

**Saving bodies, saving souls : hospitals in history an exhibition at the Wellcome Trust History of Medicine Gallery, September 1997 / Ken Arnold, Lindsay Granshaw, Denna Jones.**

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# SAVING BODIES SAVING SOULS

HOSPITALS IN HISTORY



An  
exhibition  
at the  
Wellcome  
Trust



The Wellcome Trust  
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AN EXHIBITION AT THE WELLCOME TRUST  
HISTORY OF MEDICINE GALLERY

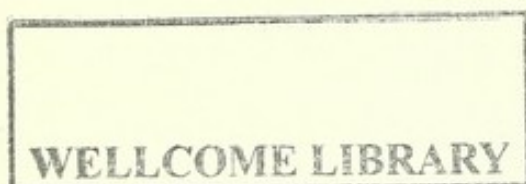
*September 1997*

Ken ARNOLD • Lindsay GRANSHAW • Denna JONES



**The Wellcome Trust**  
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CAC / WEL

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The idea for this, the tenth history of medicine exhibition to be presented in the refurbished Wellcome Building, was already germinating by the time the first, 'Picturing the Body' was open to the public. John Henderson and Robin Price were two enthusiastic contributors to early discussions about a show on the theme of the history of hospitals.

Among the topics tackled by exhibitions that have been and gone since then are East–West medical relations, birth control and reproductive politics, venereal diseases, magic and, most recently, death. At first glance, what is on offer in this exhibition is more driven by the internal history of medicine than its more outward-looking predecessors, whose topics at times seemed almost absurdly unspecific. In retrospect at least, the common rationale behind previous exhibitions was to start with the medicine and work out into broader areas of subject matter in order to lead a non-specialist public in the opposite direction, that is from a subject with which they were already familiar in their own lives into less well-known recesses of medical history. It is, of course, the extraordinary breadth and depth of the Wellcome Institute Library's collections that has made such grand curatorial gestures possible.

'Saving Bodies, Saving Souls' is different, for it starts and ends with a topic that is seemingly purely medical. Two facts, however, allow this exhibition to be every bit as outward-looking as earlier shows. One is that hospitals before the modern era had as much if not more to do with charity and religion than with medicine. The second is that modern hospitals have become so much the dominant institution in medical practice that they have, as it were, created their own broader context. Their sheer size and importance have quite naturally made them a microcosm of society: art and architecture are naturally there, as are science and technology. More importantly however, so too is the human drama of professions, politics and individual lives – for many people, both staff and patients, have lived out much of their lives within a hospital's walls.

In a period when many hospitals have, ironically, been closed down and converted into museums and display spaces, this exhibition is about those key institutions of modern medicine. It seeks to reflect the visual aspects of their rise to prominence in modern medicine, to trace the religious and spiritual aspects of their early history, to look at the strides of technological and scientific innovation alongside the more mundane matters of daily nursing routines, and to showcase the continuing relationship between artists and hospitals.

*Ken Arnold*



## The Wellcome Trust

The Wellcome Trust is an independent medical research charity spending some £250 million on biomedical research every year. The Trust supports more than 3000 researchers, at 300 locations, in 30 different countries – laying the foundations for the healthcare advances of the next century and helping to maintain the UK's reputation as one of the world's leading scientific nations.

The Trust also funds major initiatives in the public understanding of science and is the country's leading supporter of research into the history of medicine. Part of its work in both these areas is focused on two separate galleries. The Two10 Gallery presents a series of exhibitions that explore the overlap between contemporary art and medical science; while, drawing primarily on the riches of the Wellcome Institute Library, the History of Medicine Gallery shows exhibitions relating to various topics in the subject.

## History of Medicine Gallery

The present exhibition is the most recent show presented in the History of Medicine Gallery. This series of exhibitions provides windows on to the Wellcome Institute Library's collections. For reasons of conservation and security the material displayed in them is not usually on public view, but can be consulted by Library readers. The last lines of the exhibit captions reproduced here give details of where library items come from – that is the catalogue numbers and collection areas: Contemporary Medical Archive Centre (CMAC), Early Printed Books, Historical Collection, Iconographic Collections, Modern Medicine Collection, Oriental Manuscripts and Printed Books and Western Manuscripts. These exhibitions often also include objects from the Wellcome collections kept at the Science Museum, as well as relevant exhibits lent by other institutions and individuals.

Approximately two exhibitions are mounted each year, the themes of which often reflect research undertaken within the Academic Unit of the Wellcome Institute. It is also intended that they might suggest ideas for further research.

Past exhibitions have included 'Picturing the Body: five centuries of medical images' (1993) – an examination of the evolution of medical attempts visually to understand the human body and its workings; 'Birth and Breeding: the politics of reproduction in modern UK' (1993/4) – an exploration of some of the debates surrounding motherhood in the twentieth century, with material selected from six archives housed in the CMAC in the Institute Library; 'Fatal Attractions: AIDS and syphilis from medical, public and personal perspectives' (1995) – a comparative look at the histories of two diseases that have had such enormous impacts on world history; 'Abracadabra: the magic of medicine' (1996) – an exhibition about the interwoven histories of magic and medicine; and most recently 'Doctor Death: medicine at the end of life' (1997), which explored the history of death in its medical context.



## The Hospital Records Project

The Hospital Records Project is a joint initiative between the Wellcome Institute Library and the Public Record Office.

It is a computerized database of information about hospital records, mainly those which have been transferred to local authority or other record offices, or which are administered by health authority archivists. With a few exceptions, the Wellcome Institute Library does not itself hold hospital records.

There are currently nearly 2400 entries in the database, which incorporate historical information about the hospitals in question as well as the administrative and clinical records that survive. The Wellcome Institute Library's Contemporary Medical Archive Centre (CMAC) and the Public Record Office are working on updating the information held in the database, as well as upgrading the software. Until the database is made sufficiently 'user friendly', unassisted public access will not be possible. Simple searches (by hospital name) will be undertaken by CMAC staff; but appointments to use the database under guidance are necessary for more detailed enquiries. The database will be available in the search rooms of the Wellcome Institute Library and Public Record Office by the start of 1998.

## Hospitals in British History

Hospitals today are central to healthcare. Most people are born in them; many die there; and most will experience hospital treatment at some point in their lives, if only as an out-patient. It is hospitals, with their technical, building and staff needs, that largely account for rising costs in medical care, even though GPs, chemists, and patients themselves and their relatives cope with most illness. However, hospitals did not always fulfil this central function. They used to be very much on the fringes of medicine. There were few of them; they used few resources; and they treated only the poor.

The first hospitals in the UK, like those on the continent, were tiny charities set up by the well-off for the poor. They were often associated with monastic foundations and grew out of informal accommodation for the sick and travellers. Many of these small hospitals and leprosaria came and went in medieval times. It was a Christian responsibility for the rich to help the poor and donors hoped to secure salvation and forgiveness of their sins through their charity.

Hospital architecture illustrated their religious context: hospitals were often designed in the form of a cross, with a chapel at the centre, to which patients might look and gain inspiration. To their endowers, hospitals were intended more for the cure of souls than of bodies. Even in later years the appointment of a chaplain was often regarded as more important than the appointment of medical staff.

Hospitals of size first developed in Europe in those countries whose trading classes expanded – medieval and Renaissance Italy and the Low Countries (present-day Belgium, Luxembourg and The Netherlands). As cities grew, so did trade, and with it the numbers of wealthy merchants able to make donations to support hospitals. Merchants wished to demonstrate their status by their charitable actions, and monastic foundations tapped them for their support. Often these hospitals were tiny, sometimes closing down after the death of original benefactors; but in larger towns with more numerous merchants they were sometimes destined for a longer life.



In Britain some small hospitals survived the Reformation – most notably St Bartholomew's and St Thomas's in London – while others were dissolved along with their monastic foundations. Even in post-Reformation Britain, when salvation was no longer seen as something which might be purchased, charity was still seen as a Christian duty for the better-off, and they were still prepared to give to hospitals. It was, after all, just as much a mark of financial and social success as it had ever been to be listed as a donor to a hospital.

It was in the eighteenth century, and more particularly in the nineteenth century, as towns and cities grew, that Britain saw a significant expansion in the number and position of hospitals. In London, in the first half of the eighteenth century, five general hospitals were founded – the Westminster (1719), Guy's (1721), St George's (1733), the London (1740) and the Middlesex (1745). Many replicas of the early eighteenth century London hospitals were established in other UK cities, the first in England being the Winchester County Hospital (1723) and the first in Scotland the Royal Infirmary of Edinburgh (1729). The founders now were laymen, not church figures. In some, minority rather than establishment figures predominated. Members of a religious group or minority lacking in political clout bound themselves together by establishing a hospital.

The pattern of establishment was quickly set. A leading lay figure or group would decide on the need for a hospital. A few aristocrats would then be enlisted, and their names published prominently to encourage the support those of lower social standing. Donors were given certain benefits. According to the sum donated, they had the right to admit patients. For a guinea, for example, a donor might have one admission ticket for an in-patient for the year and one for an out-patient. Benefactors also became hospital governors: they elected a dozen or so of their number to supervise the hospital and they voted for members of staff, an important right since it meant that doctors had to seek lay support if they wanted a hospital position.

These hospitals intended to treat only the 'deserving' poor. Their purpose was their charity function: they were not regarded as appropriate places for the treatment of better-off patients. Nor did hospitals treat the very poor. The deserving poor were typically labourers from 'respectable' families, where the head of the household was trying to support his family through employment. Benefactors did not want to give charity to the destitute (who were considered to be responsible for their own plight) or to others whom they regarded as undeserving. The destitute were to be returned to their parish of origin when sick.

Patients were treated free of charge, but first they had to find a benefactor from whom to secure an admission ticket. Thus it was the governors, not the doctors, who



decided who should and should not be admitted. It was not just socially 'undeserving' patients who were excluded: children, pregnant women, fever cases, lunatics and incurables were all turned away. Those treated in eighteenth-century British hospitals tended 'therefore' mostly to be people suffering from accidents or minor medical problems. And when admitted, an in-patient had to agree to a strict set of rules – patients could not leave the hospital, wander through the wards, put coals on the fire, spit and so on and so forth. The expectation, it would seem, was for hospitals to be filled with unruly patients who were not desperately ill. Moreover, convalescing patients had to help with mending linen or nursing other patients.

The new hospitals attracted keen medical interest. Doctors came to regard them as important for their professional careers. Medical staff were unpaid, but hospital positions enabled doctors to become well known among leading lay people – that is to say, the governors – who would help them build up their private practices. An appointment at a hospital also provided medical practitioners with a way of distinguishing themselves from competitors in a crowded medical market. The higher reaches of the medical profession, like the law, church, army and politics, were very much restricted to those who had the right social connections. Hospital appointments came to be highly sought after, because it was expected that they would lead to future prosperity, and as such tended to be secured by a small elite.

Those who were outside this elite but who had been through years of training increasingly challenged the status quo. In the late eighteenth century, and especially in the first half of the nineteenth, pressure grew for reform of the medical system. This mirrored the debate over the reform of political institutions, and in the case of medicine hospitals became a focus for discontent.

The creation of new hospitals – this time by medical men rather than lay people – came to play a part in a more general battle for power and influence. The new establishments came in three waves. The first began around the middle of the eighteenth century, and consisted of hospitals which catered for certain groups of patients excluded from the general hospitals. The first such institutions were the lying-in hospitals, taking in one of the excluded groups of patients, women in childbirth. Lunatic asylums, smallpox hospitals and Lock Hospitals for venereal disease followed.

The second wave came in the establishment of dispensaries for out-patients. Doctors treated the patients at the dispensary or in their own homes. The idea behind them was in keeping with contemporary notions of disease – that illness was unique to an individual in his or her own setting, and best understood in that setting. The first dispensary, in Aldersgate Street in London, was set up in 1770 by John Lettsom, who



had been unable to secure a position at one of the general hospitals. Other dispensaries were soon established in London and throughout the country.

The third wave of new institutions, set up from the early nineteenth century, was that of specialist hospitals which concentrated on a limited range of diseases or a particular part of the body. The first was an eye hospital, later known as Moorfields. It was set up in 1805 as a dispensary by John Cunningham Saunders – another surgeon not able to gain a hospital position, this time at St Thomas's. It soon became a hospital, and served as the model over the next two decades for at least 18 similar eye hospitals around the UK. These were followed by special hospitals set up to treat all kinds of diseases. By the 1860s there were at least 66 specialist institutions in London alone.

The specialists emphasized that their hospitals could focus more intensively on particular diseases or organs. Such opinions were in keeping with changing explanations of disease. Doctors were, from the end of the eighteenth century, moving away from humoral ideas to the concept of diseases as distinct and definable entities which could affect different patients in a similar kind of way. According to this notion, much could be learned from large groups of patients suffering from the same diseases – and the best place to find such large collections of clinical material would be in hospitals. Observation rather than book learning, physical examination, pathological anatomy, and the need to understand disease through statistical analysis now added special medical significance to hospital practice.

From the end of the eighteenth century, private medical schools had grown rapidly. However, with the emphasis on clinical studies, it was argued that students needed to attend hospital wards in order to train properly. The shift to hospital-based medical schools gradually took place, undermining the position of older schools. To be licensed by the Royal College of Surgeons of England, a year's experience in walking the wards was required. And in 1815 the Apothecaries' Act laid down that anyone applying for the licentiate of the Society of Apothecaries must walk the wards for six months. By the 1850s and 1860s hospital medical schools had become the focus for medical education.

Also by that time, voluntary hospitals were not the only institutions catering for the poor. Alterations in the way that poor relief was offered had led to the growth of workhouse infirmaries. From 1834, 'outdoor' poor relief (that is, topping up of wages at levels lower than subsistence, allowing the recipient to remain outside the workhouse) was no longer given. It was argued that such topping up led to pauperization, removing the person's incentive to better themselves. Those who were now unable to support themselves were forced into the workhouse. It tended to be the old and the sick who could not stay above absolute destitution. Increasingly infirmaries were built to accommodate such inmates,



and by the last third of the nineteenth century many workhouse infirmaries had been constructed. The workhouse infirmaries were, therefore, assuming a role that the voluntary hospitals had shunned – the support of incurables and the destitute.

