

Where were the doctors when the Roman Empire died?

## WHERE WERE THE DOCTORS WHEN THE ROMAN EMPIRE DIED?

### ABSTRACT

The notion that inadequate health services might have been one of the reasons for the fall of the Roman Empire is investigated. Despite many factors preventing the early development of an adequate public health service, the Romans had achieved much by the 5<sup>th</sup> century AD. Apart from many laws promoting public health, various official measures were taken by the Roman government, for example the appointment of state physicians and free medical services for the poor. But the greatest contribution of the Romans was the provision of facilities which served as an indispensable infrastructure for public health care, such as the provision of an ample supply of pure water, public baths, advanced measures for the disposal of sewage, and somewhat later under the influence of Christianity, hospitals for the general public. Although there were still deficiencies, the Roman government cannot be criticised for laxity as far as the provision of health services was concerned. Inasmuch as they were in default, it was because of lack of scientific medical knowledge which only evolved c. 1 500 years later.

### 1. INTRODUCTION

Several cogent arguments can be advanced to support the view that inadequate health services might have been one of the underlying reasons for the fall of the Roman Empire. The first and most obvious is the Romans' total ignorance of the scientific bases of health. Also the fact that there were social barriers barring the way to a good health service: there was no driving force or organisation to put existing knowledge to practical use. Another stumbling block was the negative attitude of the Greeks and the early Romans toward the ill: the ideal man was noble, beautiful and harmonious. Disease made man an inferior being and thus a disgrace. There was thus no conception of organised, long-term medical care of the sick or disabled. Yet another barrier to the early development of health services was superstition and primitive religious beliefs and practices. The early Romans were content with traditional folk medicine, prayers, expiations and magical practices. Greek medicine was eventually introduced into Rome, but it took long to be assimilated in Roman thought and practice — even in the highly developed Roman Imperial society one finds that alongside excellent

medical men such as Soranus and Galen, magical-religious healing still played an important role. Finally, the advent of Christianity can also be regarded as a retarding factor in the advance of medicine: scientific progress in the investigation of the causes of diseases was for centuries hindered by the Church's explanation of diseases by means of demon theories inherited from Egypt, Persia and the East. The occurrence of miracles in the early Church also played an important role in advancing superstition; moreover, the practice of anatomy was denounced, since man's body was considered the temple of the Holy Ghost which should not be desecrated by dissection. The contribution of Christianity to medical science was to be on another level, namely that of caring for the sick, as will presently be shown.

## 2. OFFICIAL MEASURES

### 2.1 Laws

Despite all these factors militating against the development of public health services, the Romans had by the 5<sup>th</sup> century AD already achieved much in this terrain. Although the authorities apparently did not feel any express obligation to develop public health services, laws were passed and official measures concerning health matters in general were taken from the earliest times when necessary. As early as the 8<sup>th</sup> century BC one finds a law prescribing that Caesarian sections should be performed on women dying in labour. This concern about the life of an as yet unborn Roman citizen was probably aimed at the increase of the population of the newly founded town of Rome.

As to hygiene in the city, another very early injunction forbade the burning or burial of corpses within the walls of Rome. This law was followed by many others regarding hygiene in the city, for example the very practical measures of Julius Caesar forbidding among other things the defiling of the narrow streets with filth and refuse. Measures were also taken regarding medical practitioners; some concerned the appointment of state physicians.

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## 2.2 Foreign aid

A good illustration of Rome's attitude to public health can be found very early in her history: a great epidemic broke out in Rome in the year 293 BC. The senate consulted the Sibylline books, as was traditional in times of crises. The recommendation was that they should import the cult of Asclepius, the Greek god of medicine, from its chief centre in Epidaurus. It is related that a serpent (the symbol of the god) boarded the ship at Epidaurus of its own accord, and when the mission arrived in Rome, it swam ashore to an islet in the Tiber. After the epidemic had subsided, the grateful Romans built a temple on the island in honour of the god whom they named Aesculapius in Latin. There is a very prosaic explanation of this myth: Roman medicine was still very unsophisticated in the 3<sup>rd</sup> century BC and thus the state had to seek outside assistance against the disease. The priests in Epidaurus advised that it would be more hygienic to have ill people outside the built-up area of the city. Therefore the temple to Aesculapius where the afflicted could seek healing was built on an island in the Tiber, outside the city precincts.

