



The Alexandra Hospital for Children with Hip Disease

'For the reception, maintenance and surgical treatment of the children of the Poor', suffering from tuberculosis of the hip in the nineteenth century.

Samantha Foot

MA, 2011

The Alexandra Hospital for Children with Hip Disease

‘For the reception, maintenance and surgical treatment of the children of the Poor’,¹ suffering from tuberculosis of the hip in the nineteenth century.

Samantha Foot

MA, 2011

Institute of Historical Research, University of London

¹ St Bartholomew’s Hospital Archives, SBHA/HA/11/13, Rules of the Alexandra Hospital, (c.1889)

Contents

	Page
<i>Title Page</i>	1
<i>Contents</i>	2
<i>List of Abbreviations</i>	3
<i>List of Figures and Tables</i>	4
<i>Acknowledgements</i>	5
Introduction	6
Chapter One: An Introduction to British Children's Hospitals	9
Chapter Two: The Alexandra Hospital for Children with Hip Disease	15
Chapter Three: A Consideration of Tuberculosis of the Hip-Joint	24
Chapter Four: The Ambitions and Public Promotion of Alexandra Hospital	30
Chapter Five: The Method and Effectiveness of Treatment	34
Chapter Six: The Influence of Family Poverty	48
Conclusion	56
<i>Appendix I: Structure of the Alexandra Hospital for Children with Hip Disease, 1867-1900</i>	58
<i>Appendix II: Glossary of Medical Terms</i>	59
<i>Bibliography</i>	62

List of Abbreviations

AH	Alexandra Hospital for Children with Hip Disease
AHAAD	Alexandra Hospital Application and Admission Database
Bart's	St Bartholomew's Hospital
<i>BMJ</i>	<i>British Medical Journal</i>
COS	Charity Organisation Society
FRCP	Fellow of the Royal College of Physicians
FRCS	Fellow of the Royal College of Surgeons
<i>HHARP</i>	<i>Historic Hospital Admission Records Project</i>
HSC	Hospital for Sick Children, Great Ormond Street
SBHA	St Bartholomew's Hospital Archive
<i>SHM</i>	<i>Social History of Medicine</i>

List of Figures and Tables

Figures

		Page
Cover	The Alexandra Hospital for Children with Hip Disease, original hospital in Queen Square, (c.1898), St Bartholomew's Hospital Archive, SBHA/HI/6	
3.1	'Extreme lordosis and deformity, occurring in the spontaneous cure of disease of the right hip-joint. From a girl in the Hospital for Sick Children in the year 1866', T. Holmes, <i>The Surgical Treatment of the Diseases of Infancy and Childhood</i> , (London, 1869), p.440	27
5.1	Method of treatment for a flexed, abducted limb by weight and pulley, from <i>British Medical Journal</i> , Vol.2, (1877), p.98	35
5.2	Thomas Splint, from H.O. Thomas, <i>Diseases of the Hip, Knee, and Ankle Joints</i> , (Liverpool, 1875), Plate 9	37
5.3	Condition of patients on discharge from Alexandra Hospital, 1867-94, excluding those removed for reasons unrelated to hip-disease	40
5.4	Per cent of each 'condition of patient on discharge', subsequently readmitted to Alexandra Hospital, 1867-94	42
5.5	Effectiveness of treatment in Alexandra Hospital by length of treatment, 1867-94, excluding those removed for reasons unrelated to hip-disease	44
5.6	Effectiveness of treatment in Alexandra Hospital by periods of admittance, 1867-94, excluding those removed or reasons unrelated to hip-disease	45
6.1	Proportion of applications and admissions to Alexandra Hospital by occupation of parents, 1884-94	52

Tables

6.1	'Bank's Classification Scheme', from K. Waddington, 'Unsuitable cases: The debate over outpatient admissions, the medical profession and late-Victorian London hospitals', <i>Medical History</i> , Vol.42, (1998), p.33	50
-----	--	----

Acknowledgements

I am very grateful to the Historic Hospital Admission Records Project (HHARP) team at Kingston University, for kindly providing me with the admissions data for Alexandra Hospital, enabling a more detailed study than time would otherwise have allowed. Also to the staff of St Bartholomew's Hospital Archive for all their time and assistance.

My particular thanks go to Dr Beth Lewis for her medical expertise and valuable comments.

Special thanks to Dr Andrea Tanner for all her guidance and advice, for making sure this work became the best it could be, and for all the lovely breakfasts. Thanks also to all the staff at the Institute of Historical Research, and especially Dr Matthew Davies for his support throughout the past year.

Finally, a big thank you to Mark for all his encouragement and endless patience.

Introduction

In twenty-first century Britain, tuberculosis is not considered a major health risk for humans, although even with today's medical knowledge, globally it is among the most dangerous infectious diseases, killing 1.7 million in 2009.¹ This contrasts with the mid-nineteenth century, when it was, 'the largest single cause of death in England'.² Without antibiotics, Victorian medicine was limited in its treatment of tuberculosis. Among infectious diseases, tuberculosis was the second highest killer, after diarrhoea, of children under five between 1861 and 1870.³ The most common form of non-pulmonary tuberculosis in children was tuberculosis of the bones and joints.

This study looks at the Alexandra Hospital for Children with Hip Disease (AH), established in 1867, to determine the hospital's success in treating children of the poor with tuberculosis of the hip, within the confines of nineteenth century medicine and the Victorian voluntary hospital system.⁴

At this time there was no universal provision of medical care. The wealthy paid for private treatment in their homes, and those who were destitute were treated in Poor Law infirmaries. Voluntary hospitals were established to accommodate the deserving poor, being those who could not afford private care but who were not reliant on the State.⁵

As paying customers, the wealthy had some influence over their treatment. Recipients of charitable care, however, had little choice in this.⁶ With regard to hip-disease, a patient's

¹ '2010/2011 Tuberculosis global facts', *World Health Organization (WHO)*, www.who.int/tb/publications/2010/factsheet_tb_2010_rev21feb11.pdf, [30/08/11]

² L.G. Wilson, 'The historical decline of tuberculosis in Europe and America: Its Causes and Significance', *Journal of the History of Medicine and Allied Sciences*, Vol.45, (1990), p.366

³ A. Hardy, 'Rickets and the rest: Childcare, diet and the infectious children's diseases, 1850-1914', *Social History of Medicine (SHM)*, Vol.5, (1992), p.393

⁴ Elizabeth Lomax has provided a comprehensive account of the development and character of British children's hospitals in the nineteenth century; E. Lomax, *Small and Special: The Development of Hospitals for Children in Victorian Britain*, (London, 1996)

⁵ K. Waddington, *Charity and the London Hospitals, 1850-1898*, (Woodbridge, 2000), p.89

⁶ Andrea Tanner has shown that parents maintained some control over the treatment administered in children's hospital by either allowing or preventing the treatment of their children; A. Tanner, 'Choice and the children's hospital: Great Ormond Street Hospital patients and their families, 1855-1900', in A. Borsay and P.

social status significantly influenced their treatment. Wealthy children were prescribed bed-rest for extended periods, until they were believed to be fully cured. For the poor, limited resources generally precluded this course of action. Patients in the early stages of the disease were treated for their acute symptoms only, with more serious cases undergoing excision of the hip-joint. By contrast, wealthy patients almost never underwent this invasive procedure.⁷ AH was established to provide children of the poor with an opportunity to access this conservative method.

This study briefly introduces Victorian children's hospitals, and the perceived need for the Alexandra Hospital for Hip Disease. An outline of the structure of the hospital is given, with its working methods and its position within the voluntary system. Chapter three concentrates on tuberculosis of the hip-joint in general. AH's ambitions and its public promotion are discussed in chapter four. The final two chapters consider the success of AH in its treatment of hip-disease and its ambition to serve the children of the poor. This study shows that although AH's influence was limited when compared to the large numbers of children affected by this condition, it did achieve its goals.

The study covers the years 1867, when the hospital opened, to the end of the nineteenth century, using patient admission and application records. It concentrates on inpatients, as outpatient records are limited and do not cover the whole period under review. Most sources consulted were produced by AH management and staff. Some were intended for public viewing, therefore heavily colouring the language and information provided. Internal records display a middle- and upper-class perspective of working-class patients and their needs. It is not possible, within the confines of this study, to assess the psychological effects long periods of hospital treatment, and enforced immobility, would have had on AH patients, in part due both to space and the nature of the sources, in which little evidence of patient perspective is given.

AH's name changed twice during the course of the nineteenth century; here it is referred to as Alexandra Hospital (AH), for the purposes of clarity. The term hip-disease denotes

Shapely (eds.), *Medicine, Charity and Mutual Aid: The Consumption of Health and Welfare in Britain, c.1550-1950*, (Aldershot, 2007)

⁷ T. Holmes, 'Address in surgery', *British Medical Journal (BMJ)*, Vol.2, (1880), p.257

tuberculosis of the hip; although the hip-joint can be affected by many diseases, within nineteenth-century medicine the term was used to describe the tubercular condition, the cause being finally identified in 1882.

Chapter One An Introduction to British Children's Hospitals

The Alexandra Hospital for Children with Hip Disease opened in 1867, during the general expansion and diversification of British medical facilities.⁸ The nineteenth century saw a dramatic increase in voluntary hospitals in Britain, including those dedicated to either a specific group, such as the Hospital for Women, or a single disease or condition, as in the Cancer Hospital.⁹

Whereas Poor Law infirmaries existed to care for those reliant on the State, voluntary hospitals sought to ensure temporary sickness did not lead to destitution for 'deserving' members of the working classes, (those who could not afford private medicine), by providing them with charitable medical care.¹⁰

Voluntary hospitals depended on public donations, so their increase in numbers arguably heightened competition for funding. Special hospitals created controversy among the established medical community, principally due to the perception that donations to them diverted funds from older general hospitals. In 1875, thirty-six special hospitals received donations averaging above £95 per bed, compared to the 'eight chief Metropolitan hospitals', who on average received less than £49 per bed.¹¹ It has been argued that this financial competition left general hospitals with deficits while, overall, special hospitals had a surplus of funds.¹² The situation was acute in London, with its concentration of medical facilities, which included at least 66 special institutes by the early 1860s.¹³ Critics maintained that patients treated by these institutes could be seen in the specialist wards of general hospitals, and that resources were being duplicated unnecessarily.¹⁴ *The Times* in 1869 asked, 'what

⁸ Waddington, *Charity*, pp.8-10

⁹ H. Burdett, *Hospitals and the State: with an account of the Nursing at London Hospitals and Statistical Tables*, (London, 1881), p.22

¹⁰ G. Rivett, *The Development of the London Hospital System, 1823-1982*, (London, 1986), p.28

¹¹ H. Burdett, 'Public support of hospitals', *BMJ*, Vol.1, (1877), p.406

¹² Waddington, *Charity*, p.123

¹³ L. Granshaw, "'Fame and fortune by means of bricks and mortar": the medical profession and specialist hospitals in Britain, 1800-1948', in L. Granshaw and R. Porter, (eds.), *The Hospital in History*, (London, 1989), p.206

¹⁴ 'London hospitals and dispensaries', *The Times*, 30 January 1869, p.4

excuse will there be for the existence of the South London Ophthalmic Hospital', once the dedicated eye department was opened at the new St Thomas' Hospital?¹⁵

Conversely, special hospitals proved popular with philanthropists and patients. As Lindsay Granshaw has explained, special hospitals could always attract patients and this demand 'underlay [their] overall success'.¹⁶ Subscribers were drawn by the glamour of their eminent patrons and by appeals highlighting the need for the special hospitals' particular offering.¹⁷

Special hospitals upheld that they existed to provide treatments which were not available in general hospitals, where there was pressure to receive curable cases.¹⁸ General hospitals sustained a high turnover of inpatients, so as many as possible could demonstrably benefit from limited facilities, highlighting the efficiency of the hospital. This pressure meant that acute cases were more readily admitted to general hospitals.¹⁹ Chronic cases, such as consumptives, were often denied care due to poor prognosis and their long bed occupancy.²⁰ Infants were also generally excluded from non-specialist hospitals because of their susceptibility to cross-infection, and high mortality rates.²¹ Many special hospitals, for example, the Hospital for Consumptives, were established for such cases, although children's hospitals tended also to exclude infants, the exception being the East London Hospital for Children.²²

Special hospitals also fulfilled professional ambitions. London attracted doctors seeking to establish professional reputations through experience at one of the large Metropolitan hospitals. Positions at the prominent teaching and general hospitals were jealously protected and hard to acquire, as they could bring valuable medical experience and lead to

¹⁵ Ibid., p.4

¹⁶ Granshaw, "Fame and fortune", p.206

¹⁷ Rivett, *London Hospital System*, pp.44-5

¹⁸ 'London hospitals', *The Times*, 30 January 1869, p.4

¹⁹ B. Abel Smith, *The Hospitals, 1800-1948: A Study in Social Administration in England and Wales*, (London, 1964), p.39

²⁰ Rivett, *London Hospital System*, p.46

²¹ E. Lomax, 'The control of contagious disease in nineteenth-century British paediatric hospitals', *SHM*, Vol.7, (1994), p.397

²² Rivett, *London Hospital System*, p.46; Lomax, 'Control of contagious disease', p.397

profitable private practices.²³ Charles West waited in vain to be appointed senior physician at St Bartholomew's Hospital (Bart's) until, in 1852, he founded the Hospital for Sick Children, Great Ormond Street (HSC). Some doctors, like West, established specialist institutions, to generate their own hospital experience and reputation, or because they wished to specialise in a particular field of medicine.²⁴ For West, motivation came from a desire to develop hospital facilities for children; in 1877 he wrote, 'The foundation of a Hospital for Sick Children was the dream of my youth'.²⁵

HSC was the first successful children's hospital in Britain. Although initially cautious of its ability to attract patients and public support, it soon proved popular with both. Appeals focused on the heart-rending suffering of its patients, thereby increasing public sympathy and donations.²⁶ The initial success of HSC encouraged the establishment of five further paediatric hospitals in London before 1870.²⁷

Support for children's hospitals had not always been strong. At the beginning of the nineteenth century, the prevailing opinion was that sick children were better off with their families rather than in institutional care. Charity could foster apathy among the working classes and it was argued that, if the poor were not responsible for the welfare of their own children, they would become neglectful parents.²⁸

Children's hospitals were also rejected on medical grounds. High mortality among working-class children was considered inevitable, and therefore the development of dedicated paediatric institutes was pointless.²⁹ Furthermore, as evidenced by examples from the Continent, mortality rates in children's hospitals were often no better than among the general

²³ S. Cherry, 'Hospital Saturday, workplace collections and issues in late nineteenth-century hospital funding', *Medical History*, Vol.44, (2000), p.465

²⁴ Lomax, *Small and Special*, p.25

²⁵ C. West, *On Hospital Organisation, with Special Reference to the Organisation of Hospitals for Children*, (London, 1877), p.97

²⁶ Waddington, *Charity*, p.28

²⁷ Lomax, *Small and Special*, pp.36-7

²⁸ *Ibid.*, p.12

²⁹ E. Seidler, 'A historical survey of children's hospitals', in Granshaw, *The Hospital in History*, p.190

working-class population. This was largely because of limited treatment options for many childhood diseases and widespread cross-infection.³⁰

However, by mid-century, childhood was increasingly viewed as a distinct and valuable period of life. The health of British children became more important as they were recognised to be the future working population, on which the national economy would rely.³¹ John Bunnell Davis sought support for the Universal Dispensary of Children, founded in 1816, by arguing that investment in the health of working-class children would, 'ensure a healthy population and enable the poor to support those labours from which the rich extract their competence and resources', stressing the benefits to both the nation and to wealthy pockets.³² This was to become a theme used by other children's hospitals, including AH.