In addition there were cottage hospitals, set up from the late 1850s. These treated a different group of patients again, ones who were expected to pay a weekly sum for treatment. Cottage hospitals were therefore catering for a better-off group of patients than either the free voluntary hospitals or the workhouse infirmaries, and therefore spreading yet further the idea of the appropriateness of hospital treatment. By the mid 1890s there were several hundred cottage hospitals: patient demand was clearly expanding.

Public attitudes to hospitals were also changing as the century ended, a shift in which reforms in nursing played a large part. Nursing reformers in the second half of the nineteenth century – in particular Florence Nightingale – vehemently stressed the darker side of earlier nursing to emphasize the case for reform. They pointed to drunkenness, dishonesty, immorality, corruption and laziness, and contrasted these 'old' characteristics with those of the newly trained, clean, disciplined, and uniformed nurses. However inflated the perceived differences might have been, certainly the improved image of nursing encouraged the middle classes to look on the hospital as a cleaner, more disciplined place in which to be treated.

There were other changes in the nineteenth century which also brought hospitals from the periphery of medical care to its centre. Surgery changed almost beyond recognition. In the early nineteenth century very few operations were carried out, but by the twentieth the amount of surgery was increasing very rapidly and came largely to dominate the business of hospitals. The introduction of general anaesthesia in the 1840s and from the 1860s of antisepsis and, later, asepsis, allowed surgeons to undertake much more radical surgery. Hospitals began to be places in which things could be done which could not be performed in the patient's home.

From the 1850s hospitals also set up laboratories to undertake chemical analyses, and from the 1890s bacteriological work was included. Other procedures also began to be carried out in hospital. Roentgen developed X-rays in the mid 1890s, and by the 1920s X-ray equipment had been installed in most UK hospitals. If patients, whatever their class, were to take advantage of these kinds of techniques, increasingly they needed to go into hospital.

The social changes of the nineteenth century were producing a class of clerks and other white collar workers, often living in cities and unsupported by families. Many of these when the need arose now thought it appropriate to be treated in hospital.



Hospitals were beginning to lose their charity stigma. The system of patients having to seek a governor's letter was falling by the wayside, and patients were increasingly admitted according to their perceived medical need, not their social need. By the end of the century, there was such a noticeable shift in the class of patient willing to come to hospital that private rooms began to be set aside for patients who paid.

World War I served as a stimulus to hospital development. Any casualty, whatever their rank, regarded it as appropriate to be treated in hospital, and that perception persisted after the war as well. From 1929 workhouse infirmaries passed into the hands of the local authorities as independent institutions, separate from the workhouses, and quickly developed into hospitals for the whole town, not just the destitute. The rapid development of surgery and medical technology in the interwar period further assisted this process.

By the time of World War II many of the voluntary hospitals were under severe financial strain. Some of them received government help for setting aside provision for casualties during the war as their functions were taken over within the Emergency Medical Service. They became used not only to that financial help but also to operating within a nationally planned scheme. Not surprisingly their financial precariousness as well as their experience of state coordination during the war helped to pave the way for their acceptance of a place within the National Health Service from 1948.

In the UK, as in other Western nations, hospitals by the mid-twentieth century had become the location for a range of treatments for everyone, whatever their social class. Medical need now determined admission, not social position. There were by now hospitals in most towns and all cities, and everywhere they played a central role in healthcare. They had long since become the centres of medical education and training, the places in which the elite of the profession was based, and the foci for medical technology and a whole range of investigative and interventionist procedures. Hospitals now provided secondary healthcare for the whole of the population.

*Lindsay Granshaw*



*'Saving Bodies, Saving Souls'*

The exhibition

*Introduction*

Hospitals are today at the very core of medicine: they define and contain it. For patients, the hospital is perpetually in the background of their medical lives, ready in moments of great medical significance – birth, death, emergencies and major interventions – to become the main point of delivery. For the medical professions, it is often the place of training, the seat of research and the workplace goal for elite practitioners. And, for a consuming public fed by newspaper headlines and soap-opera drama, the hospital more or less *is* medicine. Even my son of two-and-a-half thinks he knows what a hospital is: the sound of an ambulance, the idea of being 'poorly' and the need to go to hospital have all very quickly become part of his small world.

But this role and profile for hospitals is a relatively recent phenomenon. Just a century ago, they were far from being part of most people's immediate sense of medicine or even of where it was practised. For much of the history of medicine, and indeed for many people in the world still today, the sick were primarily treated at home, or else in someone else's house, with the women of the household taking the dominant role in nursing and healing. Indeed, till the end of the nineteenth century, the hospital offered no special medical advantage for treating the sick, with such factors as the psychological problem of being away from home, the high risk of secondary infection, and the social stigma commonly associated with such institutions, encouraging most people to do all in their power to stay out of hospital.

Working back from the relative familiarity of our own era, this exhibition examines the place of hospitals in today's medicine, culture and society, focusing in particular on the importance of medical science and technology in modern hospitals, on the evolution of the role and image of modern nurses and on the perception of hospitals through popular culture and contemporary art. Stepping back into a previous era, it also looks at how hospitals started to assume their modern presence, highlighting in particular the moves in the eighteenth and nineteenth centuries to medicalize institutions that had till then served much broader charitable ends. Exhibits in this section make clear the increasingly significant role played by hospitals in medical education,



research and professional structure, and, at the same time, the influence that medical men, and some women, had on the form and function of hospitals. Further back still, the exhibition uncovers the nature of hospitals in a pre-modern era when their medical role was far less significant than their religious and social functions of saving the souls of the sick and needy, and providing a focus for institutional charity – a period, that is, when hospitals really were primarily places of hospitality.

This exhibition then is a visual tour back through three stages of hospital history. Each era has been characterized by a concern with institutional efficiency; what has changed across them has been the focus of that concern. One could caricature the medieval hospital as attempting to maximize the exposure of patients to religious ceremonies and icons; those in the eighteenth and nineteenth centuries were instead aimed at curing as many sick bodies as possible; with the modern era applying science to this latter end and becoming increasingly dominated by the question of finance. Thus efficiency, which was initially measured in terms of souls, was later medically redefined in terms of lives, and more recently still has been augmented by an abiding interest in financial efficiency.

The exhibition also divides material within these three eras roughly in half between the visual stories of the outside and the inside of hospitals. On the outside, hospitals have always been shaped according to the dominant building types of the day, not infrequently ones with which donors were most familiar: churches, palaces, country estates, cottages and tower blocks to list just the most obvious. Not infrequently, hospital buildings were in fact literally converted from some other use. Underneath their outer skin, the underlying structure of hospitals has on occasion remained the same despite external changes, and has alternately remained unchanged on the outside while undergoing an internal revolution. The context for the story of what the outsides of hospitals looked like is provided by their architectural significance, the place they had for art and decoration, the issues of who founded and funded them and of what motivated them to do so. In getting a hospital off the ground, civic pride, neighbourly one-upmanship, political ambitions and just plain folly were often as important as altruism, Christian charity and a genuine care for the sick, with each and every motivation potentially having its own impact on the nature of the building. Art has almost always had a place in hospitals, but the more contentious matters of for whose benefit and in what style have just as commonly been heatedly debated.

The display of material that sheds light on the history of hospital interiors naturally also leads to such issues as who worked in them, what equipment they used, what the lives of the patients were like, and how they were fed, bathed, bedded and generally treated. Tickets for admission make it clear that even getting into hospital could be a



test of character – with a preference for the respectable and deserving poor over the destitute; while rules for conduct further indicate that hospitals were designed seriously to influence the ‘health’ of society as well as the physical well-being of its patients. For much of their history then hospitals have provided, in promise at least, a handy tool for social engineering, with their modern counterparts – ever larger and more central to medicine – evolving into some of the most complex of all contemporary social institutions.

### *Introductory exhibits:*

#### **Reproductions of photographs from an album of albumen prints of ‘The Great Northern Central Hospital, London’. August 1912**

The Royal Northern (Central) Hospital, London, was founded in 1856 by Dr S F Statham to give medical care to the sick poor of north London. Originally called the Great Northern Hospital because of its proximity to the terminus of the Great Northern Railway (King’s Cross Station), it moved to its present site in Holloway in 1888 and, following amalgamation with the Royal Chest Hospital in 1924, became the Royal Northern Hospital. Good-quality views of interiors of hospitals are rare and views of areas other than wards rarer still. Hence the importance of this album. The full range of these pictures gives an extraordinary all-round image of a particular hospital at a particular time, which somehow also manages to capture many of the threads that run through the whole history of hospitals.

Iconographic Collections – icv 29374–29400

### *Film Clips*

Think of a hospital and all manner of dramatic scenarios are conjured up. For drama and tension, compassion and intrigue, even for comedy, it is the perfect location: a natural for films and soap operas. Even those who have never set foot in a hospital will, with the help of *ER* or *Casualty*, *Chicago Hope* or *MASH*, have at least some idea of what goes on in its wards and operating theatres.

Just as the appearance and organization of the hospital have changed over the years, so too has its portrayal on screen. This compilation of clips, ranging from animation to fly-on-the wall documentary, gives an insight into these changes. Whether taken from a slapstick comedy or an appeal for funds, each clip gives a vivid glimpse of the hospital at work.



## **Film 1**

**'The Hospital of St Bartholomew, Rochester, Kent'. c. 1929**

(Original in possession of Dr J Stuart Brown)

Silent film portrait of St Bartholomew's Hospital, Rochester, which emphasizes its dependence on voluntary work and charitable donations by the public.

## **Film 2**

**'An Ancient House of Healing'. c. 1940**

(British Commercial Films Ltd for the Royal London Hospital. Royal Hospitals NHS Trust)

Publicity film showing the latest treatments and equipment in use at the London Hospital. The film ends with a fund-raising appeal by Sir Edward Seymour Hicks.

## **Film 3**

**'Your Very Good Health'. 1948**

(Directed by John Halas and Joy Batchelor. Central Office of Information)

Cartoon featuring the character Charley, which explains how the new National Health Service operates.

## **Film 4**

**'Not so Much a Training, More a Way of Life'. 1967**

(The Royal London Hospital. Royal Hospitals NHS Trust)

Cinema verité aimed at encouraging women to join the nursing profession.

## **Film 5**

**'Carry on Again, Doctor'. 1967**

[Directed by Gerald Thomas. Film courtesy of CTE (Carlton) Limited]

The Carry On team take their humour to the Long Hampton Hospital. Cheap laughs and smutty smirks with Kenneth Williams as the eminent surgeon Frederick Carver.

## **Film 6**

**The London. 1997**

(Directed by Tom Brisley. Zenith North)

Fly-on-the-wall documentary series that goes behind the scenes at the London Hospital.

## Houses of Mercy: Hospitals in the Context of Charity and Religion

Much of ancient medical care was based on the work of itinerant physicians visiting the sick, who alternatively if mobile might have visited the homes of doctors. When precisely the idea of isolating the sick in a separate room or even building was first modified into that of setting up a building specially for them is not entirely clear. Some historians have held that the first physical manifestations of such a notion came in around 500 BC, when the first temples to the God Asclepius were erected, in which some refuge was provided for the helpless. Others reserve the claim for the establishments set up in fourth-century Byzantium, where care for the sick, poor and helpless was held to be one of the obligations of Christian hospitality. *Xenodochia* was the Greek word applied to them; *hospitalium* the Latin. The first plan of a hospital is thought to be that of the military establishment of Vindonissa (Windisch in Switzerland); while the first known hospital in Britain was similarly built by the Romans for military purposes. Another hospital-like institution was developed in the context of Christian monasticism, in which the poor and infirm were welcomed alongside, in particular, pilgrims, who almost by definition were in need of some sort of care. While in the Islamic world, a tradition of setting aside buildings for the sick and needy – the *Bimaristans* – was already well established by the tenth century.

The Christian ideal of serving God by aiding the sick and needy became the dominant motivation for establishing and running hospitals in the West for more than a millennium. Based on a passage in the Gospel of Matthew, chapter 25, innumerable institutions were erected in Christian Europe to pursue the seven acts of mercy. Possibly the most medical of the early institutions were the monastic infirmaries, which tended primarily to be for the religious community rather than the lay public. Hospital charity could take on a variety of forms, often freely mixing long-term maintenance of the infirm, medium-term care of the sick, hospitality to travellers and pilgrims, and distribution of alms to the poor. In Protestant countries, the role of the church as chief source of social assistance to the sick was significantly curtailed by the Reformation, with royalty, nobility, and the wealthy citizens of the new towns gradually taking over the responsibility. Despite this, a Christian charitable ethos continued to surround hospitals in both Protestant and Catholic countries, though with enormously different characters.



Within this Christian context, most medieval hospitals were viewed as primarily religious places: houses of God. The salvation of the soul rather than the healing of the body was of primary concern: worship as much, if not more than care, was the main purpose of the early hospital. The chapel was therefore the most important part of a hospital, with its relationship to the wards providing the most significant variable in hospital design. The cross-shaped hospital was pioneered in northern Italy and spread throughout Catholic Europe in particular. It had both symbolic appeal and a practical outcome of multiplying the amount of ward space and therefore the number of patients still within at least earshot of a single priest saying mass at the altar.

Other factors were also important in the establishment of hospitals. Three necessary pre-requisites for any substantial buildings were peace, prosperity and a substantial population, though in the case of pilgrims this last requirement could be guaranteed by placing institutions next to major roadways. The source of funds was also a crucial determinant. As well as the church, a variety of sources of endowment and fees were forthcoming, particularly from amongst society's wealthiest citizens.

The great population explosion of the thirteenth century led to the foundation of numerous hospitals, with some estimating that in many European towns there were up to one for every 1000 inhabitants. Many were small, some comprising just a dozen or so inmates; but in the large and wealthy towns of northern Italy, a number of great hospitals – both in patient population and grandeur – were founded in the later middle ages, most notably in Florence, Siena and Milan. For many towns, the hospital was the most significant urban public building, and was consequently adorned with the work of significant artists and craftspeople. It was this range of urban hospital institutions that laid the foundations for the eventual development of modern medicine.