## 2.3 Public physicians

Another instance of an advance in health care is the story told by an early historian about the first physician to come to Rome, namely Archagathus, who migrated from the Peloponnesus in the year 219 BC. He was granted the rights of citizenship and a shop was purchased at public expense for his use. Initially Archagathus enjoyed great popularity as a "wound specialist" (*vulnerarius*), but he was soon called *carnifex* because of his savage use of the knife and cautery. The result was that he returned home to his former obscurity, and his profession as well as all physicians fell from favour. Apart from giving us a glimpse of the Romans' antagonism toward Greek physicians, the main significance of this story is to be found in the fact that Rome had done what Greek communities had been doing for centuries — the still rather backward but rising city had in the late 3<sup>rd</sup> century BC hired a doctor from abroad to be a resident civic physician.

This practice of hiring a physician to care for the public health of a city was regularly followed by the Greeks from the earliest times

— during the 4<sup>th</sup> century BC Athens e.g. had six public physicians! In the Roman world it was only during the time of the Empire that cities in general started to follow the example set by the Greeks nearly six centuries earlier. Since the 2<sup>nd</sup> century AD most cities had one or more municipal doctors who tended the common people. These doctors (called *archiatri medici publici*) had many privileges (exemption from taxes, etc.), and besides their state salaries, they were also paid well by prosperous private patients. The office of public doctor was probably more lucrative than, but not as honourable as that of court physician. Besides these, there were also the slaves' doctor and the gladiators' doctor. There was at this stage already some specialisation in medical practice — we hear for instance of a *medicus clinicus* (a physician who attended patients sick in bed), a *chirurgus* (a surgeon), an *ocularius* (an oculist) and an *auricularius* (an aurist). In Egyptian times there had even been a keeper of the Pharaoh's anus, but no trace of such extreme specialisation could be found in the Roman world!

#### 2.4 Standard of medical treatment

The Romans, however, did not only see to it that there were doctors, but also tried to ensure that the standard of treatment was high. As early as the 3<sup>rd</sup> century BC we find the Lex Aquileia which imposed severe penalties on any doctor who caused death by negligence. One must remember that unlike states such as Assyria, Babylonia, Persia and Egypt, the Greco-Roman world had no legal form of licensure to the medical profession, with the result that there were many charlatans and quacks — one of the satirist Martial's fundamental criticisms in his epigrams was the ease with which a man could establish himself as a doctor. The first step in the direction of some form of licensure was, however, not taken until the 2<sup>nd</sup> century AD. During the reign of Antoninus Pius, the considerable privileges extended to physicians in the Empire were, for financial reasons, restricted to a limited number of doctors which varied according to the size of the communities; the burden of taxation was falling increasingly hard on citizens less able to afford them. Thenceforth physicians had to apply for privileges and present their credentials. Those who were then elected as community doctors or *archiatri* could be trusted to be real doctors who had

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satisfied the authorities as to their knowledge and skill. In private, however, anyone could still practise medicine.

## 2.5 The Hippocratic Oath

The question may arise why the Hippocratic Oath could not ensure at least some kind of ethical standard amongst physicians. The reason is that this document had no legal force and that most physicians in the pre-Christian era were probably not aware of its existence. It is doubted nowadays whether this so-called Hippocratic Oath was actually written by Hippocrates. It is now regarded as an esoteric ethical document, partly of Pythagorean origin, compiled by a handful of Greek philosophers in the 5<sup>th</sup> or 4<sup>th</sup> century BC and having as aim to mutually bind teacher to pupil, to keep the soul of the physician in accord with the essential Pythagorean values, and to designate proper moral duties between physician and patient. After a period of relative obscurity, the Oath's high ethical code came to be admired with the advent of Christianity, and since then it has become known more widely.

## 2.6 Rewards and privileges

There were, of course, also good doctors in antiquity, as is proved by the numerous laws granting privileges to physicians in gratitude for services rendered. There had been enormous antagonism against all Greek physicians in the 3<sup>rd</sup> and 2<sup>nd</sup> centuries BC and humiliation by the snobbery of the ruling class even down to the 1<sup>st</sup> century BC, but their position in Rome was definitely established when in 46 BC Julius Caesar granted citizenship to all physicians practising in Rome (even in the 1<sup>st</sup> century AD medicine in Rome was still practised largely by Greeks). In the Imperial period the status of physicians greatly improved — there is evidence that the royal physicians at the courts of Augustus and Tiberius received handsome salaries. Augustus further improved their position when, in gratitude to his freedman Antonius Musa who cured him of a disease, he gave to him and all his fellow practitioners freedom from public taxes then and forever.