Charles West, in his early promotion of HSC, focused on the ill-health of the young population, highlighting that of all deaths in London in 1850, over 50 per cent were of those aged 15 or younger. At the same time, children comprised only 3 per cent of Metropolitan inpatients at voluntary hospitals.³³ It had been argued that children requiring hospital treatment should attend general hospitals and that special provisions were unnecessary, however, West demonstrated that children were not accommodated in existing institutions. The rules of Birmingham General Hospital, established in the eighteenth century, reflect the pattern of many, by excluding children. Although in the nineteenth century children were occasionally found on the wards of Birmingham General, numbers remained small.³⁴ Dedicated children's wards were not established until much later, because many doctors lacked interest in children's diseases, there were fears of increasing infection and paediatric care was expensive.³⁵ Elizabeth Lomax has argued that, if general hospitals had developed children's departments by the mid-nineteenth century, there would have been less demand for dedicated children's hospitals.³⁶

³⁰ H.E. Priestley, *The Evelina: The Story of a London Children's Hospital, 1869-1969*, (London, 1969), pp.2-3

³¹ Seidler, 'Historical survey', p.183

³² Quoted in Lomax, *Small and Special*, p.5

³³ Tanner, 'Choice and the children's hospital', p.138

³⁴ J. Reinartz, 'Investigating the 'deserving' poor: charity and the voluntary hospitals in nineteenth-century Birmingham', in Borsay, *Medicine, Charity and Mutual Aid*, p.113

³⁵ Lomax, *Small and Special*, p.35

³⁶ *Ibid.*, p.35

With sustained high Metropolitan infant mortality, (Islington recorded 146 deaths per 1000 in the 1840s), gradually it was accepted that hospitals were suitable places for sick children.³⁷ Supporters believed children's hospitals offered both physical and moral benefit to their patients; wards were perceived as ideal middle-class homes from home, instilling good behaviour.³⁸ By the late nineteenth century, long periods spent in institutions were perceived as actually improving the respectability of working-class children.³⁹

As with general hospitals, children's hospitals were reluctant to admit chronic cases, such as patients with hip-disease. Without treatment by excision of the joint, hip-disease could take years of bed-rest to heal. Hospital managements disliked single patients occupying beds for the extended periods needed, as they blocked beds for acute cases and lowered patient numbers. HSC medical officers highlighted their opposition to treating chronic cases as early as 1857, although the following was not included in the hospital rules until 1864:

Many cases of rickets, hip joint disease or of scrofulous disease of the spine, are of necessity refused: either because they are quite incurable, or because they require nothing but rest for many months, or because good diet and fresh air for months or years are essential to improvement, and the reception of such cases would convert the hospital into an asylum for sickly children, instead of a place for the treatment and cure of the diseases of childhood.⁴⁰

Despite this, many cases of hip-disease were admitted, medical officers being unwilling to turn away children suffering from severe pain and discomfort. Occasionally patients were treated by excision of the joint, but more often, only their acute symptoms were attended to before being discharged.⁴¹ Relapses were frequent, as resilient *tubercle bacilli* were invariably still present in the joint, and it was common for children to be readmitted when

³⁷ M.J. Daunton, 'Health and housing in Victorian London', *Medical History*, Supplement No.11, (1991), p.126

³⁸ A. Tanner, 'Too many mothers? Female roles in Metropolitan Victorian children's hospital', in J. Henderson, P. Horden and A. Pastore, (eds.), *The Impact of Hospitals*, (Bern, 2007), p.136

³⁹ Tanner, 'Choice and the children's hospital', p.141

⁴⁰ Lomax, *Small and Special*, p.42-3

⁴¹ St Bartholomew's Hospital Archive (SBHA), SBHA/HA/13/3/6, Letter from Prescott Hewett, Surgeon at St George's Hospital, (27 December 1866)

pain and abscesses returned. For example, Edward Lovell was admitted twice to HSC with hip-disease, staying for 15 days in May 1858 and discharged as 'relieved', only to return in March 1859 for a longer period of 39 days, after which he was also described as 'relieved'.⁴²

The lack of provision for the treatment of hip-disease compelled Jane Perceval and Catherine Wood, in 1867, to establish AH solely for their treatment.⁴³ Although it was the first hospital of its kind, AH was founded at a time when the Victorian voluntary system was saturated. To succeed, AH had to work within this system, as it competed with hundreds of other charities for essential funding. Sometimes this meant compromising the initial aims of the hospital.

⁴² *Historic Hospital Admission Records Project (HHARP)*, www.hharp.org, [22/08/2011]

⁴³ In 1872, a small hospital in Sevenoaks, Kent, opened to accept children with hip complaints, but by 1878 it had only 12 beds; Lomax, *Small and Special*, 'Appendix: Table 1', p.179; Burdett, *Hospitals*, p.18; Some provision for young hip-disease sufferers was found at the three small orthopaedic hospitals in London, and by the early 1890s the National Orthopaedic Hospital, intended 39 of its 62 beds for children; Lomax, *Small and Special*, p.13

Chapter Two The Alexandra Hospital for Children with Hip Disease

The House of Relief for Children with Chronic Diseases of the Joints, later the Alexandra Hospital for Children with Hip-Disease (AH), was opened 12 March 1867 by Bishop Charles Ellicott.⁴⁴ It was originally founded and managed by a Ladies' Committee, consisting of Jane Perceval and Catherine Wood, both former nurses at HSC, Mrs Henry Whitehead, wife of a curate to St Anne's, Soho, and a Miss Delf.⁴⁵ Nothing further is known about the latter two, except that they helped manage the hospital until the Ladies' Committee was disbanded in 1871. Catherine Wood left in 1869 to become Superintendent of Wards at Cromwell House, HSC's convalescent home in Highgate. In 1878, she became Lady Superintendent at HSC.⁴⁶

AH was the brainchild of Jane Perceval, it was her 'zeal and perseverance' which brought about the hospital's foundation, and she remained influential there until her death in 1896.⁴⁷ Perceval bought 19 Queen Square, Bloomsbury in 1867 as the hospital site, which was also her home until her marriage in 1870.⁴⁸ She received an annual rent of £64 for no.19, which she donated to AH in 1890 to enable the new hospital building.⁴⁹ In 1870 Jane Perceval married Howard Marsh, surgeon to AH from 1867 to 1888.⁵⁰ It was unusual for a woman to continue public work after marriage, but from 1871 until 1886, Jane Marsh (Perceval) was the AH's honorary secretary, in which capacity she was also an ex-officio member of the Committee of Management alongside her husband.⁵¹

⁴⁴ SBHA, SBHA/HB/4/8, Typescript history of the Alexandra Hospital, (c.1920); Charles Ellicott, (1819-1905), was then Bishop of Gloucester and Bristol; *Who's Who*, www.ukwhoswho.com, [19/09/11]

⁴⁵ SBHA, SBHA/XP/1/1, Newspaper Cuttings, (1867-1902), p.336

⁴⁶ 'Catherine Jane Wood', *HHARP*, www.hharp.org/library/gosh/nurses/catherine-jane-wood.html, [22/06/2011]

⁴⁷ T. Holmes, 'An address on children's hospitals as medical schools', *BMJ*, Vol.2, (1886), p.807; *The Times*, 26 September 1896, p.1

⁴⁸ SBHA, SBHA/HA/14, Notes from Housing Subcommittee, (1871); Frederick Howard Marsh, Marriage Record, 25 August 1870, London, England, Marriages and Banns, 1754-1921, *Ancestry.com*, www.ancestry.com, [22/09/11]

⁴⁹ SBHA, SBHA/HA/14, Housing Subcommittee; SBHA, SBHA/HA/1/2, Minute book of the Committee of Management, (1887-94), p.78

⁵⁰ Frederick Howard Marsh, Marriage Record, www.ancestry.com, [22/09/11]; *The Times*, 26 September 1896, p.1

⁵¹ SBHA, SBHA/HA/1/1, Minute book of the Committee of Management, (1871-1887), p.4 and p.73

Jane's family was prominent and wealthy, and she herself was presented to Queen Victoria in 1858.⁵² Her uncle, Spencer Walpole MP, was among the hospital's first patrons, and his son, also Spencer Walpole, became AH's first honorary secretary.⁵³ Many Victorian charities were established by persons of social prominence; Jane's position and the involvement of her family would suggest it was this, as much as her nursing experience, which instigated her foundation of AH and continued her influence there, reinforced by her position as landlady.

Jane's motivations in founding AH did not reflect professional ambition, as with special hospitals established by medical men. The new hospital did afford Howard Marsh the position of senior surgeon, however he already had a close association with Bart's, becoming chloroformist in 1868, assistant surgeon in 1873 and full surgeon in 1878, during and after which he continued his work at AH.⁵⁴ He was also assistant-surgeon to HSC from 1868.⁵⁵ Marsh's professional success was therefore not dependant on his involvement with AH.

Connections with the social elite enabled AH to attract noble and royal patronage. In 1870 Princess Alexandra, then Princess of Wales, became its patroness and after a visit in 1881, she consented to it being renamed the Alexandra Hospital.⁵⁶ The Duchess of Albany and the Duchess of Fife were also patronesses. Royal patronage was, in the words of Frank Prochaska, 'a virtual guarantee of prosperity' for Victorian charities, with subscribers and donors attracted either by a desire to follow royal example or because of the chance to become associated with the British aristocracy through common charitable interests.⁵⁷ However, many hospitals had royal support, placing AH somewhat on par rather than at an advantage; Queen Victoria became patron to HSC in 1852, and by the turn of the century the Prince of Wales alone supported seventy-five hospitals.⁵⁸

⁵² *The Times*, 23 April 1858, p.5

⁵³ SBHA, SBHA/XP/1/1, Newspaper Cuttings, p.335

⁵⁴ 'Obituary: Frederick Howard Marsh', *BMJ*, Vol.2, (1915), p.35

⁵⁵ Lomax, *Small and Special*, p.40

⁵⁶ SBHA, SBHA/HB/4/8, Typescript history

⁵⁷ F.K. Prochaska, *Philanthropy and the Hospitals of London: The King's Fund, 1897-1900*, (Oxford, 1992), p.13

⁵⁸ Prochaska, *Philanthropy*, p.13; J. Kosky, *Mutual Friends: Charles Dickens and Great Ormond Street Hospital*, (London, 1989), p.5

Much of how AH was run by the Ladies' Committee remains unknown, due to the lack of management records. It can be inferred, however, that in those years the hospital maintained a relatively domestic character.