Hospitals of all types tended to remove their patients from ordinary society. This was explicitly the aim of leprosaria and lazarettos (for sufferers from the plague), but was also the common effect of most such institutions, since few were originally set up within city walls. Ministering to souls as much as to bodies, the staff of these early hospitals were not infrequently monks or nuns, commonly without any medical training. The patients seem to have been men and women in fairly equal proportions, with rather few children. Socially, the poor were very much in the majority. Patients' lives in hospital were subject to much regulation and a strict timetable; but they could expect bed rest, warmth, some attempt at cleanliness and an adequate diet. Expenditure and provision of medicines was often minimal if existent at all. Women's and men's wards were almost invariably separated; and during the fourteenth and fifteenth centuries some hospitals began to provide greater degrees of patient privacy using partitions between beds to divide up the large halls of earlier periods.



**1.1 Works of mercy with Dives and Lazarus. Oil on wood. Lower Rhineland, c. 1520 [illustrated]**

In the centre background of the picture the rich man Dives can be seen in his mansion ignoring Lazarus, who sits outside. To the right, Death summons Dives to hell-fire (far right) as his punishment for neglecting the Christian works of mercy, some of which are shown in the foreground. The recipients of aid include lepers, the blind, cripples and the dying; while those giving it include religious figures, secular workers, surgeons and town councillors. The message of the print, which may have been made for a religious institution or a town hall, is reinforced by various biblical texts.

From the fourth century AD, an institutional Christian interest in helping the sick, poor, weak and helpless, was inspired by the ideal of serving God through helping the needy. The seven works of mercy were feeding the hungry, giving drink to the thirsty, clothing the naked, visiting the sick, taking in the stranger, freeing the prisoner and burying the dead, with early hospitals often providing all but the last two. All but the last, which was added later, were taken from Matthew chapter 25: 34–40, which reads: “Then shall the King say unto them on his right hand, Come, ye blessed of my Father, inherit the kingdom prepared for you from the foundation of the world: For I was an hungred, and ye gave me meat: I was thirsty, and ye gave me drink: I was a stranger, and ye took me in: Naked, and ye clothed me: I was sick, and ye visited me: I was in prison, and ye came unto me. Then shall the righteous answer him, saying, Lord, when saw we thee an hungred, and fed thee? or thirsty, and gave thee drink? When saw we thee a stranger, and took thee in? or naked, and clothed thee? Or when saw we thee sick, or in prison, and came unto thee? And the King shall answer and say unto them, Verily I say unto you, Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me.

Iconographic Collections – icv 17969

**1.2 Carved and painted wood headboard from a hospital bed. Austria. Seventeenth/eighteenth century [illustrated]**

Along with spiritual care, the early hospital had the relatively modest goals of providing the sick and weary with warmth, cleanliness, and adequate diet and rest. Medication was rarely of great concern. Hospital equipment was fairly simple, with beds in fact representing some of the most substantial investments that were made.

loaned by the Science Museum – A115172



**1.3 Pottery statue of St John of God, with relic at the front said to be a splinter of his walking stick. Spain, 1690 [illustrated]**

Juan de Dios (John of God), who was born in Portugal in 1495 and died in Granada, Spain in 1550, was canonized in 1690 and made patron saint for hospitals and sick people in 1886. He founded his first hospital in a single room in Granada, providing the nursing care himself. By 1715 there were more than 250 hospitals in his name, serving 100 000 patients a year. The religious aspect of many early hospitals was heightened by their common association with principal churches in towns – therefore simultaneously functioning as a sick room and altar.

loaned by the Science Museum – A61810

**1.4 Ivory models of military carts, probably used as hearses. Eighteenth century [?] [illustrated]**

For a long time, the poor reputation of hospitals was such that in many people's minds they represented nothing so much as a stepping stone on the way to the grave. With unintentional ironic overtones, the inscription above one of the entrances to the Hôtel Dieu in Paris declared: "Here is the house of God, and the Door to Heaven".

loaned by Science Museum – A642478 and A642434

**1.5 Richard Grey, *The encouragement to works of charity and mercy,... A sermon preached in the Parish Church of All Saints in Northampton*. London, 1744**

The illustration opposite the title page of this work is headed 'County Infirmary at Northampton' – an institution that was established in 1743. The cartouche above the door carries the inscription from the Gospel of Matthew "I was sick and ye visited me,...". Grey (rector of a Northamptonshire parish) used it as the text for his substantial sermon, running to no less than 41 pages, which he preached on 29 March 1744, when the infirmary was formally opened.

EPB T.789.1

**1.6 Christ's Hospital, London: a quatrefoil window with the armorial device of Richard Whittington. Etching by E B Price**

Known also as the Bluecoat School for the distinctive blue coats and yellow stockings worn by its foundling and orphan charges, Christ's Hospital was one of four royal London hospitals founded in the sixteenth century. By 1676 foundlings were prohibited, leaving Coram's Foundling Hospital and the poor and work houses as the only resources in London for abandoned infants. Charitable subscriptions supported many Christ's scholars, but from 1617 until 1778, large numbers were sent to serve out apprenticeships in America. Dick Whittington, four times mayor of London, was one of many benefactors whose wills allowed for the creation of hospitals.

Iconographic Collections – cat. no. 22724



**1.7 John Duncombe, *The history and antiquities of the three archiepiscopal hospitals, ... at and near Canterbury*. London, 1785**

The plate shows a “View of St John’s Hospital Canterbury”. It was dedicated to St John the Baptist and was founded and endowed by Archbishop Lanfranc in about 1084. It was originally divided, as was commonly the case, into two parts: one “for men labouring under various distempers, the other for infirm women.” Duncombe describes how central to the construction of the hospital was the ancient church, which by the late-eighteenth century had been much reduced in size. This work was dedicated to the Archbishop of Canterbury, Patron of the hospitals described.

EPB 21210/C

**1.8 Ospedale Maggiore, Milan, Italy, aerial view. Etching. [illustrated]**

At the core of the hospital is a cruciform building, which, following the general pattern established in the Renaissance, enabled the central chapel to be accessible to four times as many patients as one placed at the end of a simple ward. Conceived of as a whole in Antonio Averlino Filarete’s plans of 1456, the Ospedale Maggiore in Milan was one of the most significant of this type of hospital. Northern Italy was particularly rich in large medieval hospitals, with those in Florence, Siena and Milan being especially notable.

Iconographic Collections – cat. no. 24273

**1.9 Psychiatric hospital (Dolhuys), Amsterdam, Netherlands. Etching. Seventeenth century**

Traditionally, large institutional buildings such as monasteries, colleges, almshouses, and manor houses, were inward-looking structures, composed around a courtyard which might double as a garden. Only a few outward embellishments betray the grandness of the dwelling inside: in the following century, sculptural decoration in stone work expanded, and the grand facade replaced the intimate courtyard. The Amsterdam Dolhuys looked inwards and backwards; while the palatial new buildings of Bethlem Hospital (1675) looked outwards and forwards. To the inmates, however, it probably made little difference.

Iconographic Collections – cat. no. 24278

**1.10 Plan for Hospital Real de los Indios (interior), Lorenzo Rodriguez, Mexico. 1764**

The Royal Hospital for the Indians evolved from the Hospital of St Joseph founded by Franciscan friars in 1531, and was established by royal charter in 1553 to care for Indian patients. The hospital attended to on average 200 patients daily, and until it closed in 1822 was the most important hospital in Mexico. Antonio de Arroyo, administrator from 1761 until 1788, considerably enlarged the building, adding accommodation for nurses and chaplains, laundry rooms, burro corrals and the first anatomical theatre in Mexico.

WMS 135 American



**1.11 Hospital bed number tile. Seville, Spain. Seventeenth century[?]**

Containing the crowned initials 'F' and 'Y' within a narrow border of geometric shapes and leaves, this tile is said to have come from the hospital founded by Ferdinand and Isabella in 1483 outside Granada. Hospitals in Spain date from at least the twelfth century, when the Hospital del Rey in Burgos was founded. This tile represents not only the impressive Islamic decorative tradition in Granada which culminated in the fourteenth-century Alhambra, but the advanced Arab medical practices then being introduced into Spain. It is not known when the practice of numbering hospital beds began.

loaned by the Syndics of the Fitzwilliam Museum, Cambridge

**1.12 Ceramic tondi of swaddled babies, Italian [?], nineteenth-century copies of originals by Luca della Robbia**

The originals of these tondi decorate the exterior of Brunelleschi's *Spedale degli Innocenti* (1445) in Florence, one of the first foundling hospitals in Europe, and still in operation today as an orphanage. Swaddled in much the same manner at birth as at death, the infants in the tondi served as advertisements for the buildings' function, and this motif has since gained the status of a universal symbol for the whole hospital enterprise.

loaned by the Science Museum – A85152 and 5

**1.13 (a) St Lazarus's House, Delft, with a praying inmate receiving the news of the fire of Delft, Holland, 1536. Engraving printed by S K. [illustrated] (b) John Howard, *An account of the principal lazarettos in Europe*. Second edition. London, 1791**

Lazarettos (hospitals for plague victims) and leprosaria (for sufferers of leprosy) were the commonest types of early specialized hospitals. Lazarettos were often temporary structures built outside cities away from populations that would be put at risk of infection, thus performing a dual role of quarantine stations and places to support sufferers. The opening in Howard's book shows a 'Sea view of the lazaretto' in Genoa. Howard's own interest was in the architecture of these buildings, which he thought would indicate much about "guarding against the propagation of contagious distempers in general".

(a) Iconographic Collections – cat. no. 16825; (b) EPB 29513/C



**1.14 Wooden figure of physician with urine flask. Late eighteenth century [?]**

Uroscopy – the visual examination of urine in pursuit of a medical diagnosis – was for centuries a means of allowing physicians a form of physical examination without the necessity of the patient being present. Along with uroscopy, the study of faeces, bodily ‘habits’ and facial features, the taking of the pulse and the recording of case histories were all part of common pre-scientific diagnostic practice.

loaned by the Science Museum – A654166

**1.15 St Elizabeth visiting the sick. Oil painting on copper by Adam Elsheimer. Frankfurt am Main. c. 1598? [illustrated]**

Known as a healing saint, Elizabeth of Hungary (1207–1231) was venerated for her devotion to the poor and sick for whom she built a hospital at Marburg with the dowry released at the death of her husband, and where she personally nursed the patients. St Elizabeth is shown here ministering at mealtime – she and her attendants dispense broth and bread from vessels on the floor. The layout of the ward – single beds in rows, devotional pictures above the headboards and the details of chamber pot and slippers – have remained constant symbols of hospital care.

Iconographic Collections – icv 17544

**1.16 Virgin and child. Oil painting and formed metal on wood. Nineteenth century [illustrated]**

The translation of the Russian text on the reverse of this piece indicates that its owner was “staff captain Constantine Mescharakoff. Died in the Marine Hospital Sevastopol of Disease in the month of May 1855”. These scant facts conjure up an image of a Russian serviceman in the Crimean War taking comfort from this icon while dying in hospital. Even as the religious role of hospitals has waned, the idea that patients’ ‘souls’ need as much care as their bodies has continued to be a prevalent, if not always resolved, one within the medical professions.

Iconographic Collections – icv 17859

**1.17 (a) A brother of the Order of St Camillus of Clerics Regular, Servants of the Sick. Coloured line engraving by Nicolas de Poilly. Early eighteenth century. (b) A Sister of Charity in her habit carrying medicine and her bible with her hospital behind her. Watercolour**

An early type of Christian institution for helping the sick and needy developed in the context of monasticism, which initially at least was primarily concerned with the care



of pilgrims. Bibles and prayer books were often a valued form of donation to hospitals. Traditionally, religious orders were at the forefront of patient care. In Catholic countries, this continued to be the case for many centuries, but after the reformation, the job of nursing became more secularized in Protestant countries.

Iconographic Collections – (a) cat. no. 17405; (b) cat. no. 17419

- 1.18 Juan Manuel Maldonado de Puga, *Religiosa hospitalidad por los hijos [de]... S. Juan de Dios en su provincia de S. Raphael de las islas Philipinas...* Granada, 1742

The Hospital de San Juan de Dios at Manila originated out of a dispensary established for the poor by the Franciscans in 1577. It was taken over by the Order of St John of God in 1656 and the buildings were substantially reconstructed after the earthquake of 1727. This illustration shows the dominant position in the complex occupied by the church. These buildings were destroyed in the earthquake of 1863 and, although the hospital was rebuilt, it was removed from the control of the Order. It was finally destroyed in 1944.

EPB/Suppl/B/MAL

- 1.19 'Rules and orders, to be observed by a society of tradesmen'. Broadsheet. King's Norton, Worcestershire, printed by J Belcher, Birmingham. 1800 [illustrated]

This remarkable broadsheet relates to a mutual society set up on something like an insurance scheme, where members paid regular sums while healthy so that when they become sick, lame, blind or infirm they then benefited from the funds for their care. Among the 29 listed rules was one relating how one pound and one shilling should be paid toward the funeral expenses of any member who died before belonging to the society for a year, while another banned members from using "scandalous or indecent language to any other member". The illustration at the head of the broadsheet shows one man in bed being looked after by three other men.