### 2.7 Free medical services for the poor

Free medical services for the poor were not instituted until the 4<sup>th</sup> century AD. In a law passed in 368 the emperor Valentinian I decreed that public doctors were expected to render their services free of charge to the poor. Payment for services rendered by doctors to private individuals was very erratic and was only enforced by law at a very late stage. Salaries for physicians appointed by the state were probably instituted in the early Empire, and by the time of Constantine they were an accepted fact of life.

### 2.8 Training of physicians

Another advance in medical health was the interest the state started showing in the training of physicians. Vespasian (AD 69-79) was the first emperor to grant salaries to teaching doctors who had hitherto only received fees from their pupils. Later in the 3<sup>rd</sup> century AD the emperor Alexander Severus provided salaries and public lecture rooms for professors of medicine in Rome and in a few other cities, as well as allowances for needy students.

### 2.9 National health scheme

An amazingly “modern” development in public health was an arrangement in ancient Egypt and Greece which can be regarded as the equivalent of our modern national health schemes, but for some strange reason was not adopted by the Romans. In both Egypt and Greece there is evidence that a yearly payment in the form of a tax was made to the government who kept it as a fund which was used for health services. Another benefit was that those needing medical assistance in wartime or while travelling were treated free of charge.

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### 3. ABORTION

An age-old issue which is still being hotly debated today but which apparently attracted the minimum attention in antiquity until the advent of Christianity, is abortion. For the Greeks and Romans child exposure was a relatively common practice, and infanticide was still practiced by the rich during the highly civilised Roman Imperial period. In excavations infant skeletons were often found under floors and even in rubbish pits — one must remember that the *paterfamilias* had power of life and death over his whole household. It is therefore hardly surprising that Greek and Roman law did not protect the unborn child, and that the act of aborting the fetus — provided the mother was not harmed — tended to be viewed as morally permissible. Since in classical Roman law there was no prohibition on abortion, it was practised without embarrassment by the upper-class Romans to limit their families (although contraceptives were also widely known and commonly used in antiquity). The first legal measures of the Roman State against abortion was only taken in c. AD 200. But the motivation behind these sanctions is revealing: the point at issue was still not the protection of the unborn infant, but the right of the father which had been impinged upon, or the interest of the state which had lost a potential citizen, or the life of the mother which had been endangered because drugs had been taken. One can, however, trace an increasingly negative attitude towards abortion in all kinds of sources from the earliest times on. This reflects a growing conviction that the fetus as a living being has the right to live. This conviction grew stronger with the advent of Christianity: Christian writers condemned abortion as being incompatible with and forbidden by the fundamental Christian teaching of love which forbade the taking of a life.

## 4. INFRASTRUCTURE



Figure 8: Aqueduct at Pont du Gard, France.

### 4.1 Aquaducts

Public health care requires facilities provided by the government as necessary infrastructure, among which the supply of water is very important. This was probably the Romans' greatest contribution in this field: the finest monuments to their care for public health still stand for all to see in the remains of the innumerable aqueducts the Romans built (Fig. 8). Wherever they set foot, we find ruins of these gigantic structures, many of which still fulfil their original purpose today. Before the construction of the first aqueduct in 312 BC by Appius Claudius Caecus, the citizens of Rome drew their drinking water directly from the Tiber, a method that was certainly practical enough but rather dubious from a sanitary point of view. By the beginning of the Christian era there were six aqueducts in operation, and at the height of the

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Empire — c. AD 100 — this number had grown to ten. About half of the water went to the public baths and street fountains; this left about 50 gallons or 225 litres per person per day for a population of around 1.5 million. This figure compares well with modern conditions: the inner city of Bloemfontein e.g. has approximately 265 000 inhabitants; the daily water supply of 101 000 000 litres gives us 384 litres per person per day. But back to Rome: it appears that very little of this immense supply of water found its way to private houses. A private supply could only be obtained by imperial grant on payment of a fee, which meant that only leading, prosperous citizens would qualify; others had to employ water carriers or had to fetch their own water from street fountains or basins. Nevertheless, water was available and of reasonably good quality.