In 1871 the hospital changed its name to the Hospital for Hip Disease in Childhood.⁵⁹ That year, management of AH was transferred to a predominantly male committee, including, Charles Thurstan Holland FRCS, Samuel Gee FRCP, Timothy Holmes FRCS, Howard Marsh FRCS and Spencer Perceval, (Jane's father or brother).⁶⁰ According to one contemporary observer, this new management was intended to, 'secure, as far as possible, the permanent character of the institution'.⁶¹ This probably reflects a concern for the appearance of AH as a serious hospital rather than the hobby of well-connected ladies. Jane Marsh's recent marriage, and the birth of her first child in 1872, may have caused her to relinquish some responsibility.⁶² Despite this, she continued to sit on the Committee of Management, a contrast with HSC, from whose Board women were excluded.⁶³ Where AH and HSC were alike, although differing from the majority of children's hospitals, was that their senior medical officers sat on their managing committees.⁶⁴

Formal rules concerning hospital governors and the Committee of Management were not introduced at AH until 1878, with the first annual meeting of governors being held in 1879.⁶⁵ Governors, being those donating £10 or subscribing one guinea (£1.05) annually, were initially entitled to the nomination of one inpatient *per annum*.⁶⁶ From 1879, they were also entitled to vote at annual meetings and elect management committee members, (though retiring members were invariably re-elected).⁶⁷ From 1878, the Committee of Management

⁵⁹ SBHA, SBHA/HB/4/8, Typescript history

⁶⁰ SBHA, SBHA/HA/1/1, Minute book, pp.1-4; All these men, excepting Perceval, were doctors. Gee, Holmes and Marsh were associated with both HSC and Bart's, demonstrating the close connections between those hospitals and AH; Holland later became a radiographer; www.ukwhoswho.com, [19/09/11]

⁶¹ SBHA, SBHA/XP/1/2, Newspaper Cuttings, (1871-93)

⁶² 1881 Census Returns of England and Wales, General Register Office, (3 April 1881), RG 11/93 f.69 p.1, *Historyscape*, www.historyscape.org.uk, [22/08/2011]

⁶³ Tanner, 'Too many mothers?', p.137

⁶⁴ Lomax, *Small and Special*, p.28

⁶⁵ SBHA, SBHA/HA/1/1, Minute book, pp.73-83

⁶⁶ *Ibid.*, p.33

⁶⁷ SBHA, SBHA/HA/7, List of Committee of Management members, (1879-91)

consisted of no more than 21 members excluding ex-officio members, namely the hospital treasurer, physician, surgeons and honorary secretary.⁶⁸

Limited inpatient facilities meant AH's admission criteria were narrow and changed little in the nineteenth century, despite increased bed numbers. Patients were restricted to those suffering with hip-disease, although occasionally cases of knee-disease were admitted.⁶⁹ Cases of spinal tuberculosis were excluded.⁷⁰ AH founders intended to cure as many cases of hip-disease through non-operative care as possible, therefore seemingly incurable cases and those post-excision were also excluded.⁷¹ As with other hospitals, children with infectious diseases were denied admission to prevent contagion.⁷² Admissions were restricted to children from the age of three, boys up until the age of eleven and girls up to twelve, with the typical exclusion of infants.⁷³ However, there are examples of admission rules being ignored, for example, a pamphlet printed in the 1890s explains AH's 'youngest baby... was admitted at the age of eighteen months'.⁷⁴

Initially it appears AH was intended to be free for patients, with subscribers paying treatment costs; £10 paid annually allowed the nomination of a child younger than ten years, £12 for older patients.⁷⁵ This was changed almost immediately, however, and before 1868 the annual subscription was lowered to one guinea and a weekly patient fee of 4s (20p) was introduced, (subsequently 4s 2d [21p]), paid either by parents or subscribers.⁷⁶ Hospital accounts show that in 1867, parents paid £21 4s (£21.20) towards inpatient treatment, while subscribers contributed £17 16s (£17.80).⁷⁷ From 1878, annual subscription included three weeks' free treatment for a nominated patient; however, as most inpatients stayed six months or longer, this made little overall difference to patient fees. Fees were waived for patients occupying 'Special' or endowed cots, all expenses for these children being covered

⁶⁸ SBHA, SBHA/HA/1/1, Minute book, pp.73-4

⁶⁹ Alexandra Hospital Application and Admission Database, 1867-94 (AHAAD), *HHARP*

⁷⁰ SBHA, SBHA/HA/11/13, Rules for The Alexandra Hospital for Children with Hip Disease, (c.1889)

⁷¹ *Ibid.*

⁷² SBHA, SBHA/HA/4/1, *The Thirty-First Annual Report of The Alexandra Hospital for Children with Hip Disease*, (London, 1897), p.5

⁷³ *Ibid.*, p.5

⁷⁴ SBHA, SBHA/HB/4/1, Fundraising pamphlet, 'An Unknown Haven', (c.1899), p.14

⁷⁵ SBHA, SBHA/XP/1/1, Newspaper Cuttings, p.336

⁷⁶ SBHA, SBHA/HA/11/13, Rules; SBHA, SBHA/HA/4/1, *Thirty-First Annual Report*, p.5

⁷⁷ SBHA, SBHA/HB/7/15, General account book, (1867-86)

by an annual payment of £30; the benefactor named the cot and earned rights of nomination.⁷⁸ By the end of the century, AH accepted medically suitable cases in the care of the Parish or other charities for 12s (60p) weekly fee.⁷⁹

The hospital was situated in a domestic property, originally accommodating 10 patients, which increased to 30 during the first year. The decision for further expansion came after a housing subcommittee reported in November 1871 that, 'applications for admission very far exceed the accommodation, and at least double the number of beds could be kept permanently filled'.⁸⁰ In 1872, 18 Queen Square was bought by the hospital for £1050 and a further 20 beds added.⁸¹ Demand for inpatient accommodation remained high, and the following year, 17 Queen Square was bought, making a total of 60 beds in the main hospital.⁸² AH went on to acquire 1 Queen Square in 1887, providing space for 10 isolation beds for fever cases, ending the need to discharge these patients.⁸³ Construction of a purpose-built hospital on the site of the old properties began in 1898, and patients were temporarily housed in nearby 34 Guilford Street. Opened in July 1899, the new hospital had the same accommodation but incorporated the previously separate isolation beds and staff accommodation.⁸⁴ The hospital remained in this building until 1920, when it moved to Kettlewell Hospital, Swanley, which had been a Bart's convalescent home.⁸⁵ Of the fourteen children's hospitals listed in Henry Burdett's 1876-8 survey, only two had more beds than AH, HSC with 156 and the East London Hospital for Sick Children with 90.⁸⁶

Like many nineteenth century hospitals, AH established convalescent homes in the country near to London, providing patients with a change of scenery and clean air.⁸⁷ After briefly occupying a cottage in Parkstone, Dorset in 1871, AH had convalescent homes situated in Bournemouth until the end of the century. The Helen Branch in Bournemouth eventually had

⁷⁸ SBHA, SBHA/HB/4/1, 'Unknown Haven', p.14

⁷⁹ SBHA, SBHA/HA/4/1, *Thirty-First Annual Report*, p.5

⁸⁰ SBHA, SBHA/HA/14, Housing Subcommittee

⁸¹ SBHA, SBHA/HA/1/1, Minute book, p.12

⁸² *Ibid.*, p.25

⁸³ SBHA, SBHA/HA/4/1, *Thirty-First Annual Report*, p.4

⁸⁴ 'The Alexandra Hospital, Queen Square', *Nursing Record and Hospital World*, 29 July 1899, p.94

⁸⁵ SBHA, SBHA/HB/4/10, Transcript history of the Hospital to 1948, (c.1949)

⁸⁶ Burdett, *Hospitals*, p.18

⁸⁷ SBHA, SBHA/HA/1/1, Minute book, p.34

space for 21 patients, increasing total inpatient capacity of the hospital to 81.⁸⁸ Patients were sent for three months after the severest stages of their illness had passed. Subsequent homes were established in Painswick, Gloucestershire (1900) and Clandon, Surrey (1903).⁸⁹

Medical officers at AH, as with other nineteenth-century voluntary hospitals, offered their services gratuitously. With only 10 beds initially, and no more than 30 during its first four years, Howard Marsh was the only surgeon attached to the hospital. From 1872, with as many as 50 inpatients, the hospital engaged the services of Henry Butlin as assistant surgeon, with 20 beds under his care.⁹⁰ Thereafter, there were always two surgeons retained by the main hospital. Surgeons were expected to visit their wards twice weekly and from 1879, to sign an attendance book.⁹¹

In 1867 the hospital also appointed Samuel Gee as physician, although his day-to-day involvement in the treatment of patients was negligible.⁹² Hip-disease was classified as a surgical condition; therefore physicians were only required in cases of additional illness. Hospital Rules from the late-1880s state that the medical staff, 'shall consist of one or more Physicians, two or more Surgeons, a Surgeon-Dentist, [and] a Chloroformist'.⁹³ Edward Bartlett filled the role of Surgeon-Dentist from 1875 until the end of the century.⁹⁴ Frances May Dickinson-Berry, wife of James Berry, (surgeon to AH 1889-1911), and one of the few qualified female doctors at the time, was the hospital's chloroformist from 1893.⁹⁵

⁸⁸ *Select Committee of the House of Lords on Metropolitan Hospitals, Third Report*, British Parliamentary Papers, 1892, XIII, p.56

⁸⁹ SBHA, SBHA/HB/4/3, Fundraising pamphlet, 'The Alexandra Hospital', (c.1903)

⁹⁰ SBHA, SBHA/HA/1/1, Minute book, p.19; Henry Butlin also became surgeon at Bart's; www.ukwhoswho.com, [19/09/11]

⁹¹ SBHA, SBHA/HA/1/1, Minute book, p.77

⁹² *Ibid.*, p.4

⁹³ SBHA, SBHA/HA/11/13, Rules

⁹⁴ SBHA, SBHA/HA/1/1, Minute book, pp.54-5

⁹⁵ 'Obituary: Lady Berry, M.D.', *BMJ*, Vol.1, (1934), p.780; SBHA, SBHA/HB/4/2, Fundraising pamphlet, 'Safe in Harbour', (c.1900)

In 1890 the Committee of Management agreed to allow medical students from the London School of Medicine for Women to attend the hospital; however the 1892 Select Committee Report does not list any formal teaching of medical students at AH.⁹⁶

Nursing was structured in much the same way as at HSC, where both Catherine Wood and Jane Marsh had been nurses. A Lady Superintendent and ward sisters were recruited from the middle and upper classes, often working gratuitously, with paid working-class nurses under their supervision.⁹⁷ In 1871, resident staff were described as, 'three ladies, three assistants and a cook'.⁹⁸ As the hospital grew, so did its nursing staff; each ward had 10 patients and was 'under the care of a lady with a nurse under her'.⁹⁹ The yearly salary of nurses by the mid-1880s was £11, less than that of the laundry maid (£15), kitchen maid (£13), and housemaid (£12).¹⁰⁰ These wages were comparable to nurse probationer wages at other children's hospitals, with more experienced day nurses earning up to £26.¹⁰¹ Nurses at AH worked twelve and a half hour days, with two hours off-duty every other day and three weeks annual holiday.¹⁰² In February 1881 a permanent night nurse was added to the staff and by 1892, two night nurses worked in two month rotation.¹⁰³

Lady nurses were increasingly paid for their service. In 1871, Miss Madden, then Lady Superintendent, was given an annual gratuity of £35, and in August 1872 the Committee of Management ruled that 'the Lady Superintendent be authorized to obtain if necessary Lady Assistants at a salary not exceeding £30 [per] annum'.¹⁰⁴ Up to six paying probationers at a time could pay to be trained as nurses within AH wards, with lectures given by the hospital's medical officers.¹⁰⁵

⁹⁶ SBHA, SBHA/HA/10/1, Letter book, (26 March 1889 - 1 December 1893), p.63; *Select Committee on Metropolitan Hospitals*

⁹⁷ Lomax, *Small and Special*, p.63

⁹⁸ SBHA, SBHA/HA/14, Housing Subcommittee

⁹⁹ SBHA, SBHA/XP/1/2, Newspaper cuttings, p.5

¹⁰⁰ SBHA, SBHA/HB/19/1, Staff wages account book, (1887-93)

¹⁰¹ *Select Committee on Metropolitan Hospitals*, pp.56-7

¹⁰² *Ibid.*, p.56

¹⁰³ SBHA, SBHA/HA/1/1, Minute book, p.102

¹⁰⁴ *Ibid.*, p.4 and p.20

¹⁰⁵ *Select Committee on Metropolitan Hospitals*, p.43 and p.56

AH had an outpatient department from 1867.¹⁰⁶ In 1877 Miss Madden, formerly lady superintendent, volunteered to visit outpatients in their homes, and by 1900, two visiting nurses undertook this work.¹⁰⁷ They attended patients waiting to be admitted to AH, but also those who had been discharged.¹⁰⁸ This service was provided free for outpatients, although parents were charged for medicine and supplies such as bandages and splints.¹⁰⁹

In addition to subscriptions, donations and patient fees, AH's supporters also raised funds through conventional Victorian charitable events, such as fêtes, concerts, sermons and dinners.¹¹⁰ The Ellicott Ward was named after Bishop Ellicott's wife, who raised £260 in July 1873, by organising 'an entertainment'.¹¹¹ Apart from prestige and social status, charitable support through subscription and fundraising was believed to develop moral growth and provide a means of spiritual reward in a widely religious society.¹¹²

Annual donations were also received from the Hospital Sunday Fund from 1873 and the Hospital Saturday Fund from 1875.¹¹³ During the 1890s the hospital raised over £20,000 for the construction of the new hospital building. AH management took out regular advertisements in newspapers and printed numerous fundraising pamphlets, emphasising the 'noble', 'national' work of the hospital and the condemned condition of the old properties.¹¹⁴

¹⁰⁶ AHAAD, *HHARP*

¹⁰⁷ SBHA, SBHA/HA/1/1, Minute book, p.63; SBHA, SBHA/HB/4/4 Fundraising pamphlet, 'A Story with a Moral' (c.1900), p.10

¹⁰⁸ SBHA, SBHA/HB/4/4, 'Story with a Moral', p.10

¹⁰⁹ SBHA, SBHA/HA/10/1, Letter book, p.14; HSC trained nurses to visit private patients but not charitable cases, A. Tanner, 'Community private nurses at GOSH', *Roundabout*, (March, 2008)

¹¹⁰ SBHA, SBHA/HB/7/15, Account book

¹¹¹ SBHA, SBHA/HA/1/1, Minute book, p.31; Both Bishop and Mrs Ellicott were patrons of AH, SBHA, SBHA/HB/4/1, 'Unknown Haven', p.24

¹¹² J. Woodward, *To Do the Sick No Harm: A Study of the British Voluntary Hospital System to 1875*, (London, 1978), pp.19-20

¹¹³ SBHA, SBHA/HB/7/15, Account book; The Hospital Sunday Fund was established in 1872, to raise money for London's hospitals through church collections. The Hospital Saturday Fund, initiated in 1874, raised money from factory and street collections in largely working-class areas; Prochaska, *Philanthropy*, p.10

¹¹⁴ SBHA, SBHA/HB/4/1-7, Fundraising Pamphlets, (c.1898-1903)

In 1891-3, AH management was criticised for endorsing a 'Snowball Letter', started by Jane Marsh in June 1891, to raise funds for the new building.¹¹⁵ Snowball letters were a form of chain-letter intended to prompt the donation of stamps from recipients, who would distribute copies of the letter, continuing the process. Jane Marsh resold the donated stamps, and by September 1892 had received stamps worth £964 at resale.¹¹⁶ Problems arose, however, because there was no regulation of the copied letters and Major J.L. Steavenson, secretary to the hospital, acknowledged in 1892 that there was a possibility for 'fraudulent people to take advantage of the scheme'.¹¹⁷ Both he and Jane Marsh took steps to stop the letter after criticism from *The Times* and *Truth* magazine.¹¹⁸

The majority of AH medical officers also worked at Bart's, including Howard Marsh, Samuel Gee, Anthony Bowlby and James Berry. The connection to Bart's was strengthened in 1920 with the move to Kettlewell Hospital and was formalised in 1948 when AH became absorbed into Bart's.¹¹⁹

¹¹⁵ *The Times*, 13 September 1892, p.4; *The Times*, 14 September 1892, p.4; SBHA, SBHA/XP/1/2, Newspaper cuttings, pp.30-1

¹¹⁶ *The Times*, 14 September 1892, p.4

¹¹⁷ *The Times*, 13 September 1892, p.4

¹¹⁸ *The Times*, 13 September 1892, p.4; *The Times*, 14 September 1892, p.4; SBHA, SBHA/XP/1/2, Newspaper cuttings, pp.30-1

¹¹⁹ SBHA, SBHA/HB/4/10, Transcript history

Chapter Three A Consideration of Tuberculosis of the Hip-Joint

Tuberculosis is a chronic infectious disease which, despite some decline in nineteenth-century Britain, remained 'the leading killer, after heart disease, in 1900'.¹²⁰ It was the most significant condition found in nineteenth century paediatric hospitals. Of a cohort of 1,124 patients in the Edinburgh Hospital for Sick Children during 1898, as many as 208, or 18.5 per cent, were treated for some form of tuberculosis.¹²¹ The human strain of tuberculosis is caused by the bacteria *Mycobacterium tuberculosis*. Bovine tuberculosis can also infect humans.¹²² Tuberculosis was not fully understood to be infectious until Robert Koch identified the *tubercle bacillus* in 1882; dominant opinion prior to this was that a predisposition to tuberculosis was hereditary.¹²³ Pulmonary tuberculosis was, and is, the most common form, but others include scrofula (lymph glands), lupus (skin), tubercular meningitis and tuberculosis of the bones and joints.¹²⁴

It was not until Koch's discovery that hip-disease was confirmed to be tuberculous; the two conditions had previously been considered separate (albeit associated) diseases.¹²⁵ For the first half of the period covered by this study, the true nature and cause of hip-disease were unknown.

