifteenth century, the city went through a period of strong expansion, which roughly lasted from 1430 till 1480. The large population increase in these years resulted into a population of c. 14,000 by 1480. From then on, the growth of the textile industry levelled off and from c. 1530 the economy of Leiden was ailing. With the economic stagnation, the growth of the population came to a halt. For the better part of the sixteenth century Leiden was a city in decline with a dwindling population. From around 1580 onwards, the city’s economy improved vastly, again being powered by the textile industry. The stream of immigrants in these years was even larger than during the period of expansion in the fifteenth century. The population grew from c. 10,000 in 1575 to c. 24,000 by 1600.

Mortality crises

This study includes an analysis of the mortality crises that struck Leiden in the fifteenth and sixteenth centuries. We have compiled a detailed record of the years in which increased mortality occurred in the city. A deviation of 20% or more from a moving 9-year average is defined ‘mortality crisis’. Years that saw a mortality of at least 50% above the 9-year-average are considered as years with severe mortality crises. Between 1395 and 1610, a time span of 216 years, Leiden was struck by increased mortality for a total of 39 times. In the same period there were 28 severe mortal-
ity crises. On average, a mortality crisis occurred once every six years, and a severe mortality crisis once every eight years. The intervals between severe mortality crises ranged from just a couple of years to a much longer period (several times an interval of ten years and once even 23 years between severe crises). The duration of the individual mortality crises differed as well. In a couple of cases there was not just a single year of increased mortality, for instance in 1467, but there were also some consecutive years with plague. These were sometimes preceded by a severe famine, for instance the famine of 1481-1483, which coincided with the plague epidemic of the years 1483-1484.

Infectious disease, particularly plague, was the predominant cause of mortality crises in Leiden in the fifteenth and sixteenth centuries. Acute infectious diseases were responsible for at least 20 severe mortality crises, 18 of which caused by plague. Each of those crises represented a period of many sick people within the city and a heavy burden on medical provisions. Causes other than disease played a much smaller role. An (extreme) increase in grain prices, resulting in famine, accelerated the outbreak of plague, especially in the fifteenth century. Famine itself does not appear to be an important and independent cause of peak mortality. Also, war was not an important factor leading to mortality crises by itself.

The medical market

Leiden’s health care in the late middle ages can be seen as a medical market, with the sick people on the demand side, and the suppliers of medical care on the other. The man or woman, struck by disease or injury, had varying options for seeking care and healing. The sources for the late middle ages show little of the individual sick person and his or her choices. The medical market of Leiden of the fifteenth and sixteenth centuries therefore comes into view predominantly through the different suppliers of medical services.

The suppliers on the medical market were the institutions for social care and the practitioners of the different professions in health care. The hospitals and the town’s other institutions for social care were primarily concerned with care for the poor. Part of that care was medical care for the poor. In this study we have focused on the institutions which provided (para)medical care. These were St. Catharine’s Hospital (‘St. Catharinagasthuis’), founded just before 1276, Our Lady’s Hospital (‘Onze Lieve Vrouwegasthuis’), founded c. 1395, St. Elisabeth’s Hospital (‘St. Elisabethgasthuis’), founded in 1428 en the Leiden leper hospital (‘leprooshuis’), founded c. 1400. From around 1530 to 1570, the former convent Lopsen, just outside the city walls, served as an annex to the St. Catharine’s Hospital and pest house. At the end of the sixteenth century, some hospitals merged and the city founded the Cecilia Hospital (‘Cecilia-
gasthuis’), designated for the care of people suffering from plague or mental illness.

The four most important professions on the medical market of Leiden were the physician (‘doctor medicinae’), the surgeon (‘chirurgijn’), the midwife (‘vroedvrouw’) and the apothecary (‘apotheker’). We have determined which area of medical care was covered by each of these professions, and how the city regulated the practice of these professions. Furthermore, we have documented which men and women in Leiden in the fifteenth and sixteenth centuries gave substance to these professions.

The institutions and medical professionals operated in an urban system, in an interrelation of private and (semi)public arrangements. The municipal government controlled this medical market, primarily by regulating the activities of the practitioners of the different professions on the market. The city also had an influence, directly and indirectly, on the institutions and it guaranteed services itself by appointing town officials in the medical domain: the town physician (‘stadsmedicus’), the town surgeon (‘stadschirurgijn’) and the town midwife (‘stadsvroedvrouw’).

We can with some certainty determine the size of the four occupational groups at different moments, from the end of the fifteenth century onwards. These groups roughly consisted of two to five physicians, between ten to twenty surgeons/barbers, two to five apothecaries and four to at least seven midwives. At any given moment an unknown number of medical professionals from elsewhere were active in the city. Over the entire duration of the fifteenth and sixteenth centuries we have documented almost 40 physicians and midwives, just over 30 apothecaries and almost 170 surgeons/barbers.