Iconographic Collections – cat. no. 35064

- 1.20 Two-handled pharmacy jar from the Santa Maria Nuova Hospital. Florence. c. 1420–1450

Divided into a men's hospital with great cruciform wards and a more modest women's hospital, the Santa Maria Nuova Hospital was one of the first to specialize in the medical treatment of the sick, becoming a model for many other such institutions. Henry VII of England, for example, based his Savoy Hospital on it, ordering that its ordinances should be based on a copy of those of Santa Maria Nuova. It has been estimated that by the fifteenth century there were over 30 hospitals in Florence, about one for every 1000 inhabitants.

loaned by the Syndics of the Fitzwilliam Museum, Cambridge



- 1.21 (a) Oval copper bedpan with straight handle. Italian, seventeenth century. (b) *The Order of the hospitalls of K Henry the viiiith and K Edward the vith..., 1557. London, c. 1690s*

The four London hospitals granted to the City of London by Henry VIII and Edward VI were St Bartholomew's, Christ's, Bridewell and St Thomas's. These rules were drawn up in 1557 but remained in manuscript until the 1690s when they were first printed. Samuel Pepys is traditionally said to have paid for the printing. They cover a wide variety of activities undertaken at these hospitals. Apart from those coming from religious orders, for many centuries nurses tended to be drawn from the labouring poor, with their jobs being mainly associated with menial and often dirty work.

(a) loaned by the Science Museum – A95357; (b) EPB 34031/A

- 1.22 (a) *Al-Aqrabadhin. Pharmacopoeia* dated 1165. (b) Octagonal bronze mortar. Persia. Fourteenth century

Folio 148b of the manuscript is inscribed with an owner's entry (dated 1604) by Ya'qub b. al-Khuri Jirjis, who was a physician of the Nuri hospital of Tripoli, Syria. The tradition of hospitals in the Middle east is long and rich, and indeed one of the great Arab contributions to medicine was the creation of teaching hospitals with separate wards for men and women, wards and specialists for different diseases, and literary and musical entertainments. By the tenth century there were complex hospitals (bimaristans) in Cairo, Baghdad and Damascus.

(a) WMS Arabic. 9 (b) loaned by the Science Museum – A41580

- 1.23 A series of scenes dedicated to the 'Soeurs de la Charité', with the alphabet. Coloured etching

Some of the various scenes depicted in this engraving show the sisters bringing food to prisoners, making medicines for the sick and caring for patients in a hospital. This nursing order was set up in France in 1653, with a focus on active service amongst the poor. Their reputation grew so that well-established hospitals such as the Hôtel Dieu in Paris requested their help. Their name came to be synonymous with well-thought-of nursing care.

Iconographic Collections – cat. no. 17755

- 1.24 *Arzneibuch. Compendium of popular medicine and surgery, receipts, etc. Germany. c. 1675 [illustrated]*

This work was probably compiled for the use of a House of the Franciscan Order, in Austria, or South Germany. The large number of watercolour illustrations depict operations, laboratories, apothecary shops and medical instruments, as well as over 300 showing anatomical subjects and injuries. Over 100 pages of the text are devoted to ophthalmology, from which the opening shown comes. In almost all the illustra-



tions, the physicians and surgeons are in the habit of the Franciscan Order, with some of the patients being similarly attired, which clearly suggests a medical institution run both by and for the religious order.

WMS 990

- 1.25 (a) Ivory statue depicting a sick woman in bed. Sixteenth century [?]. [illustrated] (b) Patients being tended and treated by nurses and physicians on a hospital ward. Line engraving by Crispin de Passe after Maerten de Vos. Holland. Late sixteenth century

Many early European hospitals were tiny charities set up by the well-off for the poor. The fundamental role of providing bed rest was, in the better funded and equipped establishments, augmented by nursing staff charged to nourish patients and, last of all, to provide medication. The image is surrounded by an elaborate border containing symbols of the care provided: vegetables, meat, cooking utensils, chemistry apparatus and a physician.

(a) loaned by the Science Museum – A661124; (b) Iconographic Collections – cat. no. 17564

- 1.26 (a) Earthenware feeding cups. English [?] nineteenth century. (b) Earthenware child's porringer. Europe. (c) Tin-glazed earthenware feeding cup. Europe, nineteenth century. (d) Painted earthenware pap boat shaped like a bird. France. Late eighteenth century

The primary place where the sick were treated at least until the Renaissance was at home, with the principal nurses and healers being the women of the household. It was they who would have predominantly used equipment like this to help sustain the sick and enfeebled. The first children's hospital in Europe was the Hôpital des Enfants Malades founded in Paris in 1802. The first in England, and indeed in the British Empire, was Great Ormond Street.

loaned by the Science Museum – (a) A42358; (b) 99794; (c) A608332; (d) A625857

- 1.27 St Camillus de Lellis comforting patients in hospital. Line engraving by Catharina Klauber. Augsburg, Germany. Eighteenth century

St Camillus de Lellis was canonized by Benedict XIV in 1746 and declared (along with St John of God) the patron of the sick and hospitals by Pope Leo XIII in 1886. In 1930, Pope Pius XI extended their patronage to include nurses and nursing in the Roman Catholic faith. St Camillus was the founder in 1582 of the Order of Camillians or Clerics Regular, Servants of the Sick.

Iconographic Collections – cat. no. 17573





Oil painting: Works of mercy with Dives and Lazarus (EXHIBIT 1.1)



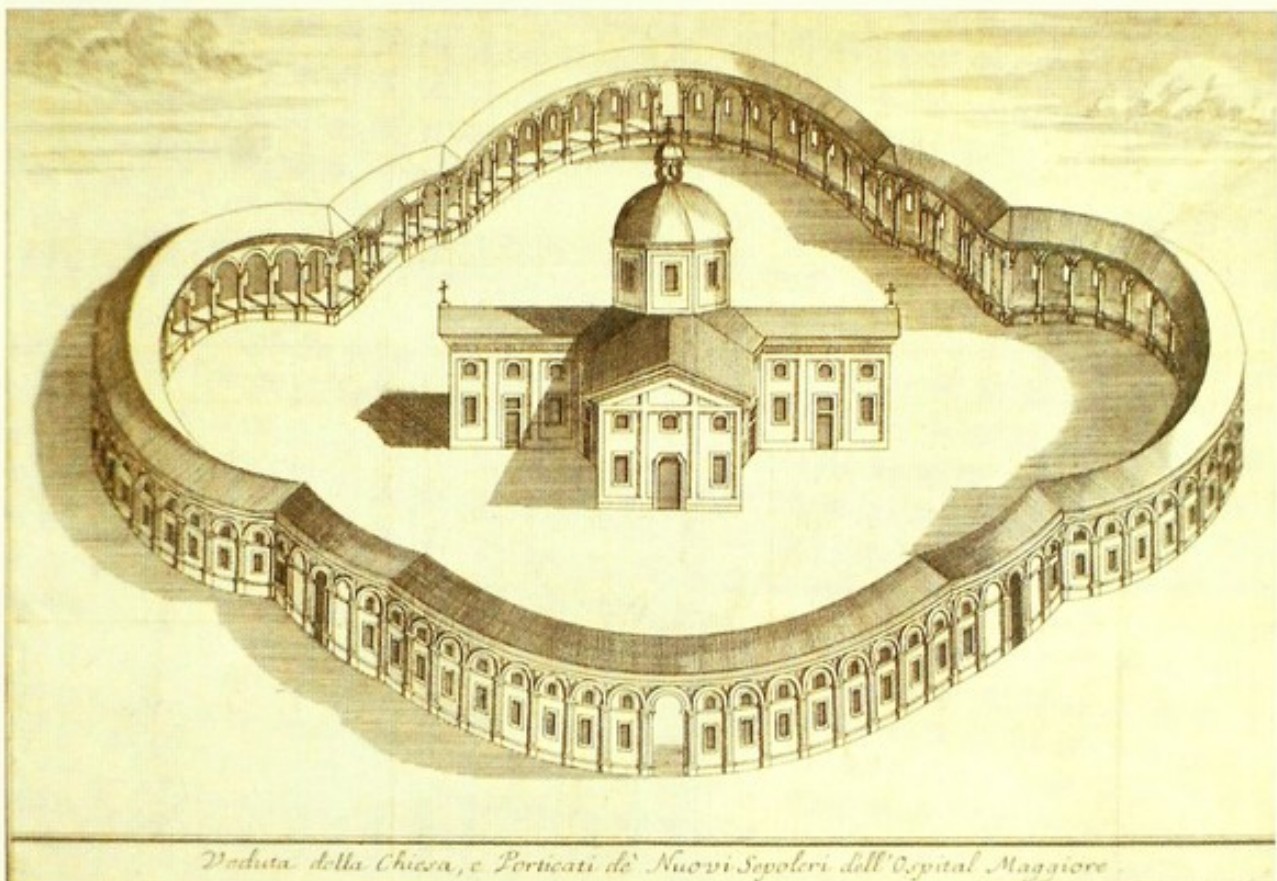


**Opposite top: Statue of St John of God** (EXHIBIT 1.3)

**Opposite middle: Headboard from a hospital bed** (EXHIBIT 1.2)  
(Courtesy of the Science and Society Picture Library, Science Museum)

**Opposite bottom: Ivory model of military cart, probably used as a hearse** (EXHIBIT 1.4)  
(Courtesy of the Science and Society Picture Library, Science Museum)

**Below: Etching of Ospedale Maggiore, Milan** (EXHIBIT 1.8)





Engraving of St Lazarus's House,  
Delft, with a praying inmate  
(EXHIBIT 1.13a)



Oil painting of St Elizabeth  
visiting the sick  
(EXHIBIT 1.15)



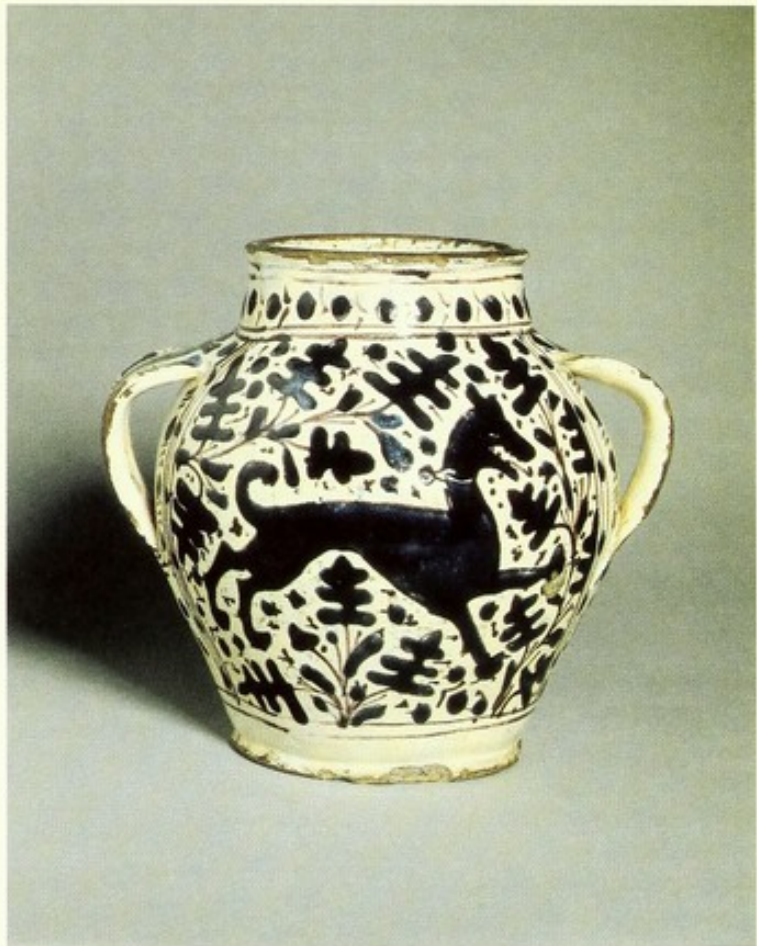




Oil painting and formed metal depiction of the Virgin and child (EXHIBIT 1.16)



**Two-handed pharmacy jar**  
(EXHIBIT 1.20) (Courtesy of the  
Syndics of the Fitzwilliam Museum,  
Cambridge)

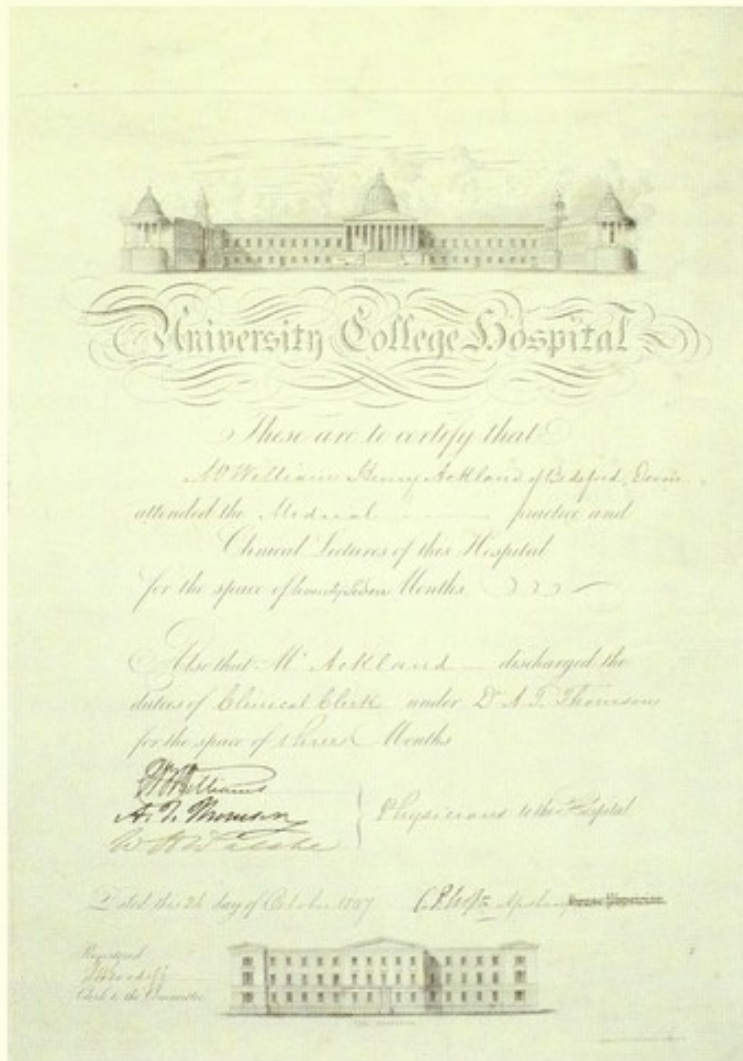


**Arzneibuch. Compendium of popular medicine and surgery, receipts, etc.**  
(EXHIBIT 1.24)





**W H Ackland's diploma**  
(EXHIBIT 2.15a)



**Ivory statue depicting  
a sick woman in bed**  
(EXHIBIT 1.25a) (Courtesy  
of the Science and Society  
Picture Library, Science  
Museum)