Tuberculosis of bones and joints occurs most in weight-bearing joints, including the hip, spine and knee, although other joints are affected.¹²⁶ The soft bones in the growing skeletons of children are highly susceptible to the disease.¹²⁷ For this reason, hip-disease was almost entirely a disease of childhood. Only 73 patients out of a total of 619 hip-disease cases studied by late-Victorian surgeon G.A. Wright and physician Henry Ashby were over

¹²⁰ A. Hardy, *The Epidemic Streets: Infectious Disease and the Rise of Preventive Medicine, 1856-1900*, (Oxford, 1993), p.211

¹²¹ Lomax, *Small and Special*, pp.95-6

¹²² Hardy, *Epidemic Streets*, p.212

¹²³ L. Bryder, "Not always one and the same thing": The registration of tuberculosis deaths in Britain, 1900-1950', *SHM*, Vol.8, (1996), pp.254-5; H. Marsh, 'Lectures on the diagnosis and treatment of hip-disease in children: Lecture II', *BMJ*, Vol.2, (1877), p.69

¹²⁴ Hardy, *Epidemic Streets*, p.212

¹²⁵ T. Holmes, *The Surgical Treatment of the Diseases of Infancy and Childhood*, (London, 1869), p.435

¹²⁶ G.R. Girdlestone and E.W. Somerville, *Tuberculosis of Bone and Joint*, (London, 1952), p.53

¹²⁷ H. Ashby, and G.A. Wright, *The Diseases of Children: Medical and Surgical*, (London, 1899), p.687

the age of twenty, and Wright and Ashby believed many of these cases had begun at an earlier age.¹²⁸

Although sometimes affecting children of the upper and middle classes, hip-disease was more frequent among the poor.¹²⁹ This was largely the result of unhealthy living conditions, especially in city slums. Tuberculosis is transmitted between people through bacteria in airborne sputum, spread by sneezing or coughing. These bacteria were more likely to have been inhaled in the overcrowded and ill-ventilated dwellings of the Victorian urban poor.¹³⁰ Children from poor families were also more liable to have diminished immunity due to insufficient diet and lack of sunlight, weakening their resistance to the disease.¹³¹

A 1931 study showed that 30 per cent of non-pulmonary tuberculosis was caused by the bovine strain, principally through infected milk, which was particularly associated with infants and children.¹³² Milk infected with bovine tuberculosis will have also been a significant cause of infection in Victorian children, more so than in 1931, as efforts to control infection from milk, for example through pasteurisation, were less widespread.¹³³

Hip-disease was often fatal, and many of those who survived were left with permanent disabilities. Mortality rates for those treated for hip-disease prior to 1880 were 30-40 per cent.¹³⁴ As a chronic condition, whether successfully healed or not, the duration of hip-disease was years rather than weeks or months. Of cured cases in the nineteenth century, without the benefit of modern antibiotics and surgical methods, it was observed that the disease lasted an average of five years from initial symptoms to complete cure in cases not treated by excision, and three years for those excised.¹³⁵

¹²⁸ Ibid., p.687

¹²⁹ Holmes, *Surgical Treatment*, p.434

¹³⁰ Hardy, *Epidemic Streets*, p.213

¹³¹ 'The Health Academy: Avoiding tuberculosis: Selfstudy program on tuberculosis,' WHO, http://www.who.int/healthacademy/WHO_TB.pdf, [10/09/11], pp.35-6

¹³² Hardy, *Epidemic Streets*, p.212

¹³³ G.G. Kayne, *The Control of Tuberculosis in England: Past and Present*, (London, 1937), p.121

¹³⁴ J. Croft, 'Present stage of surgical treatment of tubercular disease of the joints', *Lancet*, (8 February 1890), p.282

¹³⁵ Croft, 'Present stage', p.282

The insidious nature of tuberculosis meant symptoms would often not appear for weeks or sometimes months after initial infection. The following symptoms were observed to be common in cases of nineteenth century hip-disease. **Lameness** or limping was typically one of the first visible signs of the disease. During its early stages, this was due to muscular stiffness whereas in later stages limbs would often become more pronounced due to shortening of the leg. **Muscle atrophy** was also an early symptom, and identified wasting of the buttock was used by some surgeons to strengthen diagnosis.

Hip-disease invariably caused some degree of **postural distortion**, which became more severe as the disease progressed. Initially this could show as apparent lengthening or shortening of the leg due to the abduction (pulling away from the body's centreline) or adduction (pulling towards the body's centreline) of the limb and the corresponding elevation or lowering of the pelvis to bring both legs parallel. The most prominent distortion affecting many sufferers was **flexion** of the leg at the hip. The leg brought forward and held by contracted muscles, released pressure from the head of the femur in the joint, reducing pain and irritation. As surgeon Timothy Holmes described, in long-standing cases flexion was often pronounced to such a degree, 'that the child [would lie] with his knee drawn across the belly nearly touching his face'.¹³⁶

Muscular spasm surrounding the joint was an 'almost universal condition', caused both by voluntary contraction to prevent painful movement of the joint and involuntary reflex spasm induced by inflamed nerve ends at the hip.¹³⁷ Contraction would cause rigidity and stiffness, which led to the child's spine curving inwards (lordosis) to act as a substitute joint (see Figure 3.1). If the hip joint remained in a flexed position for years without correction, ankylosis could occur.

Hip-disease was characterised by **night starts**, whereby contracted muscles surrounding the joint would relax with sleep and friction between the diseased bones in the inflamed capsule would cause great pain, waking the child. **Pain** was present in the majority of cases of hip-disease, although the severity and location varied greatly, occurring anywhere from

¹³⁶ Holmes, *Surgical Treatment*, p.441

¹³⁷ Ashby, *Diseases of Children*, p.693

the foot to the buttock or hip itself. There was no apparent correlation between the pain felt by a patient and the location or severity of the disease.¹³⁸

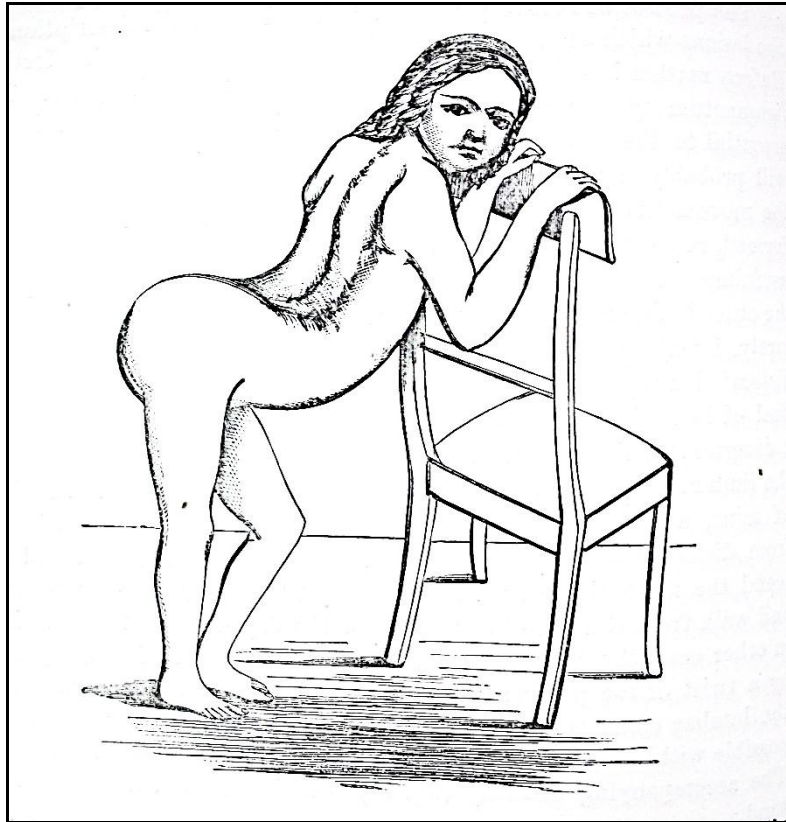


Figure 3.1 'Extreme lordosis and deformity, occurring in the spontaneous cure of disease of the right hip-joint. From a girl in the Hospital for Sick Children in the year 1866', Holmes, *Surgical Treatment*, p.440

As the disease attacked the tissue and bone of the joint it would cause suppuration, producing pus-filled **abscesses**. These were often not outwardly visible, their location deep in the hip-joint or pelvis made them hard to identify and access. In other cases, abscesses would surface beneath the skin. Pressure created by abscesses would often cause pain, and they were also frequently accompanied by a high temperature. A localised abscess could lead to general sepsis if left un-drained, a fatal condition prior to the development of antibiotics.

Real, as opposed to apparent, **shortening of the limb** took place in the later stages of hip-disease, when the head of the femur could become necrosed and disintegrate, or be drawn

¹³⁸ Ashby, *Diseases of Children*, p.690

upwards if the acetabulum (hip-socket) became diseased. Alternatively, growth of the femur could become suspended leaving a difference in length between the diseased and healthy limbs.¹³⁹

Surgeons treating hip-disease fell into two groups; those who advocated excision of the hip-joint and those who rejected it except in extreme cases.¹⁴⁰ The process involved cutting away all or part of the head of the femur and cleaning or scraping any other necrosed or diseased material from the joint, including the acetabulum if it was affected. The operation was dangerous, especially before the widespread use of antiseptic surgery in the early 1880s.¹⁴¹ Out of 19 cases of excision performed by Timothy Holmes prior to 1869, 6 died as a direct result of the operation.¹⁴² Operations became safer with antiseptic surgery and excision was increasingly advocated on the grounds that treatment time was thereby reduced. By entirely removing tubercular infection from the joint, recovery was quicker and further infection was suspended; however, the ability of surgeons to ensure no *tubercle bacilli* remained was questioned by critics.¹⁴³ With regards to the final condition of the joint, this varied greatly between patients; some were left with stable joints with varying degrees of movement, on which they could walk, while others remained completely unstable, leaving an unusable leg.¹⁴⁴ Frequently, further complications, such as continued suppuration and distortion, followed excision.¹⁴⁵

Howard Marsh was strongly opposed to the excision of tubercular joints, which he believed, for the majority of patients, could be treated conservatively with a better chance of a useful limb as the final result.¹⁴⁶ Marsh emphasised his objection by explaining that excision was

¹³⁹ Symptoms of hip-disease from: Ashby, *Diseases of Children*, pp.686-712; Holmes, *Surgical Treatment*, pp.434-70; H. Marsh, 'Lectures on the diagnosis and treatment of hip-disease in children', *BMJ*, Vol.2, (1877), pp.37-9, pp.69-71, pp.97-9 and pp.129-31; E. Owen, *The Surgical Diseases of Children*, (London, 1897), pp.404-32; C. West, *Lectures on the Diseases of Infancy and Childhood*, (London, 1884), pp.785-92

¹⁴⁰ Croft, 'Present stage', pp.281-3

¹⁴¹ A. Bowlby, 'Nine hundred cases of tuberculous disease of the hip, treated at the Alexandra Hospital, with a mortality of less than 4 per cent', *BMJ*, Vol.1, (1908), p.1465

¹⁴² Holmes, *Surgical Treatment*, p.453

¹⁴³ H. Marsh, 'On the treatment of tubercular disease of joints', *Lancet*, (26 July 1890), p.171

¹⁴⁴ Holmes, *Surgical Treatment*, p.456

¹⁴⁵ *Ibid.*, p.454

¹⁴⁶ H. Marsh, 'On the treatment of chronic inflammatory affections of the joints in children, with especial reference to excision', *Lancet*, (31 July 1880), pp.167-9

rarely performed on the children of wealthy families. In cases of hip-disease, where money and accommodation allowed treatment through conservative means, the reluctance to opt for excision was used as proof that it was not the best option.¹⁴⁷ Therefore, it was argued, the poor were only subjected to excision because they could not be treated conservatively at home, and there was not provision for this in hospitals.¹⁴⁸ AH was intended to provide the space to treat children of the poor without the use of excision.