#### 4.2 Sanitary measures

Sanitary measures were a source of great civic pride to the Romans. In James Joyce's *Ulysses* one of the characters says that when the Greeks moved into an area, they would say: "Ah, this is a meet place, let us build a temple!" whereas the Romans would say: "Ah, this is a meet place, let us build a sewer!" A landmark in the field of public hygiene was the Cloaca Maxima, originally constructed by the Etruscans in the 6th century BC to drain the marsh where the Forum Romanum was later situated. Later it acquired all the functions of a modern sewer, and it was so solidly built that it is still used for that purpose today — 2 500 years and many millions of litres later! The sewers were continually extended and improved during the Republic and Empire until they formed a network under the city. Most of these *cloacae* were constructed on such a grand scale — about 3 metres wide and 4 in height — that in certain places a wagon laden with hay could be driven through them with ease. Yet, looking at the reverse of the coin, it appears that by no means all the houses in Rome were connected with the public system of sewers — especially not the upstairs apartments in flat buildings. Therefore the majority of private people — even at the height of the Empire — still had to use the public latrines in the streets, or the (in)famous marble building equipped with urinals, constructed by that very practical-minded emperor Vespasian. The masses were therefore not always able to share in the available hygienic facilities: in the poorer quarters passers-by could count themselves lucky if it was only the con-



Figure 9: A two-seater lavatory at Timgad, North Africa.

tents of the chamber pots that were emptied out of the upper storeys of apartment buildings that fell on their heads and not the vessels themselves! According to the jurist Ulpian this really did happen and on one occasion the victim died because of the blow received from such a “missile”!

### 4.3 Public baths

The famous public baths also illustrate the appreciation that the Romans had for public and personal hygiene. There were 170 public and private bathing establishments in Rome according to M. Agrippa’s census in 33 BC, and more than a thousand by the 4<sup>th</sup> century AD. These baths put personal hygiene on the daily agenda of each Roman and within reach of the humblest — even women and slaves! Here the citizenry also learned, by taking part in the sporting activities offered there, to put a premium on physical fitness as indispensable for good health.

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Figure 10: A scale model of the Baths of Caracalla, Rome.

#### 4.4 Environment

Yet another contribution of the Romans sprung from their awareness of the relationship between environment and health. Quite early in their history they recognised the need for locating new towns on salubrious sites. According to the 1<sup>st</sup> century BC architect, Vitruvius Pollio, liver inspection of sacrificial animals by the augurs was used for this purpose — if the liver of an animal that had grazed on the land being considered for settlement was found to be greenish-yellow, the area was regarded as unhealthy for man. Noteworthy too is the observation made by the Romans on the relation between swamps and diseases: Vitruvius noted that towns situated near marshes may remain healthy if sea water could mix with the marsh water — an acute observation which is confirmed today by our knowledge that certain kinds of mosquitoes cannot breed in salt water.

## 5. HOSPITALS

Hospitals as a feature of public health services are taken for granted today. But the hospital as we know it, i.e. an institution where a patient is treated by a physician over a period of time, only came into being in late antiquity. There are scholars who believe that the temples of Asclepius in Greece to which ill people flocked, may be regarded as the first hospitals. In some penetrating articles this view was, however, completely rejected. There is no evidence that patients received regular treatment from the priests: they went to the Asclepiea basically for dreams in which they believed the god revealed to them the treatment they ought to follow. These temples should thus rather be regarded as the approximate equivalent of places like Lourdes. Neither can the *iatreion* or the *taberna* — the consulting-room of respectively the Greek and Roman physicians — be regarded as a kind of hospital, because there is no evidence, whether literary or archaeological, that either of the two had beds attached to them or made provision for nursing patients for a period of time. The question may then be asked where ill people were treated in antiquity. It seems that the poorer patients were brought to the doctor's *iatreion* or *taberna* where they received treatment and were then sent home, while the rich were visited at home by the doctor. This custom was still in use in the time of the Roman Empire, as is evident from the historian Tacitus's description of the disaster at Fidenae in the 1<sup>st</sup> century AD, where the amphitheatre collapsed and 50 000 people were killed or injured. He tells us that the nobles threw open their houses and supplied medicines and physicians. If hospitals had existed, would not Tacitus have mentioned such public institutions whose overflow of casualties went to the great private dwellings? Even as late as the 3<sup>rd</sup> century there is still no evidence of hospitals. These only came into being in the later Empire under the influence of Christianity. And yet military hospitals or *valetudinaria* can be traced back to the 1<sup>st</sup> century BC — they were established after the creation of a professional army when, with the extension of the Empire, it was no longer possible to send soldiers home for treatment. *Valetudinaria* were thus established, especially near the frontiers, where soldiers could be treated (Fig. 11). In a similar way arrangements were made by wealthy landlords during the late Republic for large slave labour forces on big estates. These slaves' *valetudinaria*

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were, of course, private institutions attached to large houses on big estates and they were not open to the general public.