Coloured lithograph: 'The Nurse'  
(EXHIBIT 2.20a)



'Slipper' earthenware bedpan  
(EXHIBIT 2.20b) (Courtesy of the  
Science and Society Picture Library,  
Science Museum)



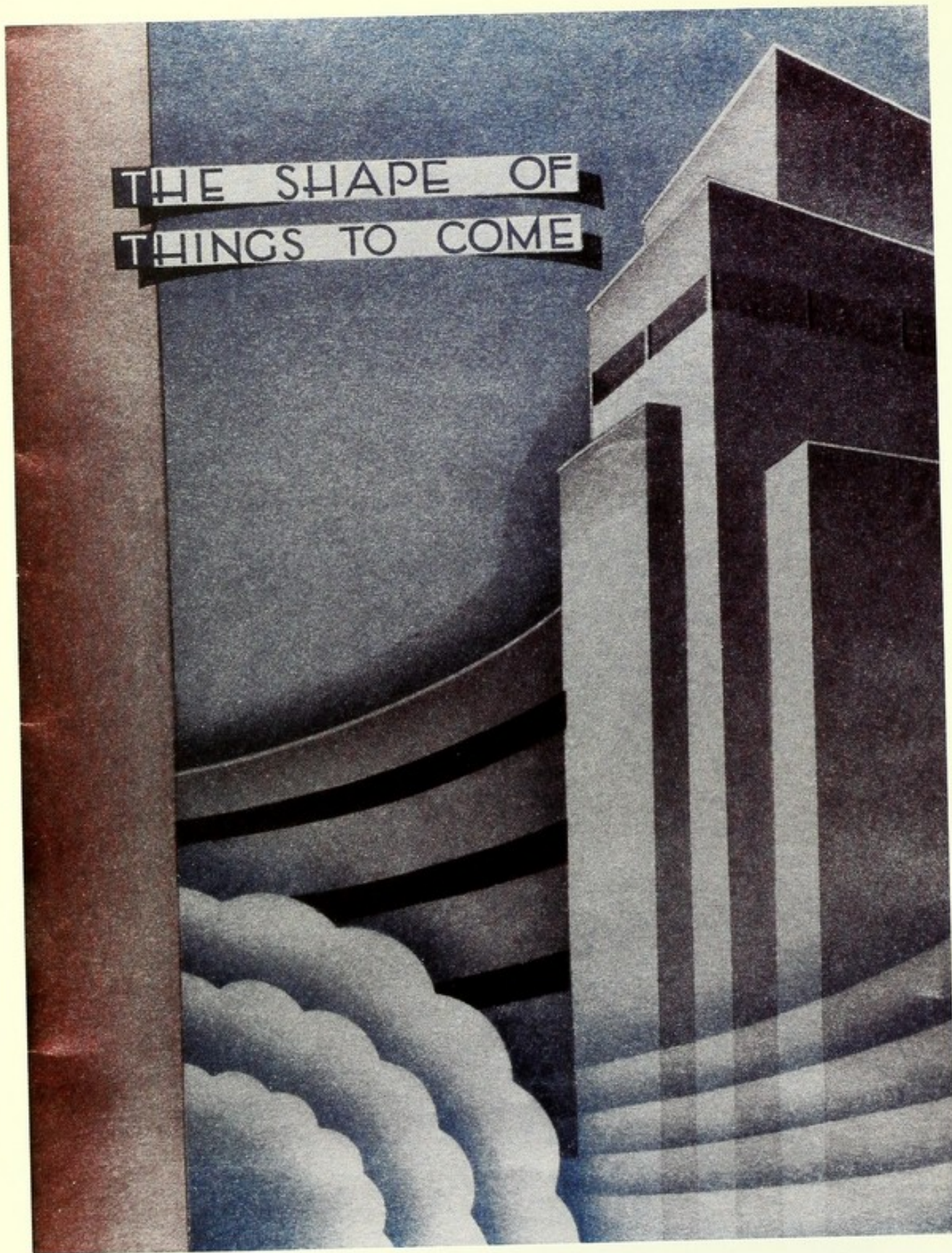


**Oil painting of Royal Naval Hospital, Haslar**  
(EXHIBIT 3.1)



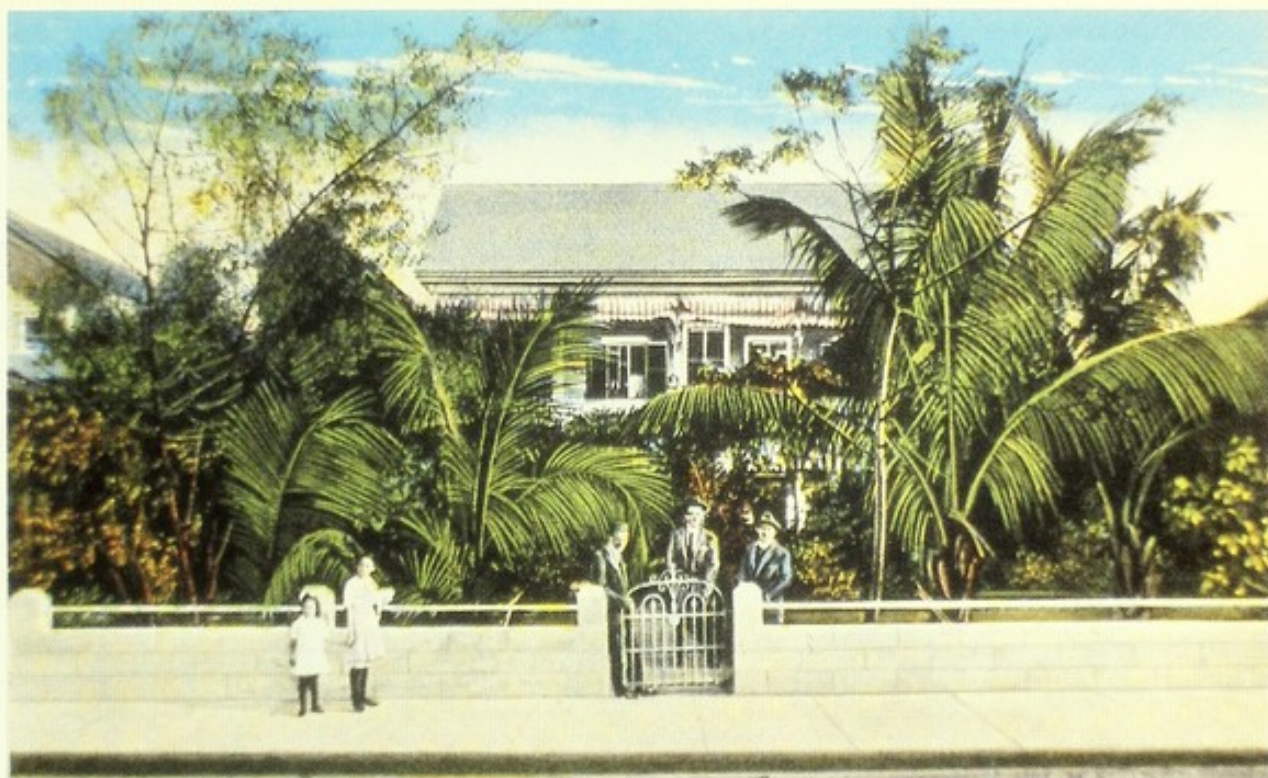
**Photograph of tower block,  
Guy's Hospital**  
(EXHIBIT 3.3a) (Courtesy of  
Dr H Winsley-Stolz)





Brochure: 'The shape of things to come' (EXHIBIT 3.7a)





**Top: Souvenir postcard of the Louise Maloney Hospital, Key West, Florida (EXHIBIT 3.9)**

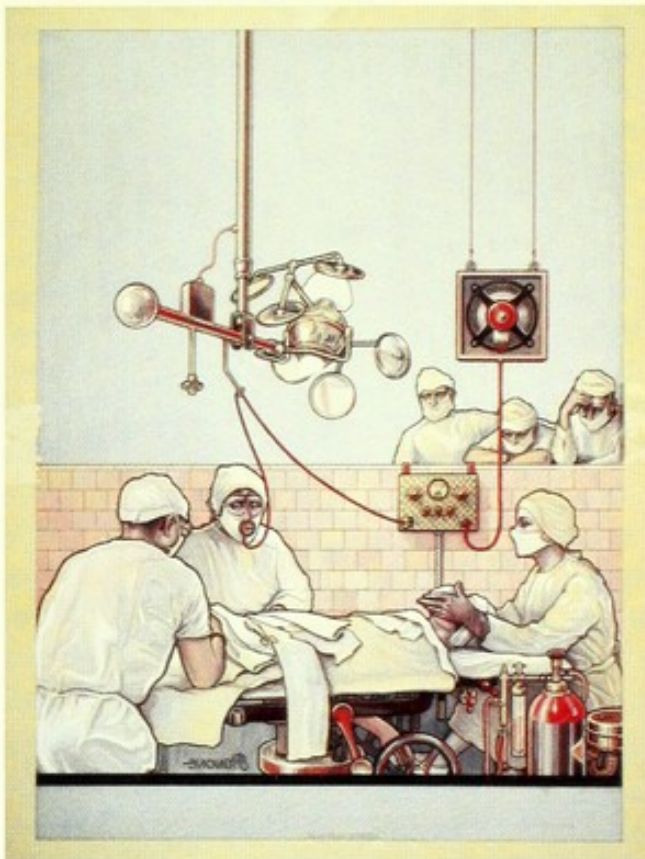
**Above: Watercolour of Royal Naval Hospital, Malta (EXHIBIT 2.7)**





Work in mixed media: 'Knobs' (EXHIBIT 3.12) (Courtesy of Maria Marshall)





**Gouache of a surgical room with a sound system at the Institute of Ophthalmology, London (EXHIBIT 3.13)**



**Drypoint: The casual ward**  
(EXHIBIT 3.14)  
(In copyright: see exhibit caption)





Magazine picture of a children's hospital ward showing a bacteria-free nursing unit in use  
(EXHIBIT 3.15c)  
(In copyright: see exhibit caption)





Edward Woodman

**Photographic work: 'Daffodil 2' ('Corridors series', 1995) (EXHIBIT 3.26)**  
(Commissioned by Public Art Development Trust with support from the King's Fund)



## **Houses for the Sick: the Medicalization of Hospitals**

During the eighteenth century, hospitals gradually became medical institutions: doctors gained power within them and came to play a greater role in patient care, and hospitals began to be used in medical teaching and research. The Black Death of the mid-fourteenth century may well have ushered in an early medicalization, especially in Italian hospitals, but it was not till four centuries later that the dominant impression of these institutions shifted from that of refuges for the needy to places for the sick.

Part of the change in hospital provision came in the area of finances and management. As the funding of hospitals became increasingly secularized, the motivations behind founding hospitals lost some of their charitable cloaking. Considerable civic pride could be gained from setting up grand buildings in which to house such a worthy activity. In Britain at least, social advancement was also likely to follow from the involvement of both architects and doctors in the planning and running of a new hospital, with many donating their services in order to secure a place amongst the gentlemen governors. The increasing concern in hospitals with the recovery of patients was, at least loosely, tied to another dominant eighteenth-century concern with getting the poor to work. It is in this context that one can best understand the strict criteria for admission that rigorously separated the labouring poor from the destitute – the latter being one of the categories of people excluded from most hospitals.

The development of using hospitals for bedside teaching was not sudden. Herman Boerhaave (1668–1738) was particularly important in establishing the procedure in Leiden. In Britain, more and more students ‘walked the wards’ during the eighteenth century, with great parties of fee-paying students following a surgeon or physician on his rounds by the century’s end. This pattern was in effect turned into a requirement by the Apothecaries’ Act of 1815. By then, it was common practice throughout Europe. A natural progression of the trend was to set up medical schools in direct association with hospitals, with those in London in the 1780s and those in Paris in the 1820s, gaining enormous power within the world of



medicine. Medical research also came to be practised within hospitals, with doctors able to compare cases of the same disease, and study, at close quarters within a single patient, the development of a disease from inception to cure or death.

A particularly significant change in medicine, as practised, taught and researched in hospitals, happened around the time of the French Revolution. The reforming zeal of that event left no part of society or culture untouched, and medicine was no exception. The French clinical medical culture, with its focus on physical and instrumental examinations, and statistical analysis of diseases, evolved during that period and went on to become the dominant model for medicine in the nineteenth century. In particular, it led to the virtual transformation of what had been largely medieval hospitals into 'modern' medical institutions. Even historians who are sceptical about the profundity of the changes associated with the French Revolution, are forced to concede the influence of the innovations introduced into some Parisian hospitals at the time.

Another change to influence the nature of hospitals in this period was the trend towards specialization. Some patients had always been excluded from general hospitals: lepers, lunatics, plague victim and women in childbirth. Separate institutions for the first three were in existence in earlier periods, and by the end of the eighteenth century 'lying-in' hospitals began to be set up throughout Europe for the last category, the first being set up in Göttingen in 1751. The first children's hospital in Europe was set up in Paris in 1802 and two years later Moorfields Hospital for patients with ear and eye diseases was set up in London. From the 1830s there was a large expansion in the numbers of specialist hospitals, with at least 66 in London alone by 1860. These institutions were important in the medicalization of hospitals, with doctors controlling patient admission, daily routines, the hiring of staff and setting of policy. Many were in fact founded by medical men primarily for commercial reasons. As such, they provided early examples of how the medical professions could take control of hospitals.