Excision was most frequently performed during the 1880s, but was gradually abandoned in favour of the methods advocated by Howard Marsh at AH.¹⁴⁹ By the second half of the nineteenth century, surgeons in general only considered amputation of the limb as a final effort to save a child deemed terminally ill.¹⁵⁰

Regardless of the method of treatment, a patient's chances of both surviving hip-disease and maintaining a useful limb were greatly improved if diagnosis and treatment occurred early.¹⁵¹ Delay in treatment meant greater damage to the joint and a higher likelihood of tubercular infection spreading. There were often multiple sites of tuberculosis in affected children; in numerous cases from AH a patient's hip-disease would heal only for them to die from tubercular meningitis or pulmonary tuberculosis.¹⁵²

In the mid-nineteenth century hip-disease was considered by many to be incurable.¹⁵³ Some surgeons, however, believed this was due to delay in treatment, or the lack of facilities in which to treat poor children. By the late-nineteenth century, the best method of treating hip-disease was still being debated, but overall mortality rates, although still high, were considerably lower than at mid-century.¹⁵⁴ This relates only to those children who received treatment; it is impossible to determine the number or outcome of cases which were left undiagnosed and untreated.

¹⁴⁷ Ibid., p.169

¹⁴⁸ Ibid., p.169

¹⁴⁹ Lomax, *Small and Special*, p.135

¹⁵⁰ Holmes, *Surgical Treatment*, p.470

¹⁵¹ Owen, *Surgical Diseases*, p.413

¹⁵² Owen, *Surgical Diseases*, pp.423-4; SBHA, SBHA/HA/3/1, *Medical Reports with Statistics*, (1884-99)

¹⁵³ SBHA, SBHA/HA/4/1, *Thirty first Annual Report*, p.7

¹⁵⁴ Marsh, 'Tubercular disease', pp.168-9

Chapter Four

The Ambitions and Public Promotion of Alexandra Hospital

Chronic affections of Joints form a very large proportion of the surgical diseases of childhood among the poor, and many such cases are constantly to be found in the wards of all our large hospitals. But, unfortunately, these cases cannot be kept in our hospitals long enough for the benefit which they have derived to become permanent; and especially is this the case with hip-joint disease. After a few months at the utmost, when all active symptoms have subsided, it becomes absolutely necessary that the little patients should be discharged ... The unfavourable circumstances in which they are placed when they leave the hospital soon bring about a relapse; they may be readmitted and after a while again discharged; then comes another relapse, and so matters go on until a cure becomes an impossibility.¹⁵⁵

This was written in 1866 by Prescott Hewett, a prominent surgeon at St George's Hospital, to Jane Perceval, in support of her proposal to open AH. This and similar letters received from leading medical men highlight the need for a hospital like AH. They also clearly establish the intended purpose of the new hospital, namely, to provide extended inpatient treatment for children of the poor suffering from chronic joint diseases, especially hip-disease, until a permanent cure was achieved.¹⁵⁶

Hospital rules state AH's objective was to, 'provide for the reception, maintenance and surgical treatment of the children of the Poor suffering from hip disease, other than those requiring excision'.¹⁵⁷

Working within the crowded Victorian voluntary system, AH had to win and retain public support (and funding); it was, therefore, important to present these objectives as both valid

¹⁵⁵ SBHA, SBHA/HA/13/3/6, Letter from Prescott Hewett

¹⁵⁶ SBHA, SBHA/HA/13/3/1-10, Letters

¹⁵⁷ SBHA, SBHA/HA/11/13, Rules

and attainable. They dominated much of the promotional newspaper articles about the hospital and, particularly, AH's own fundraising pamphlets and annual reports.¹⁵⁸

Due to its status as a special hospital, AH attracted criticism from some medical practitioners. The *Medical Times and Gazette*, shortly before its opening in 1867, argued that children with hip-disease might, 'have been received at ... the Orthopaedic Hospitals, or that the money to be spent in this institution might have been expended in adding to the already existent Hospitals' special wards for the treatment of the joint affections of children.'¹⁵⁹

AH supporters emphasised the inability of existing hospitals to treat cases of hip-disease for the extended periods believed necessary to bring about permanent cure. Statements from medical luminaries were frequently quoted in hospital fundraising pamphlets to support this; James Paget wrote, 'general hospitals cannot admit nearly all the patients of this class', and William Jenner that, 'they are necessarily ... refused beds in the present Institutions'.¹⁶⁰ The negative effect this type of patient had on the treatment statistics of general children's hospitals discouraged them from opening departments for chronic cases.

Due to the competitive nature of the Victorian voluntary system, hospitals were protective of their independence and were, generally, unwilling to work cooperatively.¹⁶¹ Establishing and running a department for hip-disease at an existing hospital would have saved money; but the relative ease with which a small hospital could be established, and the freedom and prestige afforded to those involved, made it the more attractive route.¹⁶²

Nevertheless, existing hospitals welcomed somewhere they could send their hip-disease patients and AH reiterated the extent to which other hospitals relied on it at the end of the nineteenth century:

¹⁵⁸ SBHA, SBHA/XP/1/1-2, Newspaper cuttings; SBHA, SBHA/HB/4/1-7, Fundraising Pamphlets

¹⁵⁹ SBHA, SBHA/XP/1/1, Newspaper cuttings

¹⁶⁰ SBHA, SBHA/HB/4/1, 'Unknown Haven', p.11 and p.15

¹⁶¹ *Select Committee on Metropolitan Hospitals*, p.lix

¹⁶² *Ibid.*, p.lvi and p.lix

That the Hospital is an undeniable necessity may be best shown by the fact that nearly three-fourths of its patients come from other London Hospitals. ... No ordinary institution can place one of its beds at the disposal of a single patient for a period of two or three years.¹⁶³

Another pamphlet listed 93 hospitals in which children had been treated before becoming AH inpatients.¹⁶⁴

Hospital management went further, claiming that AH was not only essential to other hospitals, but that it was performing a 'national work', as the only hospital in Britain dedicated solely to treating hip-disease. Although the majority of patients lived in or near London, it was highlighted that some had come from as far afield as Yorkshire, Suffolk and Wiltshire.¹⁶⁵ Other specialist Metropolitan hospitals also emphasised their national patient catchment, in order to attract country subscribers.¹⁶⁶

The results achieved by AH were also portrayed as serving the nation. In an address to a festival dinner, included in the 1897 AH Annual Report, the Duke of Fife stated:

[U]nhealthy and deformed children develop into puny and useless men and women... Our country will fare ill if its battles... are to be fought by a weak and degenerate race... To say this Hospital relieves pain is a mere common-place... It restores... to their homes and families and to the world, children who would otherwise have been helpless and hopeless cripples.¹⁶⁷

¹⁶³ SBHA, SBHA/HB/4/1, 'Unknown Haven', p.15

¹⁶⁴ SBHA, SBHA/HB/4/2, 'Safe in Harbour', p.11

¹⁶⁵ AHAAD, *HHARP*; SBHA, SBHA/HB/4/1 'Unknown Haven', p.17

¹⁶⁶ A. Tanner, 'The sentimental hard sell: Establishing the idea of the children's hospital', *Proceedings, "Ospedali e Sanita; Strutture, risorse, modelli gestionali, professioni, politiche"*, Cicloseminariale Citta capitali Europe', (Rome, 2004), pp.4-6

¹⁶⁷ SBHA, SBHA/HA/4/1, *Thirty-First Annual Report*, insert pp.1-2

The *London Mirror*, in November 1871, described AH as a ‘hospital which can *unmake* “cripples for life”’.¹⁶⁸ Like other hospitals, AH exploited Victorian fears of disability, and the consequential burden to the state.¹⁶⁹

AH promotions included numerous references to its patients as being from among the poorest, most deprived families. Living conditions were blamed not only for causing hip-disease in these children, but also for preventing cure while they remained at home. The *Bournemouth Observer*, appealing for support of AH’s convalescent home in 1876, described the children of the London poor as, ‘often the victims of deformity’, and that ‘such conditions are the result of surroundings of their up-bringing-neglect, foul air, starvation, exposure, often to inherited disease.’ The article goes on to place the ‘Hospital for Hip Disease’ among the charities ‘into which [were] gathered from the slums the[se] helpless children sufferers’.¹⁷⁰

An unidentified newspaper article, written before 1871, and depicting life within the hospital describes the patients as having an ‘almost uniform history’:

They belong to the very poor... In many instances they have been discharged from other hospitals, having experienced a temporary relief; when they return to their homes, and are obliged to battle for health with odds against them, thin diet, meagre lodging, and bad air, they relapse.¹⁷¹

AH’s claims closely followed those made by other hospitals as they competed for funding, except regarding their patient numbers. Where other hospitals highlighted their efficiency through yearly patient figures, AH uniquely emphasised its limited ability to treat large numbers because of its commitment to keeping patients until they were cured, a process which sometimes took years.¹⁷²

¹⁶⁸ SBHA, SBHA/XP/1/2, Newspaper cuttings

¹⁶⁹ H. Hendrick, *Children, Childhood and English Society, 1880-1990*, (Cambridge, 1997), pp.43-4

¹⁷⁰ SBHA, SBHA/XP/1/2, Newspaper cuttings, p.14

¹⁷¹ SBHA, SBHA/XP/1/1, Newspaper cuttings

¹⁷² SBHA, SBHA/HB/4/1, ‘Unknown Haven’

Chapter Five

The Method and Effectiveness of Treatment for Hip-Disease

Treatment at AH was under the direction of surgeon Howard Marsh, 1867-88, and later Anthony Bowlby, 1886-1918, and James Berry, 1889-1911.¹⁷³ Their care chiefly consisted of repositioning distorted joints, treating abscesses and nurturing patients' general health and strength.

The latter meant providing good diet and fresh air where possible. General weakness was common among sufferers of hip-disease. Although it was not understood fully whether this was a cause or a symptom of the disease, the provision of good diet was frequently listed alongside rest, as an essential part of treatment at AH.¹⁷⁴ Convalescent homes were important to London hospitals, providing the opportunity for patients to escape the city's polluted air; patients from AH spent three months receiving this benefit in the country.¹⁷⁵ Yet for those patients in Queen Square, access to outdoors was still important. Balconies were built on the new hospital, large enough for patients to be wheeled out in their beds.¹⁷⁶

Howard Marsh described his method of treating hip-disease in a series of lectures in the *British Medical Journal*.¹⁷⁷ Treatment for localised symptoms consisted of immobilising the affected joint, correcting distortion of the limb, and rest. Patients were expected to remain flat and in one position, sometimes for months, so as not to disturb the joint. Restless young patients were restrained in their cots by a chest-band (see Figure 5.1).¹⁷⁸ How true Howard Marsh's assertion that 'children never mind it' when they were restrained in this way is impossible to determine.¹⁷⁹ Nevertheless it was thought essential for their physical recovery.

¹⁷³ SBHA, SBHA/HB/4/10, Transcript history

¹⁷⁴ SBHA, SBHA/HA/13/3/1-10, Letters; SBHA, SBHA/XP/1/1, Newspaper cuttings

¹⁷⁵ SBHA, SBHA/HB/4/2, 'Safe in Harbour', pp.2-3

¹⁷⁶ SBHA, SBHA/PG/71, Photograph of patients on balcony, (c.1900)

¹⁷⁷ H. Marsh, 'Lectures on the diagnosis and treatment of hip-disease in children: Lecture III', *BMJ*, Vol.2, (1877), pp.97-9

¹⁷⁸ *Ibid.*, p.97

¹⁷⁹ *Ibid.*, p.97

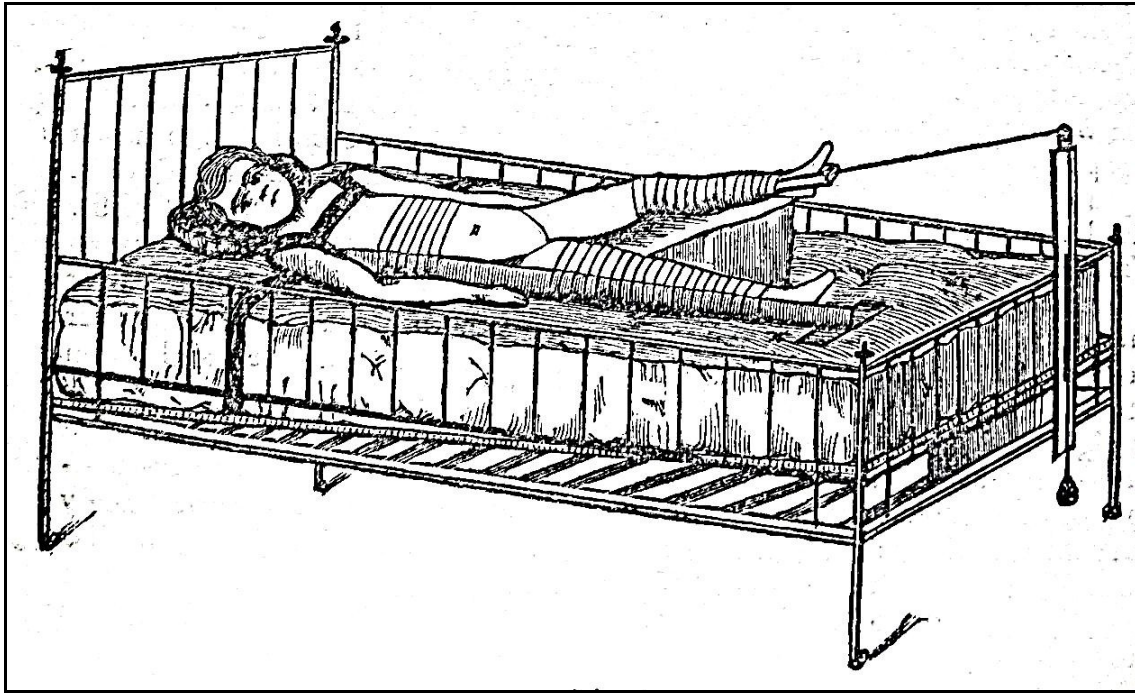


Figure 5.1 Method of treatment for a flexed, abducted limb by weight and pulley, from *BMJ*, Vol.2, (1877), p.98