Each of these practitioners had his or her own field. It was the surgeon, however, who provided the largest part of the professional medical care in the city. During the two centuries there were, on average, over four surgeons/barbers for every physician. But there are not just quantitative clues to the important role of surgeons in medical care. Surgeons resided in each of the city districts of Leiden. Physicians usually tended to live concentrated in one or more wealthy districts. Physicians are almost absent in the records of the institutions for social care. It appears that of the two, it was almost exclusively surgeons who worked within hospitals. Most legal proceedings over unsettled medical costs concern surgeons’ fees. Another indirect indication is that vacancies for town surgeons were filled each time. This indicates that the work the town surgeon performed was deemed essential for the urban community. This holds true to a lesser extent for the position of the town physician, and not at all for the town midwife. This last position was not filled permanently until the second quarter of the sixteenth century.

The boundaries between the domains of the physician, the surgeon and the apothecary were not etched in stone. The progressive formalisation, as laid down in the consecutive ordinances (1441, 1466, 1553 and 1589) of the surgeon’s guild, did not lead to an absolute demarcation of the different professions. The city council did in
fact impose rules onto the different professions, but this was not a closed system and
the city’s authorities would allow deviations from the rules. Controlled deviations
from the rules were part of the system. We identified transgressions between both
the fields of physician and apothecary and between physician and surgeon. Con-
cerning midwives, the question is whether every childbirth was indeed assisted by a
midwife or if poor women were assisted exclusively by relatives or neighbours. Mid-
wives operated in a specific niche of the market, exclusively for women, and only
during pregnancy, childbirth and probably women’s diseases and sometimes as ex-
erts in juridical cases.

Apart from apothecaries, other informal healers, without a university degree, ven-
tured onto the physicians’ field of activity. At the end of the sixteenth century medi-
cal practitioners who applied the ideas of Paracelsus (1493-1541) operated in Leiden.
The therapies of these paracelsists were characterised by the use of chemical prepara-
tions, which differed from the predominantly herbal and mineral nature of tradition-
al medieval medication. The domain of the surgeon bordered the activities of spe-
cialized, often ambulatory surgical specialists such as lithotomists (‘steensnijders’) and
oculists (‘oogmeesters’). They received permission to perform surgery in Leiden
if they adhered to the ordinances of the surgeon’s guild, both in terms of accepting
supervision and in contributing money to the guild. Accounts on quacks and other
non-regular healers are scarce. They cannot have had a substantial market share any-
way. The ordinances of the surgeon’s guild were clear, and to avoid competition, the
guild made sure that not just anybody could earn a living in Leiden at the expense of
its members.

Not just surgeons and surgical specialists, but also physicians, midwives and
apothecaries were active outside their own city and in the neighbouring countryside.
Leiden’s leper house took in lepers from the region, and in exchange got the parish
churches in Leiden’s hinterland to collect money for the leper house. Professional
healers from Leiden made a clear presence in the region, but Leiden certainly had no
medical ‘monopoly’ in the region. Also physicians and surgeons (‘buitenmeesters’) from
other cities in the county of Holland were active in the area around Leiden and
in the town itself.

Now and then, criticism regarding each profession or its individual practitioners
resounded. Physicians and apothecaries were very rarely criticised. Leiden’s sur-
geons in general faced, as far as records can tell, hardly any criticism. Also, there were
no complaints about the town surgeon, with the probable exception of the dismissal
of the town surgeons in 1476, followed by the recruitment of a new surgeon from out
of town. There were, however, structural problems in the field of obstetrics. On two
occasions, once in the 1460’s and again in the 1590’s, the municipal government inter-
vened to improve the level of obstetrics. These were extraordinary actions, both in
the outspoken and explicit definition of the problem, and in the willingness to pay a
generous salary to the midwife brought in to solve the problem. On both occasions the midwife concerned was also charged with supporting and training other midwives. The explanation is that surgeons were trained by their guild and had to pass an exam. No such regulated training and examination was available for midwives. Apart from the two periods of crisis, no judgment from contemporaries is available, but the quality of obstetrics was probably under constant pressure. A hint in that direction is that until the 1540’s none of the town midwives originated from Leiden.

The role of the municipal government

One of the basic assumptions of this study has been that the late medieval and early modern city, with the authority to control and shape its internal affairs, justifies research into its medical facilities, especially when taking an approach that focuses on the organisation of medical care. The correctness of this assumption has been confirmed for fifteenth and sixteenth-century Leiden. At no point during these two centuries did a decisive influence from the regional authorities exist. The system of health care was decided on by Leiden itself.