These social, professional and practical developments in hospitals were also accompanied by a change in dominant building style. Many of the new hospitals typically first moved into converted houses, with those that succeeded later being re-established in specially designed new premises. In the UK, many of those situated in the country were of the prevailing Palladian architectural style. One of the influences of the new French style of medicine was the preference for infinitely reproducible pavilion wards to replace the now 'old-fashioned' long open halls for patients. Particularly influential in this regard was the rebuilding of the Parisian Hôtel Dieu after the great fire of 1772, though in fact the Plymouth Royal Naval



Hospital, built in 1762, provided an earlier precedent for the pavilion plan. Later in the nineteenth century, under the proselytizing influence of Florence Nightingale, with St Thomas's Hospital as its classical embodiment, and promulgated through such architectural periodicals as *The Hospital* and *The Builder*, the pavilion-style hospital became dominant for at least 50 years.

One of the casualties of all this energetic reforming zeal was a balanced view of what hospitals had been like before the great innovations of the eighteenth and nineteenth centuries. For it was in this period that the darker visions of early hospitals as half prison, half stepping stone to the grave became firmly part of the folklore of medical care. From then on, early hospitals were to be decried, in Florence Nightingale's words, as gateways to death.

### *Houses for the Sick: exteriors*

#### **2.1 A fancy fair, held in May 1830 for the benefit of Charing Cross Hospital. Coloured lithograph by George Scharf. London, 1832**

In an increasingly secularized context, founding and funding hospitals was often as much to do with social prestige as with charitable inclinations towards the sick and needy. In 1827 Benjamin Golding began planning an enlarged version of the hospital he founded in 1818, and aided by the public assistance of many members of the royal family, the new Charing Cross Hospital was opened in 1834. Sharf's work depicting a fund-raising fair in Spring Gardens, Carlton House Terrace, London, was dedicated to the Royal Patroness, the Noble Vice Patroness and the Ladies Friends of the hospital. A band plays in the left foreground, to the right is a model of the interior of a pharmacist's shop, and further to the right are scale models of the new Charing Cross Hospital and the adjacent parish church of St Martin in the Fields.

Iconographic Collections – icv 14082

#### **2.2 (a) Cartouche from Coram Fields Foundling Hospital, carved and painted wood, by Edward Ives, eighteenth century. (b) The Foundling Hospital, Holborn, London: a bird's eye view of the courtyard, coloured engraving by T Bowles after L P Boitard. 1753**

The term 'hospital' referred not only to institutions for the sick, but those whose concern was for the needy. Thomas Coram received the King's Charter for his foundling hospital in 1739, and on opening, hundreds of mothers with infants waited for limited places. Open admission was attempted, but sheer volume proved a financial strain, and public perception assumed the policy would encour-



age prostitution. Support by private donations was instituted, later superseded by a requirement of the child's illegitimacy. Hogarth was one of Coram's first governors, and instituted a scheme by which the hospital was decorated with works of living British artists, creating in effect, the first London public art gallery.

(a) loaned by Thomas Coram Foundation for Children; (b) Iconographic Collections – cat. no. 36969

- 2.3 (a) **Edinburgh Royal Infirmary: laying of the foundation stone by the Prince of Wales, with crest. Coloured lithograph by Schenck and McFarlane, 1870.**  
(b) **Silver commemorative trowel and brick box, Walter Gilbert, St Bartholomew's Hospital 1904.**

The design of the new hospital in Edinburgh was very strongly influenced by the Nightingale model used at St Thomas's in 1872. As both the picture of the ceremony of the laying of the foundation stone and commemorative trowel and box make clear, decisions to found new hospitals have often been the source of considerable civic and indeed national pride. Behind these triumphal moments often lay invisible years of struggle to get the funds to build the hospital – struggles which were often aided by the patronage of a member of the royal family. Edward Prince of Wales laid the foundation stone of the new out-patients building at St Bartholomew's Hospital on 6 July 1904, and was President of the Hospital from 1867 to 1901. The legend to the lithograph shows that, even in the late nineteenth century, the Biblical Works of Mercy were still considered fundamental to the idea of the hospital.

(a) Iconographic Collections – cat. no.17290; (b) loaned by St Bartholomew's Hospital. Royal Hospitals NHS Trust

- 2.4 **Model ambulance, known as the Madras wagon. Made by McPherson. England. Late nineteenth century**

The emergence of effective horse-driven ambulances brought an important boost to the role of hospitals, for they allowed doctors to remain stationary while patients were brought to them. Up until relatively recently, vehicles used to transport people were often not much different from standard forms of transportation.

loaned by the Science Museum – A639520

- 2.5 (a) **Jacques Tenon, *Mémoires sur les hôpitaux de Paris*. Paris, 1788. (b) The Hôtel Dieu, Paris: as seen from Pont St Michel and the river. Etching by Jacques-Joseph Huguenet after Jacques-Alphonse Testard (b. 1810)**

The preface to Tenon's work describes the Hôtel Dieu as "unique for its type", where patients are received "at all hours, regardless of age, sex, country, religion, type of ailment etc..." As such it acted as a sort of hospice where all the sick and



poor were received, with a consequent reputation for being the most dangerous hospital in Europe. Its destruction by fire in 1772 brought the opportunity to rebuild it according to new principles. The final choice of building was selected from more than 50 plans, many based on new medical thinking. Tenon, who had been a physician at the hospital, was heavily involved with the plans, and his book was one of the most influential on hospital design for 50 years or more. He was the first to describe pavilion-ward hospitals as 'machines for healing'. Many historians have heralded this period in French medical thinking as the beginnings of the effective application of science to hospital medicine.

(a) EPB; (b) Iconographic Collections – cat. no. 21847

2.6 Samuel Tuke, *Description of the Retreat, an institution near York, for insane persons of the Society of Friends*. York, 1813

The book is dedicated by the author to his grandfather William Tuke, the first active promoter of the establishment. It describes an institution that showed "the superior efficacy, both in respect of cure and security, of a mild system of treatment in all cases of mental disorder...". Looking something like a large farm on a hill, it for example used iron-framed windows, rather than bars. Its establishment represented a major reform in institutions for the mentally ill. At the opposite end of the spectrum was Bethlem Hospital in London, where 'walking the wards' to view the inmates became a form of idle pastime, as if visiting a living museum of the insane.

EPB C/TUK

2.7 Royal Naval Hospital, Malta. Watercolour by John Parker, after a lithograph by Charles Frederick de Brocktroff (1775–1850). August 1843 [illustrated]

It was Admiral Lord Nelson who originally suggested that the promontory in Malta, then occupied by the Bighi villa, would be a suitable site for a naval hospital; but only later, in 1830, was his suggestion put into practice. The villa was converted into the central block, and two pavilions were added at the sides. According to the *Malta Penny Magazine* in 1840, "one of the best things in the establishment is a corridor, ten feet wide and one hundred and sixty feet long, which runs through the centre of each wing ventilating it in all directions".

Iconographic Collections – cat. no. 18259

2.8 Thomas Barnes, *Observations on the expediency and advantage of establishing a general infirmary at Carlisle*. Carlisle, 1831

Barnes's work argued for the importance of both alleviating the affliction and distress of the 'industrious poor' and the value of their health. Many new 'voluntary' hospitals in this period incorporated the pavilion wards that had replaced the long open halls



where hospital patients had traditionally been kept. Not infrequently, they incorporated ideas from the emergent 'science' of domestic economy as laid out in copiously illustrated manuals, that described in detail such concerns as heating, ventilation, water supply and sewage disposal systems.

EPB 12293/B

**2.9 Thomas Guy, *A copy of the last will and testament of Thomas Guy Esq.* London, 1732**

The print opposite the title page is of a monument "of grateful respect, lately placed in Guy's Hospital. The advertisement at the front of the work clearly set out its purpose: "The Governors of Mr Guy's Hospital, having been censured as acting contrary to the intention of the Founder, by discharging persons for the benefit of his charity, because they were incurable; they think it necessary to justify themselves". The much older and adjacent London hospital St Thomas's, excluded all incurables, and it was in order to do something for those of them who might benefit from care and convalescence that Guy sought to found a hospital.

EPB 27014/B/1

**2.10 Painted wooden statue, traditionally described as a wounded sailor or soldier, probably used as a sign outside a ward or entrance to St Bartholomew's Hospital, London. c. 1655**

First recorded in the Hospital's records in 1657, this melancholic seaman or sailor, looking worse for wear with a boxer's nose, arm in a sling and supported by a crutch, likely served as a signpost to a ward for ailing soldiers and sailors at St Bartholomew's. The need for a specialist ward was immense: the seafaring community in Limehouse numbered over 2000 inhabitants by 1610, and the Royal Naval Hospital in Greenwich was not established until the end of the seventeenth century. St Bartholomew's Hospital was founded in 1123 on a site in Smithfields. At the dissolution of the monasteries in 1530 the future of the hospital became uncertain, but following petitioning by the citizens of London, Henry VIII re-founded St Bartholomew's, endowing it with properties and income.

loaned by St Bartholomew's Hospital. Royal Hospitals NHS Trust

**2.11(a) St Thomas's Hospital, Lambeth, seen from the south. Wood engraving by T Sulman. Late nineteenth century. (b) Letter from Joseph Jackson Lister to Joseph Lister, Upton, 11 June 1865**

Florence Nightingale's considerable influence on hospital design is perhaps at its purest in the pavilion-style wards designed for St Thomas's. Pavilion hospitals were based on a calculation of the cubic feet of fresh air needed per patient. Cross-ward ventilation was encouraged by keeping ward width less than 30 feet. Lister's letter



records the newly announced plans for the hospital with six blocks of ward buildings to be built on four floors, with wide spaces between each block. Patient rooms of 28 foot width would contain 14 beds and 13 windows on each side with rooms for nurses and sisters at one end and lavatories at the other. Nightingale's personal notoriety and writings, together with the reputation of St Thomas's ensured that this became the model for many new hospitals in the next 50 years.

(a) Iconographic Collections – cat. no 38549; (b) WMS 6965/46

### *Houses for the Sick: interiors*

- 2.12 The good Samaritan tending to a wounded man while the priest and Levite pass by on the other side. Etching by Thomas Cook, after William Hogarth. 1809

Luke chapter 10, verse 34 describes how the Samaritan "bound up his [the injured man's] wounds, pouring on oil and wine". This is a print after Hogarth's painting for St Bartholomew's Hospital, which can still be seen in the Hospital next to a companion painting showing the biblical story of Christ curing the paralytic at the therapeutic pool of Bethesda. Hogarth was connected with many philanthropic projects, and as with the Foundling Hospital, he donated his paintings to St Bartholomew's.

Iconographic Collections – cat. no. 17911

- 2.13 An older woman tending to a sick woman. Watercolour over pencil drawing by Robert Taylor Pritchett – proof for a wood engraving with written corrections. 1864/1867

Up until the modern era, and despite the considerable development of medicine within hospitals, many of the sick were still treated at home, either by trained nurses or by the women of the household. In the mid-nineteenth century, some doctors started to worry about the numbers of hospitals being set up, and by implication the competition for their fee-paying patients. Others, however, saw the movement as an opportunity for their own advancement.

Iconographic Collections – cat. no. 16890

- 2.14 (a) The Middlesex Hospital: the interior of one of the female wards. Coloured aquatint by J C Stadler, after A C Pugin and T Rowlandson. 1808.  
(b) 'The Country Infirmary'. Coloured etching by Charles Williams. 1813.  
(c) Graduated medicine glass with minim measure in case. Supplied by Army and Navy Co-operative Society Ltd, England. Late nineteenth century

The aquatint of the Middlesex Hospital reveals much about the interior of a new Georgian hospital. Each bed is shown to have a shelf generously laden with medicines



above it, a numbered canopy above that, from which curtains can be drawn to give the patient some privacy, and a chamber pot placed underneath. Charles Williams's satirical etching of a more decrepit and ill-managed provincial hospital shows instead a large cabinet for the medicines. The proliferation of medicines in hospitals was just one index of the growth of confidence and power amongst the medical professions within these institutions.

(a) Iconographic Collections – cat. no. 38615; (b) cat. no. 11629; (c) loaned by the Science Museum – 1982-561/3

- 2.15 (a) Diploma awarded to W H Ackland for attendance at lectures, University College Hospital, London, 1847. [illustrated] (b) Robert James Graves, *Clinical reports, of the medical cases in the Meath Hospital and County of Dublin Infirmary*. Dublin, 1827. (c) Aesculapius [i.e. L H Potts?], *The hospital pupil's guide, being oracular communications, addressed to students of the medical profession*. London, 1818.

The diploma certifies that Ackland had attended clinical lectures and medical practice for 27 months and had acted as clinical clerk for three. Built in 1834, the hospital pictured at the bottom of the diploma rapidly became one of London's foremost teaching hospitals. The pupil's guide includes a plan of study and an account of the rota of the doctors in attendance at St Thomas's and Guy's Hospitals. Its size suggests it could have been carried in a student's pocket. By the end of the eighteenth century, it had become entirely routine for medical students to spend at least six months 'walking the wards' of a hospital.

(a) WMS 5419/5; (b) EPB T.513.7; (c) EPB 41982/A

- 2.16 John S Billings, *Description of the Johns Hopkins Hospital*. (Baltimore, 189)

This particular volume was presented by the Trustees of the Hospital to Sir Joseph Lister. The plate shown is of the 'Isolating Ward'. Billings was especially careful about the design of heating and ventilation systems, hence the large number of very prominent chimneys seen in the picture. This was just one factor which made his scheme very costly, and which ensured that it could only be built a ward at a time over 12 years. Early hospitals in the USAs were largely copied from European models, but with much of the religious context removed.

Modern Medicine Collection /+ XWX

- 2.17 Patients' register, Hospital Bethlemítico de Santa Catalina, Buenos Aires. 1818–1822

Each month records categories of military personnel, peasants, prisoners, slaves, freed slaves and members of the upper class (*distinguidos*), and lists names, designation of case, age and dates of entry and discharge or death. Monthly figures also record total



numbers of sick and dead as well as cost of food and drugs. The entries for 1817–1821 record 5620 cases with approximately one-quarter dying.