The longer a child's leg was poorly positioned, the more likely it was that distortion would remain permanent, therefore repositioning the limb early in treatment was important. Initially at AH this was done forcibly under chloroform, but this practice was soon discontinued.¹⁸⁰ The process adopted later was more gradual. Flexion, abduction and adduction were corrected by weights, attached with bandages above the knee, and suspended from the leg over a pulley; weights also ensured the joint remained immobile during treatment and reduced pain caused by movement and muscular spasm.¹⁸¹ Pulleys were positioned in correspondence to the limb. For example, in Figure 5.1, the child's left leg is both flexed, for which the pulley is raised and the leg supported, and abducted, so the pulley is attached left of centre to the bed. Gradually, as the contracted muscles and fibres at the joint relaxed or broke down, the pulley could be lowered and centred until the affected leg lay parallel to the centreline.¹⁸² For severely adducted limbs, weights were also suspended from the side of the bed to encourage the limb outwards.¹⁸³

¹⁸⁰ Marsh wrote that this occurred in 'the early years of the hospital'; Marsh, 'Tubercular disease', p.169; By 1877, correction was achieved by weight and pulley; Marsh, 'Lecture III', pp.97-9

¹⁸¹ Marsh, 'Lecture III', pp.97-8; Surgeon Edmund Owen suggested that weights should range from 3lb to 8lb depending on the child's age, however no examined record shows weights heavier than 4lb being used in AH; Owen, *Surgical Diseases of Children*, p.414; SBHA, SBHA/MR/15, Patient record cards, Anthony Bowlby, (1884-1907)

¹⁸² Marsh, 'Lecture III', p.98

In Howard Marsh's opinion, 'in cases in which the joint is fixed only by fibrous adhesions and contracted muscles, the restoration of the limb to its normal posture is, in the large majority of instances, only a question of time.'¹⁸⁴ To give some indication of the time needed, Marsh described two patients, whose legs were at right angles to their bodies, stating that in two months they were flat.¹⁸⁵ Patients continued to wear weights until the surgeon believed joint infection had healed, or they were strong enough to begin walking in a splint; Marsh advised that weights should be, 'applied for at least three months after all symptoms have disappeared'.¹⁸⁶ Ten randomly selected AH treatment cards show patients initially wearing weights for between 6 and 22 months.¹⁸⁷ Weights were incrementally left off until patients only wore them at night, a safeguard against involuntary muscle spasms reversing the treatment.¹⁸⁸

Once repositioned, the children could be fitted with a splint and, where old enough, were taught to walk with crutches.¹⁸⁹ However, the splints available in 1867 were largely unsuitable for hip-disease, as the majority were ineffective in immobilising the joint.¹⁹⁰

In 1875, Hugh Owen Thomas, a surgeon from Liverpool, designed a new splint expressly for the treatment of hip-disease.¹⁹¹ Like Marsh, Thomas was against the practice of excision, but he also criticised extension by weight and pulley as adopted at AH, referencing Dr H.G. Davis who described it as a 'useless' and 'injurious' method.¹⁹² Thomas' splint was designed to be used both in bed and while walking. It consisted of a flat iron bar which ran posteriorly from chest height to below the knee, and iron hoops fitted around the chest, waist and upper thigh (see Figure 5.2).¹⁹³

¹⁸³ Ibid., p.98

¹⁸⁴ This method was not effective in the rare cases of bony ankylosis; Marsh, 'Lecture III', p.98

¹⁸⁵ Ibid., p.98

¹⁸⁶ Ibid., p.98

¹⁸⁷ SBHA, SBHA/MR/51/31, 55, 73, 82, 83, 85, 119, 161, 163, Treatment Cards

¹⁸⁸ Marsh, 'Lecture III', p.98

¹⁸⁹ AHAAD, *HHARP*

¹⁹⁰ H.O. Thomas, *Diseases of the Hip, Knee, and Ankle Joints*, (Liverpool, 1875), pp.1-10

¹⁹¹ Ibid.

¹⁹² Ibid., p.11

¹⁹³ Ibid., pp.19-23

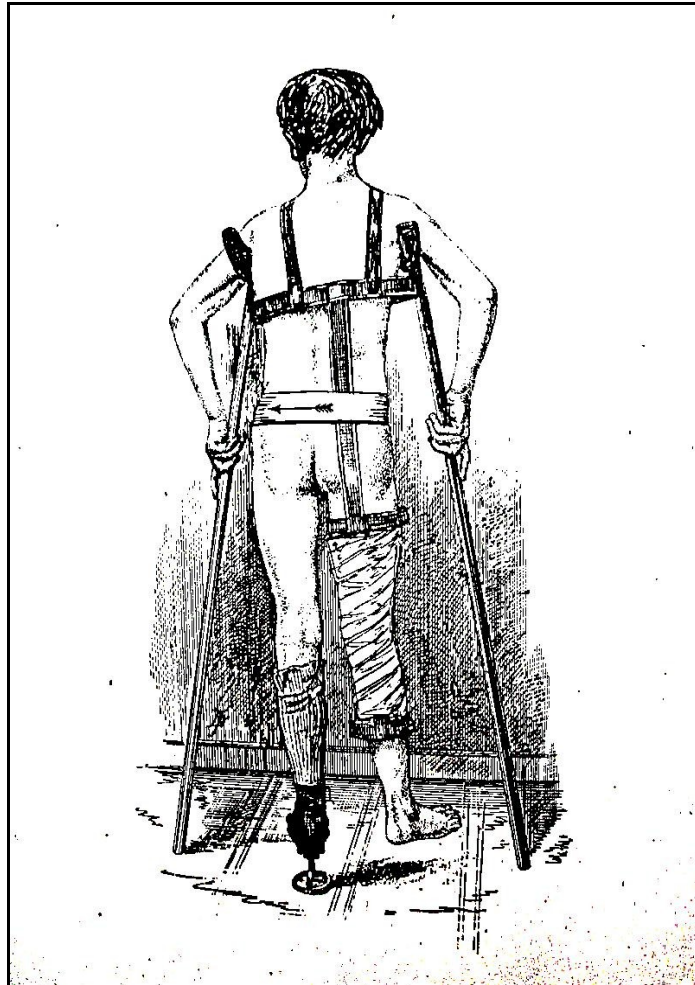


Figure 5.2 Thomas Splint, from Thomas, *Diseases of the Hip*, Plate 9

As intended, it held the hip-joint completely immobile. The posterior bar could also be adjusted to compensate for flexion and straightened gradually to reposition the leg. By wearing a high boot on their healthy leg, patients could walk with crutches without risking movement or placing weight on their 'bad' leg.

The surgeons at AH continued to use weights and pulleys in the majority of bedbound patients, however, Marsh described the benefits of the Thomas splint:

I have often used it with the best results for fixing the joint in cases in which movement produced severe pain. It enables us to move patients safely from room

to room, even when the disease is still acute. It is very efficient in preventing recurrence of flexion.¹⁹⁴

From 1877 patients were frequently discharged wearing a Thomas splint and high boot. Between 1877 and 1882, 138 children were listed in the hospital outpatient register as having had Thomas splints.¹⁹⁵ The introduction of the splint meant patients could more safely be discharged before complete cure was achieved. Marsh explained that, although many children suffered with hip-disease for nearly five years, for a, 'considerable portion of this time the children were moving about with a Thomas's splint ... a condition of existence ... in which the comfort of a child's life is but very little interfered with'.¹⁹⁶

A high proportion of patients had, or developed, abscesses.¹⁹⁷ In AH's early years, abscesses were left to open naturally or were repeatedly aspirated.¹⁹⁸ These frequently became septic, however, and by the end of the period abscesses were opened and drained, as soon as they were detected, by antiseptic surgery.¹⁹⁹ Operation reports from 1893 show that up to nine procedures to open abscesses were performed monthly, and that it was the only operation performed at AH.²⁰⁰ The increased use of antiseptic surgery in the 1870s contributed significantly to reducing mortality rates in AH over this period.²⁰¹

Treatment in AH was not always successful. Several patients were judged to be incurable, and following hospital policy, were discharged unimproved. Others died while they were in the hospital. It was not uncommon for patients discharged apparently cured or relieved to subsequently relapse, as demonstrated by the numbers readmitted to AH.²⁰² It is difficult to assess accurately the permanent success of treatment at AH in the nineteenth century, because of the unpredictable and enduring nature of tuberculosis. AH's visiting nurses did,

¹⁹⁴ H. Marsh, 'Lectures on the diagnosis and treatment of hip-disease in children: Lecture IV', *BMJ*, Vol.2, (1877), p.129

¹⁹⁵ SBHA, SBHA/MR/18/1, Case notes of outpatients: Book I, (1877-8)

¹⁹⁶ Marsh, 'Tubercular disease', p.170

¹⁹⁷ AHAAD, *HHARP*

¹⁹⁸ Marsh, 'Tubercular disease', p.169

¹⁹⁹ *Ibid.*, p.169

²⁰⁰ SBHA, SBHA/TH/1/1, Operating theatre register, (1893-1958)

²⁰¹ Marsh, 'Tubercular disease', p.169

²⁰² AHAAD, *HHARP*

however, monitor patients, sometimes for years, after they were discharged.²⁰³ In 1889 Howard Marsh used this information to report on the success of treatment at AH, estimating a figure of below 10 per cent mortality in patients treated between 1880 and 1888. He compared this to an estimated mortality rate of 34.3 per cent in the years 1867 to 1879.²⁰⁴ These numbers do not refer only to inpatient deaths but include those of discharged patients. Marsh's findings were not uncontroversial; John Croft, an advocate for early excision of the hip-joint and Marsh's rival, claimed they were unreliable, because many of the patients classed as permanently cured were not available for examination or to verify they were still alive.²⁰⁵ Marsh responded by stating that, 'Many cases had passed out of sight, but only when the great majority of them were apparently cured'.²⁰⁶

Data for 1601 admissions to AH, between 1867 and 1894, have been used to evaluate more closely the results of inpatient treatment.²⁰⁷ Although these data include information on all patients admitted 1867-94, it is not uniform and is incomplete. For each data set used, there are varying numbers of children with missing information, therefore each sample is necessarily distinct.

The clearest indication of the effectiveness of treatment at AH, is seen through patients' condition on discharge. Of 1601 cases, condition on discharge, or their reason for leaving AH, is unknown for 324. A further 258 cases were discharged for reasons unrelated to their hip-disease; these include patients with contagious diseases and those who were removed by their parents or for financial reasons.²⁰⁸

²⁰³ Marsh, 'Tubercular disease', p.170

²⁰⁴ Ibid., pp.168-9

²⁰⁵ Croft, 'Present stage', p.282

²⁰⁶ Marsh, 'Tubercular disease', p.169

²⁰⁷ This data has been kindly provided by the Historic Hospital Admission Records Project (HHARP) team at Kingston University.

²⁰⁸ AHAAD, *HHARP*

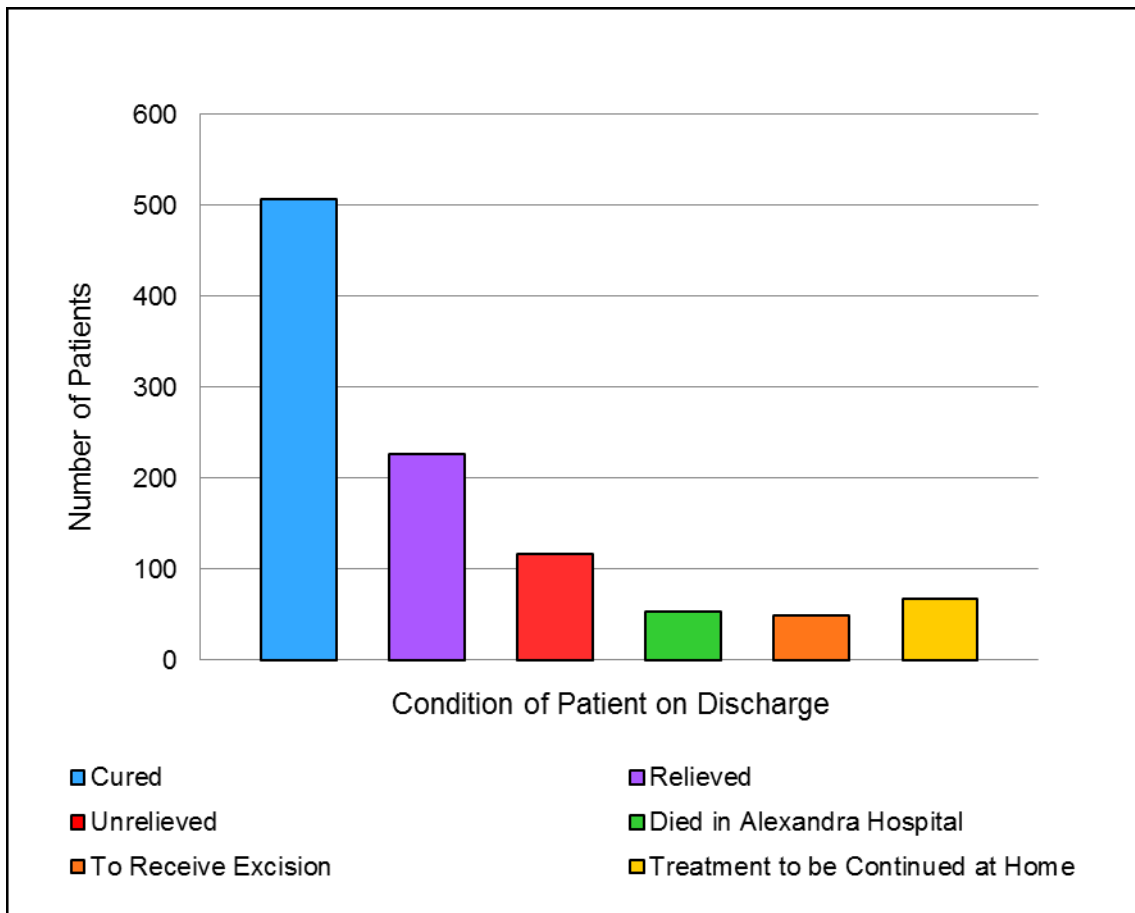


Figure 5.3 Condition of patients on discharge from AH, 1867-94, excluding those removed for reasons unrelated to hip-disease