We have observed that the system of municipal health care was arranged at city-level, but was not – except for a few extraordinary interventions – the result of active policy-making by the municipal government. Health care was not high on the political agenda in the fifteenth and sixteenth centuries. Only on rare occasions did it form an independent subject of decision-making for the city council, which had a decisive vote in urban politics. The municipal government was not passive all the time and neither over the full range of health care, but the performance of the council was far more characterised by reacting to than by anticipating the health risks that threatened the citizens of Leiden and were connected with the expansion of the urban community.

The founding and exploitation of the hospitals and other institutions for social care illustrated this predominantly reactive role of the municipal authorities. The institutions owed their existence to initiatives taken by wealthy inhabitants of the city, who reserved money and goods for the founding of the hospitals. The municipal government subjected the institutions to indirect supervision, mainly on a financial level, but would seldom involve itself in the state of affairs of these institutions. Similar conduct that was mainly of a reacting nature was demonstrated during outbreaks of plague. The frequently occurring plague epidemics led to massive death, but also came with a heavy disease burden. Both the plague sufferers that succumbed and those that recovered laid a burden on the medical provisions. The urban community accommodated that extra demand for medical care by spreading the added disease burden throughout the city. Many plague patients were cared for by their own
family or private nurses in their own homes. The town’s orphanage outsourced their plague infected children to families. The hospital, later the pest house, placed additional temporary staff on their wards. As plague broke out, the municipal government issued plague ordinances, which were repeated when an epidemic persisted. These plague ordinances were not enforced vigorously. A dedicated pest house at the complex of the St. Catherine’s Hospital was not realised until the 1450’s. At that time Leiden had already gone through a century with approximately seven severe plague epidemics. This was certainly not a proactively operating government. A scarce example of quick intervention was the establishment of a provision for patients who suffered from syphilis, after the introduction of this new disease in Leiden shortly before 1500. Apparently, the existing provisions were not adequate to cope with syphilis, and the health care system of Leiden reacted quickly and decisively.

This mixed picture of reacting and anticipating by the local authorities, but with the emphasis on a reactive policy, also came forward in the appointment of town physicians, town surgeons and town midwives. The medical personnel in the service of the town had to help the poor for free, and were allowed to charge wealthy patients a fee. Only the position of town surgeon was filled continuously during the fifteenth and sixteenth centuries. The position of town physician was less pronounced than the position of town surgeon. There were so few physicians in the city at any given time, that a connection between the municipal government and physicians was quickly made, even if it was not formalised by an appointment as a town physician. It was not until the sixteenth century before the appointment of town midwives became as self-evident as the appointment of town surgeons had been in the early years of the fifteenth century. The height of the salaries that were offered gives another example of an alternating reacting and anticipating government. The occasions in which the authorities were willing to invest in higher salaries stand out. Each of these occasions was caused by a health care problem that forced the municipal government to act.

The key to explaining this varying and mainly passive conduct concerning health care lies in the philosophy of government at the time. The municipal government considered itself responsible, as did the authorities of any city in the county of Holland, for the ‘common good’ of the city and its inhabitants. This ‘common good’ meant that the municipal government tried to guarantee the safety and security of Leiden, by safeguarding the city from attack and by maintaining peace and order in the city. Other important aims were the facilitation of economic affairs and the city’s finances. It is in this broader scope that the performance of the municipal government with regard to health care should be seen. Medical care was part of a much bigger framework of care for the ‘common good’ of the city and its population.

Therefore, the conduct of the municipal government regarding health care should be considered primarily as a contribution to improving the state of affairs in the city,
and not as a mission to take care of the health of the citizens of Leiden. The authority’s actions were thereby limited to involvement in basic (medical) provisions, reacting to incidents and intervening when unacceptable quality problems occurred.

**The decisive years**

There were two periods of transformation between 1400 and 1600 in Leiden’s health care, the first in the 1450’s and 1460’s, the second in the final quarter of the sixteenth century. The latter is by far the most notable in the historiography of Leiden, including the opinion that during this period a fundamental reform of the (medical) care for the poor was realised. In this study however, we argue that it is plausible that predominantly the first of these crucial periods the system of health care of Leiden actually got its final form.

The reorganisation of social care that was started just before 1580 and was completed around 1600, took place during the first decades of the rapid progression and ‘second’ heyday of Leiden’s textile industry. It lasted from the 1580’s to well into the seventeenth century. Soon after the successfully opposed siege of Leiden (1573-1574) the civil authorities started to work on the system of social care. The need to get the city back on track after the siege initiated this process. In 1577 the town council discussed a report that contained a blueprint for the new organisation of social care. A large stream of immigrants was yet to come. After that, the process was fed by the stormy development of the city. From around 12,000 inhabitants in 1581, Leiden’s population grew to c. 24,000 people by 1600, an average increase of 625 people per annum. A number of mergers were realized between hospitals and other institutions during the fourth quarter of the sixteenth century. The leper house was moved to within the city walls and a former convent was rebuilt into a combined pest house and mental hospital. Other developments included the creation of the function of a town surgeon especially for plague patients (‘pestmeester’), in 1583. Likewise, midwives to assist women infected by plague (‘pestvroedvrouw’), were appointed in 1599. Another new development was the founding of the university in 1575, which brought professors of medicine into the city.