WMS Amer. 149

- 2.18 (a) Boy's cap and six tokens from Thomas Coram's Foundling Hospital. Nineteenth century. (b) Fashionable London comes to observe Sunday lunch at the Foundling Hospital. Wood engraving by J Swain after T G. 1872

The range of tokens left by mothers with their children in order to secure the possibility of reclaiming them at a later date; or to serve as reminders of their birth mother, belie the happy scene presented in the accompanying engraving. Mothers left what token they could and often it might be only a nut from a tree or a sterling silver shield from a decanter of spirits. Fashionable society in nineteenth-century London flocked to the Foundling Hospital on Sundays to observe the inmates, just as their predecessors had done at Bedlam in the eighteenth century. Thackeray's *Ballad of Eliza Davis* recalls this interest "P'raps you know the foundling Chapel, Where the little children sing, Lord I like to hear on Sunday, Them there pretty little things".

(a) loaned by Thomas Coram Foundation for Children; (b) Iconographic Collections – cat. no. 23524

- 2.19 Tiles. Watercolour. 1866

The inscription on the picture reads: "Drawing of tile found at the new houseless poor wards in Thomas Street, Whitechapel, December 1866." Ceramic tiles have been used for centuries to decorate public buildings, but particularly in Victorian England, it became fashionable to brighten the plain walls of hospital wards with decorative tiles that were easy to clean. In children's wards these often incorporated pictures of nursery rhymes and fairy tales.

Iconographic Collections – cat. no. 23531

- 2.20 (a) 'The Nurse'. Coloured lithograph by W Hunt. c. 1825. [illustrated] (b) 'Slipper' earthenware bedpan. England. Late nineteenth century [illustrated]

The contents of chamber pots and piles of straw from the beds of the incontinent were kept in and around wards to be taken away after dark by nightmen. The traditional measures for coping with hospital infection were to whitewash the walls, burn clothes and encourage ventilation. Only in the late nineteenth century were such meagre measures overtaken by new practices based on the emergent study of bacteriology. Artistic depictions of nurses changed dramatically in the mid-nineteenth century. The rough, unpleasant features depicted in Hunt's lithograph were gradually replaced by beatific beauties worthy of a new nursing 'profession' championed by Florence Nightingale.

(a) Iconographic Collections – icv 11318; (b) loaned by the Science Museum – 1988-496



- 2.21 (a) Spoon with inscribed bowl and small bowl at end of handle. England. eighteenth century [?]. (b) Invalid drinking pipe. Silver. Early nineteenth century. (d) Invalid's plate with reservoir for hot water. England, late nineteenth century. (e) Sterling silver pap boat, probably by William Bateman. London, 1819. (f) Plastic medicine spoon. England, c. 1950–1970

The inscription on the spoon indicates a Masonic connection. The balance of expenditure and concern with food and medicine shifted during eighteenth century with medicines becoming increasingly significant. In modern times, this trend has escalated even more dramatically. As the plastic spoon makes clear, however, despite changes in materials the commonest method of delivering medicines has remained constant.

loaned by the Science Museum – (a) A99530; (b) A85612; (c) A600100; (d) A626808;  
(e) A641406; (f) A626371

- 2.22 (a) Warming pan. Green-glazed earthenware. Lisieux, France. Late seventeenth century. (b) Forbes Fahrenheit bath thermometers in wood cases. Nineteenth century. (c) 'La garde malade'. Coloured wood engraving by Jacques Adrien Lavieille (1818–1862) after Henry Bonaventure Monnier (1805–1877). France. Mid-nineteenth century

Treatments based on the use of bath houses were an innovation derived from eighteenth-century provincial infirmaries, with bath thermometers of the type shown (invented by Dr Forbes) becoming a crucial piece of accompanying technology. Monnier's illustration shows a home nurse carrying a much older method of providing patients with warmth – a 'hot-coal' bed warmer.

loaned by the Science Museum – (a) A95381; (b) A606115 A608155;  
(c) Iconographic Collections – cat. no. 17423



## Machines for Health: Hospitals in a Scientific and Industrial Context

It was the French hospital reformer Tenon who characterized the new pavilion-style buildings as 'machines for health' – a phrase reflecting the modern functional approach to planning and building hospitals. Industrialization shaped the mentality and, at a more practical level, brought with it a new class of wealthy individuals willing to contribute to the founding of hospitals. By the early twentieth century, all large and most sizeable cities in the West had both public and private hospitals, with many rural populations having access to small-scale, often voluntarily funded, 'cottage' hospitals.

Even in the eighteenth century, considerable thought had been given to matters of ventilation, water supply, heating systems and sewage disposal – enough to spawn a new science of 'domestic economy'. Primarily informed by the notion of needing to draw off the 'morbid and dangerous' exhalations of a sick body, Florence Nightingale gave additional proselytizing attention to the matters of hygiene and ventilation of the sick ward. Such concerns were further heightened by the prevalence of what were called 'hospital diseases' – the often fatal infections that were contracted by patients in hospital. Here was a particular instance of medical science being brought to bear on hospital design. The increasing numbers of doctors involved in the design of hospitals only added to the scientific input. Saxon Snell's *Hospital Construction and Management* (1883), which was co-authored by a physician, has been claimed as the first text book of the new subject.

During the twentieth century, the form of the hospital has, like many other building types, risen in ever higher towers. Analysis of the effects of piling wards one on top of another was first undertaken by a Chicago surgeon, Dr Albert Ochsner, at the start of the century. Much of the impetus for tower-block hospitals has since come from the economics of scale and the price of land. On the inside, the planning and design of sick wards has tended to shift towards creating a more relaxed environment. The provision of private beds has also, particularly in the USA, been a significant factor in changing the shape of hospital interiors.



In the nineteenth century the ratio of square metres of hospital floor space to numbers of beds was typically 20:1; since World War II it has risen to as high as 80:1. What has gradually taken up increasing amounts of floor space are the provisions for clinical and administrative work. As the twentieth century has progressed, the question of how to finance increasingly expensive hospitals seems to have settled into a state of perpetual crisis, with even the relatively new technical discipline of administration unable to manufacture the necessary funds. At the same time, considerable differences between methods of finance emerged in different national contexts. In the USA, the role of insurance companies encouraged hospitals to adopt business strategies within a basically commercial outlook, with the system's losers being those who could not afford to pay. In the UK, on the other hand, 1948 saw most of the over 900 voluntary hospitals in the country taken under the wing of the State within the National Health Service, with the famous promise that care would be 'free at the point of delivery'.

Possibly the most significant changes within the modern hospital have been in the area of technology and scientific procedure. Though many innovations only had their full effect a half century or more after their initial discovery. From the nineteenth century onwards hospital medicine came to have increasing emphasis on lesions detectable only with the use of instruments and laboratory tests – chemical and then bacteriological. While in the area of surgery, the last third of the nineteenth century, saw the development of new techniques based on anaesthesia (reducing the trauma of operations) and antisepsis (reducing the risk of surgical operations leading to infection). Consequently, more and more technology was seen as indispensable to the work of hospital doctors.

The evolution of the nursing profession also played a significant role in the modernization of the hospital. The late nineteenth-century reformers no doubt made too much of the differences between the dirty, dishonest, immoral and drunken 'bad old days' and the spotless image of what followed, but changes did occur. Modern mass warfare had a particularly important impact in this regard: the Civil War in the USA, for example, resulted in the hospitalization, and therefore the care, of one million soldiers. What changed was the dress, the education, and the equipment used by nurses, as well as the balance in their work between caring and curing, and their reputation. Most significantly of all their dominant social class altered, with young middle-class women taking over from the labouring poor. As a result, the patient population also shifted, with middle-class professional nurses helping to make hospitals 'respectable' enough to begin to attract middle-class patients.

The cumulative effects of both the provision of techniques and equipment in hospitals not available to those traditionally cared for at home, and of the brighter



image of the nursing staff, had the long-term effect of enormously expanding the hospital population: the number of voluntary hospital beds per thousand head of population in London, for example, grew from around one and a half in 1861 to nearly two and a half in 1938.

The image of hospitals within popular culture has reflected, and on occasions, informed these changes. The popularity of programmes like *ER* and *Casualty*, and from a previous generation *Dr Kildare* and *Emergency Ward 10*, has encouraged many recent TV programmers to timetable some high-tech, invasive and always high-drama hospital soap operas for almost every night of the week. While toys and books introduce often quite detailed depictions of operating rooms and recuperation wards to children as young as two and three. And the modern transformation of medical science into a international community has further led to both the reality and image of modern hospital medicine becoming an almost universal culture in which national boundaries count for less and less.

### *Machines for Health: exteriors*

#### **3.1 Royal Naval Hospital, Haslar: ward for open-air treatment. Oil painting by Jan Gordon. c. 1918 [illustrated]**

The naval port of Gosport is home to Haslar Royal Naval Hospital, the UK's main military hospital. Alongside its bricks and mortar counterparts at Haslar, this ward for open-air treatment serves as a reminder that many military hospitals often had to be makeshift affairs with much of the care based on what could be easily carried. It was presumably erected to help cope with the vast increase in patients at Haslar in World War I. Many of them suffered from burns and external wounds which would benefit from exposure to sunlight in an open-air ward. The intensity of medical needs during warfare and the sheer numbers involved has resulted in numerous medical innovations and inspirations. Haslar's Department of Radiology provides services to military hospitals in Cyprus, Belize and the Falklands, and is investigating teleradiology links to deployed forces in Bosnia and Cyprus.

Iconographic Collections – icv 17569

#### **3.2 Design for Qasr-El-Aini Hospital and Medical School, Cairo. Gouache after Cackett and Burns Dick. c. 1922**

This particular design for a hospital on the island of Rodah in Cairo was prepared for a competition arranged by the Egyptian Government. Requirements of the competitors included separation of the male sections from the harem side and the



avoidance of overlooking from one to another; the disposition of the ward pavilions so as to ensure the best result under difficult climatic conditions; and, as *The Builder* pointed out (27 April 1923), “the avoidance of the whims and fancies of specialists who may be superseded tomorrow”. The scale of the design is a clear indication of the level of investment that modern governments throughout the world have had to put into scientific hospitals for the industrial era. The wards are placed in the ‘pavilions’ recommended by Florence Nightingale, arranged along the Nile like the pavilions of St Thomas’s along the Thames in London.

Iconographic Collections – cat. no. 26479

- 3.3** (a) **Tower Block, Guy’s Hospital. Photograph by H Winsley-Stolz. London, 1972 [illustrated].** (b) **Roger Poulain, *Hôpitaux Sanatoria*. Paris, 1932.** (c) **R G Hopkinson, *Hospital lighting*. London, 1964**

In the twentieth century, financial considerations and engineering capabilities have in the twentieth century led to the preference for pavilion-style hospitals being replaced, at least for a few decades by another dominant model: the tower block. Some have seen this as representing a return to the monolithic hospital. The scientific/engineering approach to hospital design has led to increasing numbers of specialised areas of technical knowledge. The preface to the book on hospital lighting, not too surprisingly maybe, makes considerable claims for the importance of light in hospital design. The amount of hospital building undertaken in the twentieth century has allowed any number of architects to devote much of their careers to it, for instance this book of fairly typical schemes of the period by the French architect Poulain.

(a) Iconographic Collections – icv 30652; (b) loaned by David Brady;

(c) Modern Medicine Collection(2) – 18676

- 3.4** **Toy ambulance in 70 pieces made by Panda Toys. Greece. 1997**

Along with other emergency vehicles, ambulances have come to take an enormously significant place amongst children’s toys. The increasing reliability of ambulance services played a significant part in encouraging urban planners of the twentieth century to increase the scale of their hospitals. The advent of hospital helicopters has further extended that reach, and increased the speed of delivery. It also helped make hospitals the focus of emergency care. The speed and efficiency of getting people to hospital has often been as important as what happens in the hospital.

- 3.5** (a) **Cottage Hospital, Totnes. Copy of photograph by Francis Frith & Co. c. 1880.** (b) **Major S M Du-Plat-Taylor, John Coleridge and J Johnston Abraham, *Cottage hospitals*. London, 1930**

Small-scale rural hospitals set up and run by local doctors for local patients, sometimes almost on a family basis, have a long history in parts of Europe. ‘Cottage hospi-



tal' was the term applied to them in the USA and the UK. The book displayed was published in an effort to save voluntary General Hospitals from being taken over by the Ministry of Health. In it, much is made of the absence of bureaucracy within them, their great efficiency, and the personal interest taken in such institutions on the part of subscribers and local residents. On the wall of the Totnes hospital is the wording "Cottage hospital. Subsidised by voluntary contributions". Despite such efforts, the setting up of the NHS in 1948, meant that the ownership of all hospitals was transferred to the State.

(a) Iconographic Collections – cat. no. 268081; (b) Modern Medicine Collection – 9612

### 3.6 'Visitors' and 'Skin department' hospital signs from Liverpool Royal Infirmary. 1970–1980

Signage in hospitals has increasingly been seen as an absolutely crucial element of their effectiveness. As with so many other aspects of modern hospital design, signage has been treated to much technical and scientific analysis, as well in this case as the input of designers, with colour, typeface, positioning and wording all being carefully thought through.

loaned by the Science Museum – 1981-1690

### 3.7 (a) 'The shape of things to come'. The Sheffield Voluntary Hospital's million-pound appeal pamphlet. 1938. [illustrated] (b) Hospital cost containment: selected notes for future policy. Edited by Michael Zubkoff, Ira E Raskin, and Ruth S Hanf. New York, 1978. (c) Royal Victoria and West Hants Hospital, Bournemouth – contribution scheme card and stamps. 1939. (d) Cot plaques from Great Ormond Street Hospital for Sick Children. England, 1900–1904

As costs of medical technology and better trained staff have risen so the problem of funding hospital care has, in most modern countries, reached crisis levels. Finances have always been crucial to those who run hospitals, but like so much else, the issue has in modern times been cordoned off into a specialized area of technical work. The Sheffield Hospital appeal hoped to raise funds for amongst other things a new maternity wing. The US work on hospital costs set out ways of combating "rapidly escalating hospital costs". And the plaques were used to indicate who had sponsored the cots in the Children's Hospital over which they were hung.