This leaves 1019 patients, who have been grouped into six categories, shown in Figure 5.3. With a total of 507, cured patients comprise the biggest group. It was typical for voluntary hospitals in the nineteenth century to class patients as cured, those who were almost, or on the way to being cured, in order to improve hospital treatment records.²⁰⁹ For AH, as well as those discharged walking unaided, cured patients also include those walking with Thomas splints and crutches. This creates some problems, as there is often little distinction between patients listed as cured and those described as relieved. Relieved patients form the next biggest group with 226, and include patients whose legs were in a good position, but maybe still had open abscesses, for example, or were not quite strong enough to walk.²¹⁰

Those patients judged to be incurable and discharged without showing much, if any, improvement are listed as unrelieved, a group of 117. Some of these patients died shortly

²⁰⁹ Tanner, 'Choice and the children's hospital', pp.151-4

²¹⁰ AHAAD, *HHARP*

after being taken home, such as George Kingsford, discharged in February 1880; others survived for many years, like Georgina Cordery who was described as 'walking about nicely', three years after she left AH.²¹¹

The second smallest group is those who died in AH. Inpatient mortality is shown as 5.2 per cent; this data, however, lists 22 confirmed deaths in AH between 1884 and 1894, whereas medical statistics recorded for the Committee of Management list 28 deaths.²¹² The admission records are unclear whether deaths occurred in the hospital or subsequently, and also whether or not hip-disease was the cause. The sample is very small and, remembering that discharge condition is unknown for a total of 324 patients, it is impossible to accurately predict how low the recorded number of inpatient deaths is compared with the true figure. In addition, not all of the deaths occurring within the hospital would have been the result of hip-disease. Of the 28 deaths recorded in the medical statistics, at least 3 resulted from other illnesses.²¹³

Forty-nine children left AH requiring excision of the joint. These can effectively be included with those patients who were unrelieved, as they did not receive benefit from treatment at AH.²¹⁴ Sixty-seven patients were discharged to be treated at home. In most instances this was due to high demand for beds and occurred once a patient's acute symptoms had been treated, and care could be more easily managed.²¹⁵

By combing those 'cured' with those 'relieved', a total of 733 or 71.9 per cent of inpatients were effectively treated in AH. This is compared with those whose treatment was ineffective, (those unrelieved, those who died in hospital and those requiring excision), a total of 219 or 21.5 per cent. The remainder 6.6 per cent were to be treated at home. Although these results were not always permanent, almost three-quarters of inpatients received significant benefit from their treatment at AH.²¹⁶

²¹¹ Ibid.

²¹² SBHA, SBHA/HA/3/1, Medical Reports; AHAAD, *HHARP*

²¹³ SBHA, SBHA/HA/3/1, Medical Reports

²¹⁴ AHAAD, *HHARP*

²¹⁵ Ibid.

²¹⁶ Ibid.

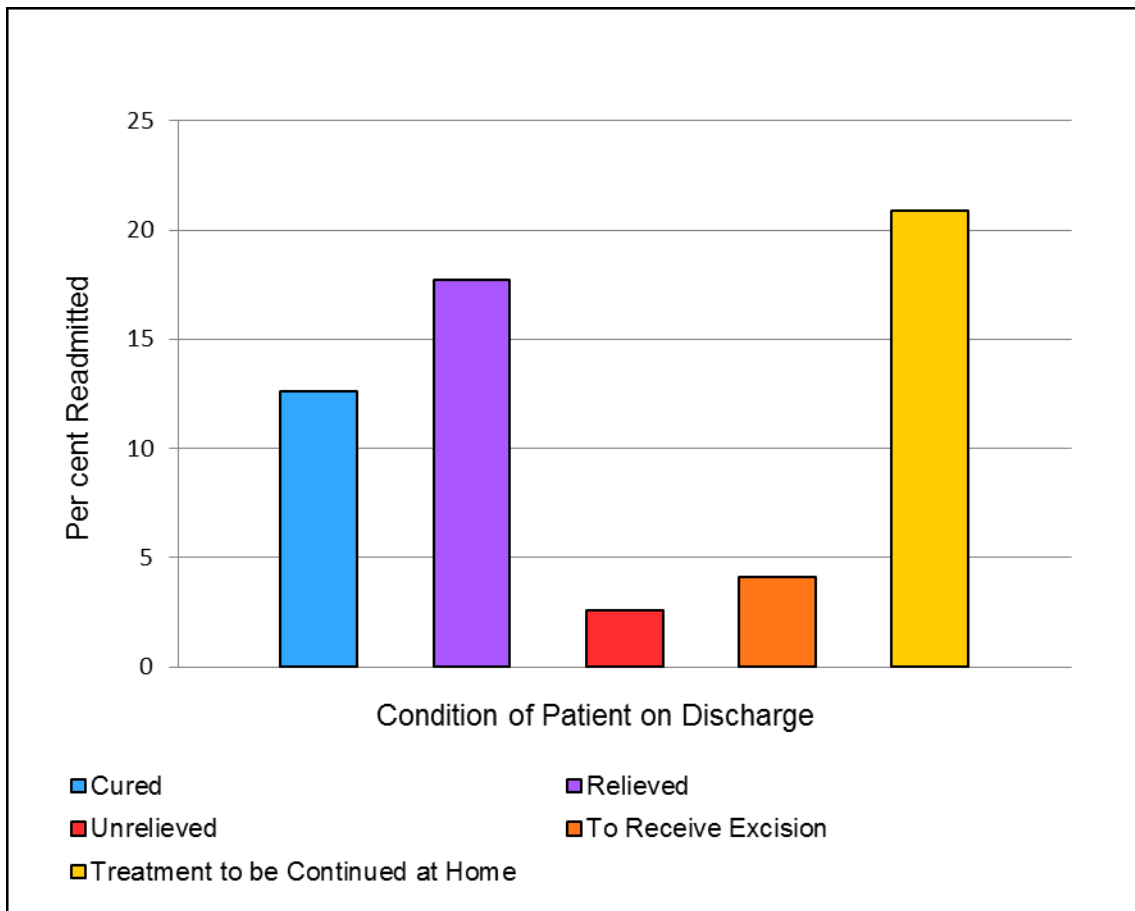


Figure 5.4 Per cent of each 'condition of patient on discharge', subsequently readmitted to AH, 1867-1894

By looking at the proportion of each group leaving the hospital, who were subsequently readmitted, it is possible to assess the permanency of treatment at AH. Figure 5.4 displays this as a per cent of the original groups, from 123 patients readmitted to AH where the result of their previous treatment is known. Firstly this demonstrates that relapses occurred in each group, including 12.6 per cent of those discharged as cured, and 17.7 per cent of those relieved. Figures for unrelieved patients and those to receive excision are low because, having previously received little or no benefit they would usually have been ineligible for readmission.²¹⁷ These figures are proportional and do not reflect the total numbers of patient relapses; some died, others attended different hospitals or remained at home. Nevertheless the graph does demonstrate that those classed as cured were less likely to be readmitted than those only relieved, and even less so than those whose treatment was to be continued at home. This confirms that patients suffering from hip-disease were more

²¹⁷ SBHA, SBHA/HA/11/13, Rules

successfully treated in the hospital than at home, even when under the supervision of AH staff.

A higher proportion of children were effectively treated after longer periods as inpatients. The majority of patients remained in AH for between six and twelve months, although it was common for children to remain up to two years and occasionally for three or more.²¹⁸ Thomas Hunter was admitted in July 1867 and was not discharged until October 1875, being the longest patient resident at AH.²¹⁹

There are 987 patients for which both their condition on discharge and length of stay are known; 943 of which were inpatients for less than three years and are included in Figure 5.5. Patients staying between two and three years were 13.5 per cent more likely to have benefited than those admitted for less than a year.²²⁰ Only 98 patients stayed for between two to three years, compared with 498 who stayed less than a year.

²¹⁸ AHAAD, *HHARP*

²¹⁹ *Ibid.*

²²⁰ *Ibid.*

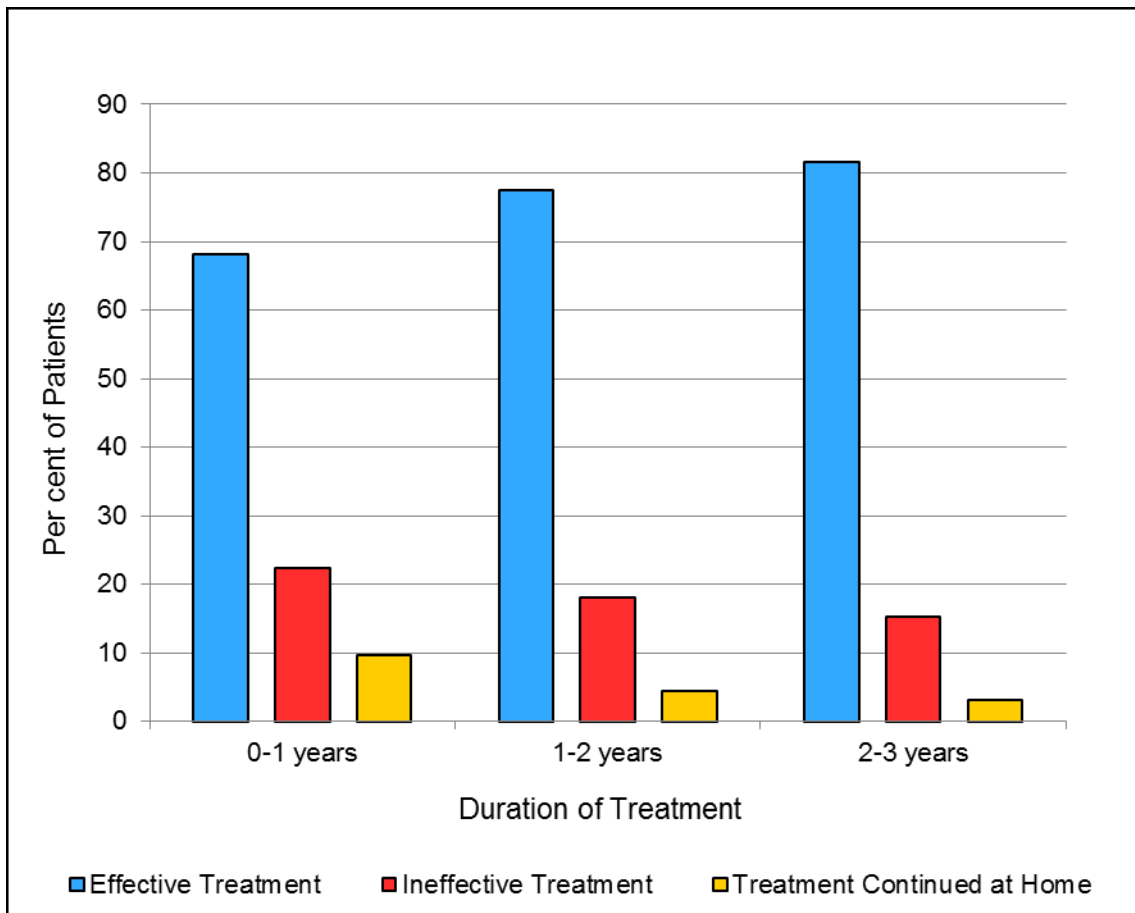


Figure 5.5 Effectiveness of treatment in AH by duration of treatment, 1867-1894, excluding those removed for reasons unrelated to hip-disease

Unhealthy conditions of the patient's homes, poor diet, and sporadic medical supervision could mean a child relapsing in the two years following their discharge, after a year's hospitalisation, even though their treatment appeared successful. If the same child was kept in the hospital, under healthy conditions for three years they would be more likely to make a permanent recovery. In some ways this reflects the problem which AH had intended to resolve, of patients leaving hospital before a complete cure had been attained. Nevertheless, 6 months' or a year's inpatient care was significantly longer than was possible in general paediatric hospitals at the time.²²¹

²²¹ Lomax, *Small and Special*, p.85

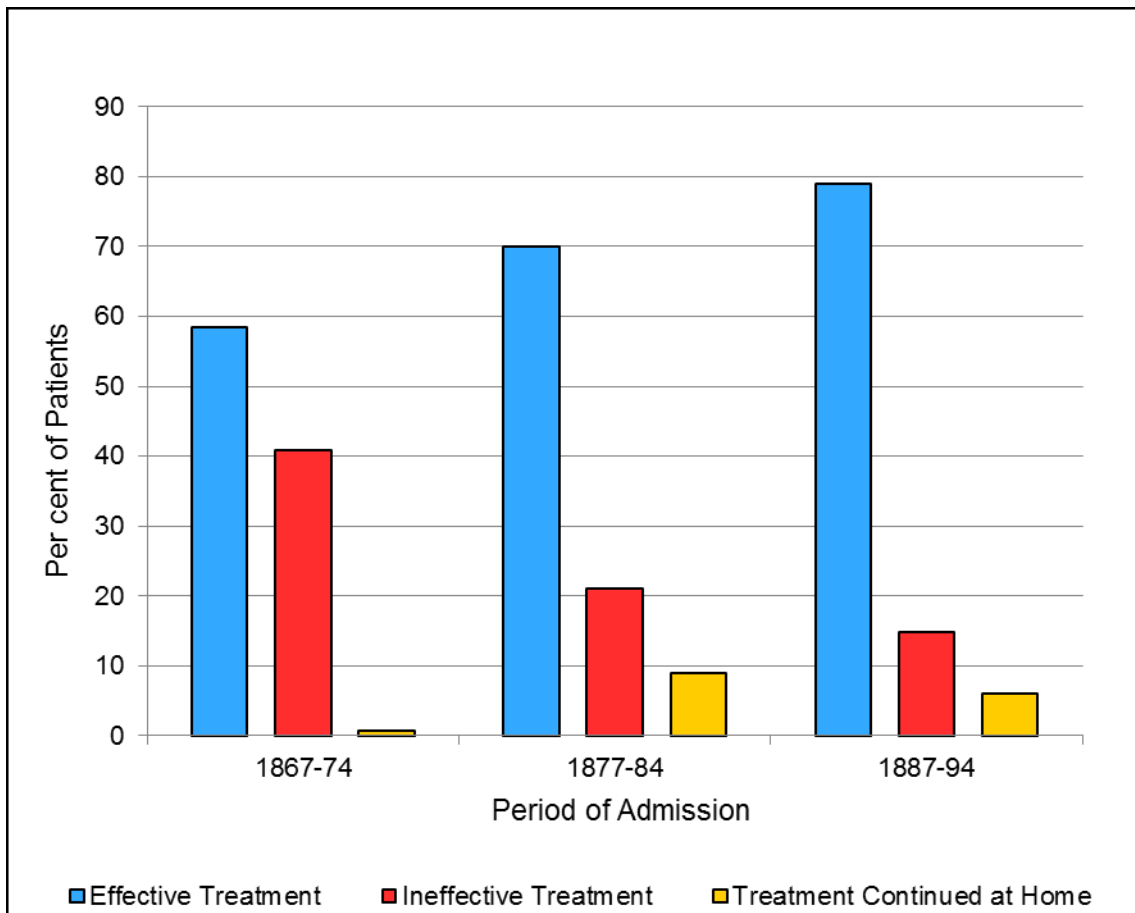


Figure 5.6 Effectiveness of treatment in AH by periods of admittance, 1867-94, excluding those removed for reasons unrelated to hip-disease

With the advancement of antiseptic surgery and improved techniques in repositioning joints and opening abscesses, it is reasonable to expect that treatment at AH was more successful at the end of the century than in 1867. Howard Marsh's estimated rates of mortality indicate this, as do the results of treatment shown in Figure 5.6.