The first period of urban dynamics, the decades around the middle of the fifteenth century, has received far less attention in historiography. This study provides the building blocks necessary to construct a comprehensive image, over the full width of Leiden’s health care, of the developments that took place during the fifteenth century’s period of expansion, which lasted from roughly 1430 to 1480. During the 1450’s and 1460’s, the municipal government acted for the first time, directly or through the administrators of the semi-public social institutions, in a proactive manner in a wider and more comprising area. Up until then the scarce governmental activities were
limited to singular aspects of health care. In the 1450’s and 1460’s, the municipal government took measures over the full extent of health care: in plague care, the accommodation of the mentally ill, improvements in obstetrics and the regularisation of the medical professions. In 1453, the town physician was scolded by the city council for not making enough of an effort to help poor sick people in the city’s main hospital. It was the only documented example in two centuries of the council calling a town physician to answer for his professional conduct. This meant his performance was met with widely felt discontent and was considered important enough to be the subject of discussion. In 1455, the city council transferred the care for the mentally ill to Our Lady’s Hospital, and had provisions made for poor mental patients. Also around 1455, a pest house was realised on the grounds of St. Catharine’s Hospital. In 1463 the city council appointed the first town midwife. Her favourable employment conditions illustrate how valuable her arrival was considered by the local authorities. The two town physicians were charged with the supervision over the town midwife. Another step was the new ordinances in 1466 for the surgeon’s guild, even though the previous ordinances were only announced in 1441. The ordinances of 1466 clarified the varying competences of the barber and the surgeon. The town physicians were instructed to supervise the examinations of candidates for entering the surgeon’s guild. With the job description for the town midwife from 1463 and the ordinances of 1466, the municipal government, for the first time, positioned the physician, the surgeon, the barber and the midwife in a comprehensive system of medical provisions.

The driving force behind these consecutive measures by the municipal government was the fast growth of the city. Between 1400 and 1440, the city increased by 25 inhabitants per year on average. During the next 40 years, from 1440 to 1480, the population increased by 200 people a year on average, from 6,000 to 14,000 inhabitants. Because of the population decrease caused by epidemics, the ‘gross’ immigration, with all the associated social and economic dynamics, was considerably larger than the ‘net’ growth of 200 people per year. The city harboured many immigrants, many young families, many newcomers who had no social network to fall back on. Although the flourishing textile industry employed many people, the jobs were mainly low-waged. In the middle of the fifteenth century, the explosive growth of the city led to a situation that absolutely necessitated measures to be taken in each of these domains of health care.

Despite mergers and relocations of the institutions their nature and responsibilities stayed the same towards the end of the sixteenth century. Even the most appealing new facility, the new plague- and mental hospital that was realized by 1600, brought together two existing services under one roof. These were services that had already functioned since the 1450’s within existing hospitals. The new positions of the surgeon (‘pestmeester’) and the midwife (‘pestvroedvrouw’) for plague suffer-
ers just formalised some of the traditional responsibilities of town surgeon and town midwife.

The founding of the University of Leiden brought new medical elements into the city. The professors of medicine immediately settled at the top of the medical pyramid, a position formerly occupied by the physicians. However, the founding of this university did not decisively change the structure of the city’s health care. Neither did the new dominant Calvinist religion play a large part in the developments in social care. Towards the end of the sixteenth century, Leiden brought into practice ideas about the centralisation and financing of social care, developed in humanistic circles. This caused no fundamental changes in the supply and organisation of health care. All things considered, health care in this second period of turbulent urban growth and dynamics showed continuity rather than change.

This confirms the conclusion that the medieval health care of Leiden was definitively shaped in the 1450’s and 1460’s. The development of Leiden’s municipal health care started in the late thirteenth century, simultaneously with the transformation of Leiden from a small, but already urbanised settlement to a mature city. Fuelled by private initiative and sporadic actions of the municipal government, the supply of medical provisions and services grew. Over the course of several decades in the middle of the fifteenth century, more intensive governmental involvement resulted in Leiden’s definitive medieval health care system. This did not basically change, despite non-fundamental changes made towards the end of the sixteenth century. It was the fifteenth century’s system of municipal health care with which Leiden entered the seventeenth century.

Translation: Boudijn Ladan