Figure 11: A scale model of the Roman legionary hospital at Xanten. Rheinisches Landesmuseum, Bonn.

We therefore arrive at the strange conclusion that the highly civilised Romans made provision for ill and injured soldiers and slaves because they rendered indispensable services, but seemed to have had no concept of public hospitals to care for civilians. Another strange situation is that these *valetudinaria* for slaves and soldiers played no part in the later evolution of the hospital. Both existed for a particular purpose and for a particular class. Not even the name *valetudinarium* survived, for when hospitals did arise, they were not known by this Latin name, but were referred to by the Greek name *xenodochia*. For the origin of the hospital as we know it — a public institution for the care of the ill — we have to turn to Christianity. Mindful of their Master's sympathetic attitude to the ill, the Christians regarded the care of the patients as a duty laid on them. Hospices, called *xenodochia*

in the Greek-speaking East, which were initially built to shelter pilgrims and messengers between the various bishops, gradually began to be used as places where ill people received treatment and thus developed into proper hospitals. By the 4<sup>th</sup> century AD *xenodochia* were well-known institutions in the West as well, mainly because the emperor Julian the Apostate (AD 361-363) in his attempt to revive paganism tried to attract converts by establishing *xenodochia* such as the Christians had. About a century later in AD 470 we also find the law of the emperors Leo and Anthemius ordering the establishment of *xenodochia*.

The first hospital in the Western world in our modern sense of the word, was built in Rome in AD 390 by a Roman lady, Fabiola, a wealthy widow and friend of St. Jerome. She was a penitent who sought absolution by spending her wealth on charitable works. Two other wealthy ladies, Pulcheria and Pauline, later followed her example and built or endowed hospitals in Constantinople and Jerusalem. Thereafter St. Augustine and in later times various popes ordered hospitals to be built, so that by the middle of the 6<sup>th</sup> century AD hospitals were securely established. And it may be added that by AD 800 the term *xenodochium* began to give place to the term “hospital”.

## 6. CONCLUSION

The initial question whether the Roman Empire had “died” because there were not enough doctors to treat the patients, i.e. whether a lack of health services was one of the reasons for the fall of the Roman Empire, now has to be answered. On the negative side one has to admit that Rome achieved little in medical theory and practice. Because of their limited knowledge of the human body and of the causes of diseases, operations had a frightful mortality rate, medicines could at most relieve the symptoms of illnesses — and then only sometimes — and epidemics remained disasters. But then one must keep in mind that the medical knowledge necessary to curb epidemics only evolved many centuries later when in the 19<sup>th</sup> century people like Louis Pasteur discovered the germ theory of infection, and Joseph Lister introduced antiseptic procedures, reducing post-operative mortality drastically. On the positive side, however, Rome made significant contributions to the advancement of public health care. The Romans were a very prac-

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tical people who, in their belief that prevention is better than cure, made provision for facilities promoting public health care, such as the supply of ample pure water for public and private use, advanced measures for sewage disposal, public baths, etc. In fact, the ready availability of baths is one of the clearest indications of the Romans' positive attitude to hygiene and health. Even more important was the Romans' organisation of medical services. Reference can be made here firstly to the appointment since the 4<sup>th</sup> century AD of public physicians in the various towns and institutions, and to the laws regulating the appointment and services of these municipal physicians. And to this may be added that the Romans' talent for organisation also comes to the fore in the creation, since the time of Augustus, of numerous boards and commissions, such as the Water Board, the Health Commission and various commissions of *aediles* who, as part of their *cura urbis*, supervised the public baths, the cleaning of the streets, the food supply, the markets, etc. The development of these basic health services into an effective administrative system, together with Rome's most important contribution to organised medical care, namely the development of public hospitals, are legacies that endured even after the Empire decayed and disintegrated.

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