Modern Medicine Collection – (a) pam- WX100 1938 S54s; (b) WX150 1978 Z93h;

(c) Barlow Collection; (d) loaned by the Science Museum – 1986-1444 to 6

### 3.8 (a) Hospital case book. Mengo, Kenya. (b) A R Cook, *A medical mission in Mengo*. London, 1899. (c) Certified midwife's badge. (Mengo Hospital)

This material comes from the papers of Sir Albert Ruskin Cook (1870–1951), a



medical missionary in Uganda with the Church Missionary Society. Along with his brother John Howard, he was the first to diagnose sleeping sickness in East Africa. The Mengo Hospital was established in 1897. Originally through colonialism and missionary work, and more recently through aid work, the Western scientific hospital has been exported all over the world.

CMAC PP/COO – (a) L8; (b) L6; (c) L16

**3.9      Souvenir postcard of the Louise Maloney Hospital, Key West, Florida. Photomechanical reproduction of a hand-coloured photograph. 1920 [illustrated]**

Postcards such as this one were produced to be sent by patients and their visitors to friends and relatives. To put the patients at their ease, the building and its garden simulate the appearance of a private house. But behind the scenes, the scale of hospitals in the modern world has become significant enough for them to operate as miniature cities, supporting their own post offices, radio stations, banks, sports facilities and the like.

Iconographic Collections – icv 50558

**3.10      (a) *Health Service Journal*. 2 November 1995. (b) *Artery: the journal of arts for health*. October 1996**

This edition of *The Health Service Journal*, the front cover of which features a photograph of some of the art to be found in Chelsea and Westminster Hospital, examines the rapidly expanding movement for art in hospitals. Art has been used in hospitals almost throughout their history, but it is only after a period of relative dormancy, that more has recently been done in the area. Under the provocative title “Does NHS art make you sick?” the article looks at a variety of recent projects and asks what is ‘good’ hospital art, and does it help or hinder healing? The Chelsea and Westminster Hospital is particularly notable for, at times, resembling an art gallery as much as a hospital.

**3.11      ‘Don’t kill another hospital’. Front page of *Evening Mail* (Birmingham). 30 May 1997**

Since its founding 50 years ago, different models of the NHS have inspired periods of great centralization followed by decentralization. Much of the recent history of hospitals in the UK has been concerned with restructuring and reorganization for the sake of financial efficiency. Many of the proposed changes have included closures for established hospitals, and, as this recent front page of the *Evening Mail* indicates, this has often proved highly unpopular with public and medical professionals alike.



**3.12 'Knobs'. Work in mixed media by Maria Marshall. 1996 [illustrated]**

This artwork comprises an arrangement of old doorknobs from King's College Hospital. Marshall is one of a number of contemporary artists that have found suggestive and provocative themes, and in her case new materials to work with, within a medical environment. These well-worn hospital door handles, with almost a geological quality to them, are strongly evocative of the passage of countless human lives through hospital corridors.

loaned by Maria Marshall

**3.13 A surgical room with a sound system at the Eye Hospital, Institute of Ophthalmology, Medical Center, New York City. Gouache on board by J Pignone. c. 1934 [illustrated]**

The sound system depicted in the picture allowed the surgeon to communicate to onlookers behind a glass wall by means of a microphone and loud speakers. Such contraptions were made necessary by the conflicting needs of teacher–student communication and a completely sterile operating environment. Along with the technical innovations that have been incorporated into standard hospital designs, many others, of course, have barely survived their trial runs.

Iconographic Collections – cat. no. 23710

**3.14 The Casual Ward. Drypoint by Diana Thorne (b. Winnipeg, 1895). New York City [?], c. 1920 [illustrated]**

The nineteenth-century urban dweller was sadly familiar with the sight of long queues outside the casual ward, with attendees clutching cards of admission for inspection on demand. Reminiscent of Luke Fildes's painting *Applicants for Admission to a Casual Ward* (1874), this drypoint completed some 50 years later depicts patients waiting in relative indoor comfort, but still in need of tickets as shown by the sign "Outpatients department. Hours 10–3. 7–9. Dont lose your blue ca[rd]." Waiting rooms still loom large in contemporary public perception of public hospitals, a concern which has led relatively recently to considerable thought being given to strategies for reducing patients' waiting time and improving the quality of the decor.

(The copyright holder of exhibit 3.14 has not been traced, but the Wellcome Trust would be glad to receive such information for inclusion in the Library catalogue and for the advantage of future enquirers.)

Iconographic Collections – cat. no. 24556



- 3.15 (a) Hospital boots. 1997. (b) Isobel M Maurer, *Hospital hygiene*. London, 1974. (c) A children's hospital ward showing a bacteria-free nursing unit in use. Coloured photomechanical print [illustrated]

Maurer's work on hospital hygiene uses the fairly typical language of a "battle against hospital infection... won or lost by soldiers on the battlefield". It also discusses 'hospital infection' - that is patients being infected during their stay in hospital. The bacteria-free nursing unit was developed to allow patients with a high risk of infection to socialize, and thus reduce the psychological problems of isolation. It was the germ theory of Louis Pasteur (1822–1895) that inspired Joseph Lister (1827–1912) in particular to propose antiseptic schemes for reducing the risk of infection – an idea which during the next half century transformed surgery and much else that went on in hospitals.

(The copyright holder of exhibit 3.15c has not been traced, but the Wellcome Trust would be glad to receive such information for inclusion in the Library catalogue and for the advantage of future enquirers.)

(b) Modern Medicine Collection – WX167 1974M45h;

(c) Iconographic Collections – cat. no. 17397

**3.16 Case notes for 50-year-old patient suffering from arthritis. November 1926**

These notes come from the papers of Dr Donald Hunter (1898–1927) and are part of his material relating to various occupational diseases. Hunter was Director of the MRC Department for Research in Industrial Medicine, and was based at the London Hospital. The notes were probably compiled while he was curator of the Medical School Museum at the London Hospital. The twentieth century has seen a considerable amount of medical research conducted in hospitals. In particular, they present the best sites in which to relate the findings of laboratory science to the realities of patient care.

CMAC – PP/HUN/C.1/8

**3.17 Applications for admissions to (a) Royal General Dispensary for the Sick Poor, London, 19--; (b) Hospital for Consumption, London, 192-; (c) Royal Surgical Aid Society, London, 1931; (d) Victoria Hospital for Children, subscribers patient ticket**

Admissions to hospitals were commonly sponsored by benefactors, who sometimes gave hospital tickets to their servants. In the nineteenth century, one guinea, for example, might 'buy' a ticket for one 'out-patient' and one 'in-patient' for a year. Rules for hospital admission were commonly used to try to influence patient behaviour. Those on the application to the General Dispensary for the Sick Poor directs that only cases "really necessitous" would be seen, and that patients should "behave decently and soberly"; while the ticket for the Hospital for Consumption specifies that the card should not to be "used for begging purposes".

(a), (b) and (c) all EPB - BF2; (d) Modern Medicine Collection



- 3.18 (a) Margaret and H A Rey, *Curious George goes to the hospital*. Boston, 1993. (b) Friedrich Kohlsaas and Katrin Arnold, *David und das Krankenhaus*. Munich, 1981. (c) Toy operating theatre and convalescence ward made by Playmobil. 1997. (d) 'Nurse'. Children's wooden jigsaw puzzle. 1983

The image on the puzzle shows a collage of hospital and dental scenes featuring children. The German children's book uses the story of a boy taken to hospital after a car accident to introduce a wide range of hospital activities. The Curious George story, originally published in 1966, similarly relates the tale of a monkey who is taken to hospital. Driven by a wide range of educational and commercial intents, the market for children's culture relating to sickness and curing is now enormous.

- 3.19 (a) First World War field dressings. England, 1914–1918. (b) Photograph of the Royal Victoria Military Hospital at Netley. (c) 'Historic war hospital to come down', and 'Out of the air'. *The Listener*. January 1966. (d) Photograph of etching on psychiatric ward window, Netley

The Royal Victoria Military Hospital was built to cope with the need to treat great numbers of returning wounded soldiers from the Crimean War, and was for a while the world's largest military hospital. Many of the patients had as many mental as physical complaints; the photograph is of an etching done by an inmate of the psychiatric ward at the hospital. The hospital's demolition in 1966 roused considerable protest amongst those who admired its ornate Victorian architecture and who lamented the demise of a 103 year-old landmark. When it was first built though, the mighty figure of Florence Nightingale expressed great dissatisfaction with the designs, which she felt compared very badly with the new pavilion-style hospitals going up in France.

(a) loaned by the Science Museum – 1983-122; (b) to (d) CMAC/RAMC/801/7, 801/4, 801/3

- 3.20 X-ray tube, with vacuum regulator, by Cuthbert Andrews. England, 1914–1925

One of the most marked developments in modern hospitals has been the exponential rise in the role of, and growth of sophistication of, medical technology. The trend started in the early nineteenth century, with the development of such simple devices as stethoscopes and endoscopes. The 1895 discovery of X-rays was quickly harnessed for medical purposes, with large scale radiological departments growing up in many hospitals during the twentieth century. More recently a dizzying range of testing, imaging and therapeutic techniques has been added to the standard equipment of large hospitals.

loaned by the Science Museum – A627167



**3.21 (a) Pottery statue of Florence Nightingale. Staffordshire. Late nineteenth century. (b) Report submitted to the War Office, Florence Nightingale. 1855**

"It may seem a strange principle to enunciate as the very first requirement in a Hospital that it should do the sick no harm." Florence Nightingale's opening line in her seminal work, *Notes on Hospitals*, was prompted by moral outrage at the horrors she encountered in the barrack hospitals at Scutari and Balaklava during the Crimean War. The Crimean report lists the final disposition of the nurses, sisters and female staff under her care: death, invalidity, intoxication, incompetence and impropriety were the chief reasons for termination of service. Rigorous standards were mandatory, and her report states: "intoxication though tacitly admitted as unavoidable among nurses in London hospitals, must in military hospitals be sternly checked by dismissal at the first offence." Her reforming zeal for the nursing profession led her to establish the Nightingale Training School of Nursing at St Thomas's Hospital.

(a) loaned by the Science Museum – A661037; (b) WMS 5479/1

**3.22 Circular sterilizing drum for dressings and small surgical instruments. 1930s**

The last third of the nineteenth century saw the evolution of a new form of surgery based on the development of three crucial factors: localized pathology, and the use of anaesthesia and antiseptics. The germ theory that informed the last of these suggested that microscopic, and therefore invisible, quantities of dirt posed a perpetual threat of infection, which could only be combated through the sterilization of every aspect of the surgical environment: surfaces, equipment, instruments, clothing etc.

loaned by the Science Museum – 1993-1591

**3.23 (a) 'Soiled dressings' enamelled iron bucket. Formerly used at Farnborough Hospital. England, 1910–1950. (b) Recycled paper disposable bedpan. England, 1997**

Since the general acceptance of germ theory, the disposal of waste material within hospitals has become a matter of considerable study and concern. Despite energetic attempts to sterilize the earlier bedpans made of stainless steel, the results of the relatively recent introduction of disposable bedpans has shown that these measures were not entirely effective.

(a) loaned by the Science Museum – 1988-599/2

**3.24 (a) 'The probationer who disagreed with the matron'. Watercolour by H M Bateman 1887–1970. (b) Nurse's certificate from Alfred Hospital. 1931. (c) Nursing memorabilia album of Lucy Gwendoline Mothersdill (qualified 22 November 1935)**

Bateman's satirical picture poked fun at the relative power gained by head nurses on hospital wards. By the twentieth century nursing was established as a



respectable profession, its reputation enhanced not only by Florence Nightingale but by nursing organizations like St Bartholomew's (Bart's) League of Nurses (founded 1899), and Bart's School of Nursing (founded 1877). One of the consequences of this shift has been heated discussions about the range of medical duties that nurses should be encouraged to take on, seen by some as a power struggle between nurses and doctors. The certificate declares Elsa Agnes Curdie qualified "to act as a SKILLED MEDICAL & SURGICAL NURSE." Bart's School of Nursing evolved into a four-year course and pioneered the idea of state registration for nurses. The nursing album contains the good luck tokens collected by a student before sitting the Bart's nursing exam. Qualified Bart's nurses wore a blue belt and were popularly known as 'bluebelts'. The navy blue petersham scraps were probably from colleagues where they were already staff nurses, the black-and-white scraps are the Bart's colours, and the blue-and-white stripe is from the standard dress uniform worn by nurses in training and staff nurses.

(a) Iconographic Collections – cat. no. 263; (b) Modern Medicine Collection – Barlow Collection;  
(c) loaned by St Bartholomew's League of Nurses

**3.25 'Theme Hospital'. Interactive computer game by Bullfrog Productions. 1997**  
Extremely popular since its release at the beginning of April 1997, the basic idea behind this computer game is to build and manage a hospital. It features crazed doctors operating with chainsaws, hospital managers stealing patients from each other, and a variety of 'weird' diseases including hairy-itis, bloaty head and slack tongue. Reactions to the use of the game as a teaching aid for NHS trainees have varied, with some, including the British Medical Association, seeing the move as realistic and others, like the health union, UNISON, decrying it as 'sick'.

**3.26 'Daffodil 2'. From the 'Corridors' series. Photographic work by Catherine Yass. 1995 [illustrated]**

This work was commissioned by the Public Art Development Trust as part of its 'Art in Hospitals' scheme, which aims to encourage interactions between artists, staff and patients. Originally intended as backgrounds for portraits of patients and staff at the Springfield Hospital (London), Yass became interested in the corridors in their own right. Artificially coloured, they reflect the range of emotions that such spaces evoke: comfort, assurance, doubt, worry and control. During the past 15 years or more, the King's Fund has commissioned, in collaboration with the Public Art Development Trust, works of art in numerous hospitals.

loaned by the Public Art Development Trust

*Ken Arnold and Denna Jones*