The condition on discharge is known for 125 admissions from 1867-74, 414 for the period 1877-84 and 295 for 1887-94. A child admitted between 1887 and 1894 had a higher chance of effective treatment, (79 per cent), than one admitted in the hospital's first seven years, when only a 58.4 per cent success rate was recorded. Ineffective treatment reduced by 25.9 per cent. Patients who were discharged from the hospital in order to continue treatment at home increased from 0.8 per cent in the first period to 8.9 per cent and 6.1 per cent in the second and third. In 1877, outpatient visits were introduced, in order that a higher number of patients could be treated by the hospital.²²² Regular visits from the

²²² SBHA, SBHA/HA/1/1, Minute book

hospital's nurses and the introduction of the Thomas splint meant that patients could return home to complete their treatment and free beds for more acute patients. However, as shown, homecare was often less effective than in the hospital.

Limited knowledge of the disease and its resilient nature, combined to ensure the treatment of hip-disease at AH remained imperfect. Nevertheless, the majority of AH's patients did benefit and some recovered completely. AH was forced to compromise its aim of keeping all patients until complete cure was achieved because of limited facilities and the high number of children suffering with hip-disease.

It is harder to determine the success AH had in preventing lasting disabilities in its patients. Of 507 patients classed as cured, 69 were described as having some shortening of the leg.²²³ Many children experienced permanent stiffness at the joint, some being completely immovable, although the majority of discharged patients had limbs in 'good position' enabling them to walk, with or without crutches and a high boot.²²⁴ A speech made by Timothy Holmes, surgeon and Committee of Management member, in 1897 shows that AH were not satisfied with their ability to prevent lameness;

[T]he great majority of [patients], he was ashamed to say, went about the world, for the rest of their lives, limping. That was not a cure, although the disease itself was perfectly cured. It was perfectly true that they had made an enormous advance in keeping a patient alive. In the future they must make a further advance and see that the patient should not be lame.²²⁵

The methods of treatment used in AH were widely advocated at the end of the nineteenth century as, increasingly, the use of excision to treat hip-disease was criticised; 'there arose a reaction against the indiscriminate practice of excision and ... treatment by rest with extension received ever-increasing support.'²²⁶ In 1901 the *Lancet* promoted the

²²³ AHAAD, *HHARP*

²²⁴ *Ibid.*

²²⁵ SBHA, SBHA/HA/4/1, *Thirty-first Annual Report*, p.6

²²⁶ 'The desirability of special hospitals for hip-joint disease in children', *Lancet*, (13 April 1901), p.1090; Excisions continued to be performed in the twentieth century, but were usually undertaken by surgeons at

establishment of a hospital in Glasgow based on the work of AH, including both inpatient facilities and visiting nurses to treat patients in their homes. The journal's only indirect criticism of AH was its location in a city, claiming that hospitals treating any form of tuberculosis should be rurally situated.²²⁷

While AH certainly had a positive impact in treating those admitted to its wards, patient numbers were limited, averaging only 173 a year after 1873, which was woefully inadequate to treat all cases of hip-disease in London, let alone those further afield.²²⁸ Other hospitals were established which specialised in the treatment of hip-disease, including The Vine, Sevenoaks, Treloar's Hospital, in Alton, and the Liverpool Country Children's Hospital.²²⁹ Nevertheless, patient numbers continued to dwarf hospital accommodation. In 1908, AH surgeon, Anthony Bowlby stated that, 'the hospital accommodation in Great Britain is not at present adequate for the treatment of a sufficient number of these cases', particularly for the poor, and that more hospitals were needed specifically to treat children with tuberculosis.²³⁰

general children's hospitals, such as Charles Morton, surgeon at Bristol Royal Hospital for Sick Children and Women; C. Morton, 'The results of excision of the hip-joint in 34 cases of suppurating tuberculous disease', *BMJ*, Vol.1, (1913), p.330

²²⁷ 'Desirability of special hospitals', p.1091

²²⁸ AHAAD, *HHARP*

²²⁹ R.C. Elmslie, 'Tuberculous disease of the bones and joints: Present position of treatment in London', *Lancet*, (17 Feb 1912), p.425

²³⁰ Bowlby, 'Nine hundred cases', p.1469

Chapter Six The Influence of Family Poverty

The founders and managers of AH made clear its intended class of patient. Hospital rules state AH was for, 'children of the Poor'.²³¹ Charles Booth defined the 'poor' as 'those who have a sufficiently regular though bare income, such as 18s to 21s per week for a moderate family'; they 'may be described as living under a struggle to obtain the necessaries of life and make both ends meet'.²³² Elizabeth Lomax states that children's voluntary hospitals were intended to serve, 'children whose fathers' earnings were too meagre to afford the services of a general practitioner and yet sufficient to provide food and housing for their families', and therefore above Parish relief.²³³

The majority of treatment offered by children's hospitals was free for patients' families, although Birmingham Children's Hospital charged 6d (2.5p) for outpatient treatment in 1871 to discourage pauper families from overcrowding their outpatient department.²³⁴ Treatment at the Evelina Hospital was free except a penny charge for outpatient medicine.²³⁵ HSC management considered an outpatient payment scheme in 1860 but this was never implemented.²³⁶ Uniquely, AH offered free outpatient treatment (although charging for supplies such as bandages), but had a weekly fee of 4s (20p) for inpatients.²³⁷

For many Metropolitan families, this was unaffordable. Parents applying to AH were required to have a guarantor, to demonstrate that they could pay the hospital fees for extended periods. In 1889, Ada Pearson was granted a letter of recommendation for admission to AH, but her father was unable to secure a guarantee of fees beyond a month. She was denied admission on the grounds that, 'a guarantee for one month is worth nothing considering the time it takes to cure a child of hip disease'.²³⁸ Ada was medically suitable for treatment at AH, but was refused on financial grounds. This system ultimately

²³¹ SBHA, SBHA/HA/11/13, Rules

²³² C. Booth, *Life and Labour of the People in London: First Series: Poverty I*, (London, 1904), p.33

²³³ Lomax, *Small and Special*, p.82

²³⁴ R. Waterhouse, *Children in Hospital: A Hundred Years of Child Care in Birmingham*, (London, 1962), p.42

²³⁵ Priestley, *The Evelina*, p.8

²³⁶ Waddington, *Charity*, p.89

²³⁷ SBHA, SBHA/HA/11/13, Rules

²³⁸ SBHA, SBHA/HA/10/1, Letter book, p.14

disadvantaged the very poorest families, as guarantees vouching for parents' ability to pay fees themselves would have been easier to acquire than finding a sponsor committed to paying the fees themselves. As the case of Dorothea Bridge will show, AH hoped guarantors would take on patients' fees if parents defaulted, however this did not always happen.

The Charity Organisation Society (COS) was a regulatory body established in 1869, to prevent indiscriminate philanthropy and limit it to the deserving poor.²³⁹ Working with HSC in 1876, the COS restricted outpatient treatment to families with a weekly income of up to 30s (£1.50), (raised to 40s [£2] in 1887), to prevent abuse from those able to afford private medical care.²⁴⁰ From this wage threshold, it appears there was a difference between Booth's definition of the poor and those considered poor enough by hospitals and the COS to deserve medical charity. Families earning 30-40s per week, although not able to afford private treatment, may have been able to afford AH fees as a contribution to the care of their children.

In some cases, hospital governors paid for their nominated patients. Nevertheless, AH accounts show that parents paid the majority of patient fees. Excluding 1876-7 and 1877-8, when subscribers contributed higher proportions of patient fees, parents paid an average of 68 per cent of fees from 1868 to 1886.²⁴¹ In 1872-3 parents contributed a total of £262 16s 4d (£262.82) compared with only £85 15s 10d (£85.79) paid by subscribers.²⁴² There is evidence that the COS paid some patient fees.²⁴³

The occupations of the parents of AH patients give some indication of their financial means. While occupations do not directly correspond to family affluence, as regularity of work, the number of dependent children and other family members' wage contributions would also have had an effect, nevertheless, an approximate indication of the social position of parents can be attempted.

²³⁹ Lomax, *Small and Special*, p.10

²⁴⁰ *Ibid.*, p.50

²⁴¹ SBHA, SBHA/HB/7/15, Account book

²⁴² *Ibid.*

²⁴³ J.L. Steavenson wrote to Bethnal Green COS requesting them to send him the fees owed for Henry Paul in March 1889; SBHA, SBHA/HA/10/1, Letter book, p.7

Of 887 applications for admission to AH between 1884 and 1894, occupations are listed for 233 parents, including widows. The occupations have been grouped into classes based on Joseph Banks's work on censuses and nineteenth century occupational structure.²⁴⁴ Keir Waddington has used Banks' classification to analyse the social class of late-Victorian hospital admissions.²⁴⁵ Table 6.1 summarises Bank's occupational class structure.

Class	Classification	Occupations (sample)
I	Professional occupations	Clergy, Clerks, Law, Medicine, Property owning, Public Service, Teaching
II	Intermediate Occupations	Butchers, Bakers, Grocers, Haberdashers, Ironmongers, Pawnbrokers, Publishers, Pensioners, Shopkeepers
III	Skilled Occupations	Bricklaying, Carpenters, Domestic (indoors), Footwear manufacturers, Gunsmith, Hairdresser, Instruments, Printing, Plasters, Plumbers, Seamen, Tailors, Waiters, Wheelwrights
IV	Semi-skilled Occupations	Agriculture, Brewers, Coopers, Domestic (outdoor), Fishermen, Furriers, Laundry workers, Machinist, Millers, Postmen, Sculptors, Tanners, Turners, Warehousemen
V	Unskilled Occupations	Bargeman, Cabman, Costermonger, Labourers, Mining, Porters, Sugar refiners

Table 6.1 'Bank's Classification Scheme', from Waddington, 'Unsuitable cases', p.33

Waddington's analysis places occupational classes I and II above working class, thus determining that Guy's Hospital retained its 'working-class orientation' in 1890 as classes I and II only made up 7.9 per cent of admissions.²⁴⁶ Regardless of whether these families were able to afford extended periods of private medical treatment (such as needed for the treatment of hip-disease), they would have been considered by many commentators of the voluntary system, to be undeserving of charity from voluntary hospitals. It is probable, too, that some of those among class III earned wages high enough to be considered comfortable,

²⁴⁴ J.A. Banks, 'The structure of nineteenth century England as seen through the census', in R. Lawton, (ed.), *The Census and Social Structure: An Interpretive Guide to Nineteenth Century Censuses for England and Wales*, (London, 1978), pp.179-223

²⁴⁵ K. Waddington, 'Unsuitable cases: The debate over outpatient admissions, the medical profession and late-Victorian London hospitals', *Medical History*, Vol.42, (1998), p.32

²⁴⁶ *Ibid.*, p.32

but again they may not have earned enough to pay for extended periods of private treatment; others from this class, however, would have lived in poverty. Two families, in which the father was a waiter, and each with three school age children, are listed in Booth's East London Introductory; one family being described as poor, the other as very poor.²⁴⁷ The majority of classes IV and V would have been considered poor, some being very poor. Although it is not possible to determine the occupational class of mothers listed as widows, there are indications that many lived in poverty; the loss of their husbands' earnings typically greatly reduced family means. Of twenty-seven widows listed in Booth's East London Introductory, only two are considered comfortable, with five poor and twenty very poor.²⁴⁸

Of the 233 applications to AH, 134 were admitted. Numbers of applications and admissions for each occupation class are shown in Figure 6.1. Classes I and II make up 15.9 per cent of applications and 14.9 per cent of admissions.²⁴⁹ Although very few of these classes of patient were admitted to AH, there were also few applying, and proportionally similar numbers are admitted compared with other groups. This supports Keir Waddington's statement that the middle classes were reluctant to make use of voluntary hospitals because of the associated stigma of receiving charitable care.²⁵⁰ The lowest groups, including classes IV, V and widows, make up 51.1 per cent of applications and 50 per cent of admissions.²⁵¹ By far the largest group of both applications and admissions is class III, on its own making up 33 per cent of applications and 35.1 per cent of admissions.²⁵² This is probably because hospital rules officially excluded those not considered poor, however, AH's weekly fee of 4s was prohibitive for many of the poorest families, if they were unable to find benefactors to cover the cost. Class III represents families who could not afford private medical fees but could make some contribution. Nevertheless, based on these results, AH was treating children almost entirely from working-class families, with at least half its patients from the poor or very poor.

²⁴⁷ Booth, *Life and Labour*, pp.16-7

²⁴⁸ *Ibid.*, pp.7-24

²⁴⁹ AHAAD, *HHARP*

²⁵⁰ Waddington, *Charity*, p.88, n.119

²⁵¹ AHAAD, *HHARP*

²⁵² *Ibid.*

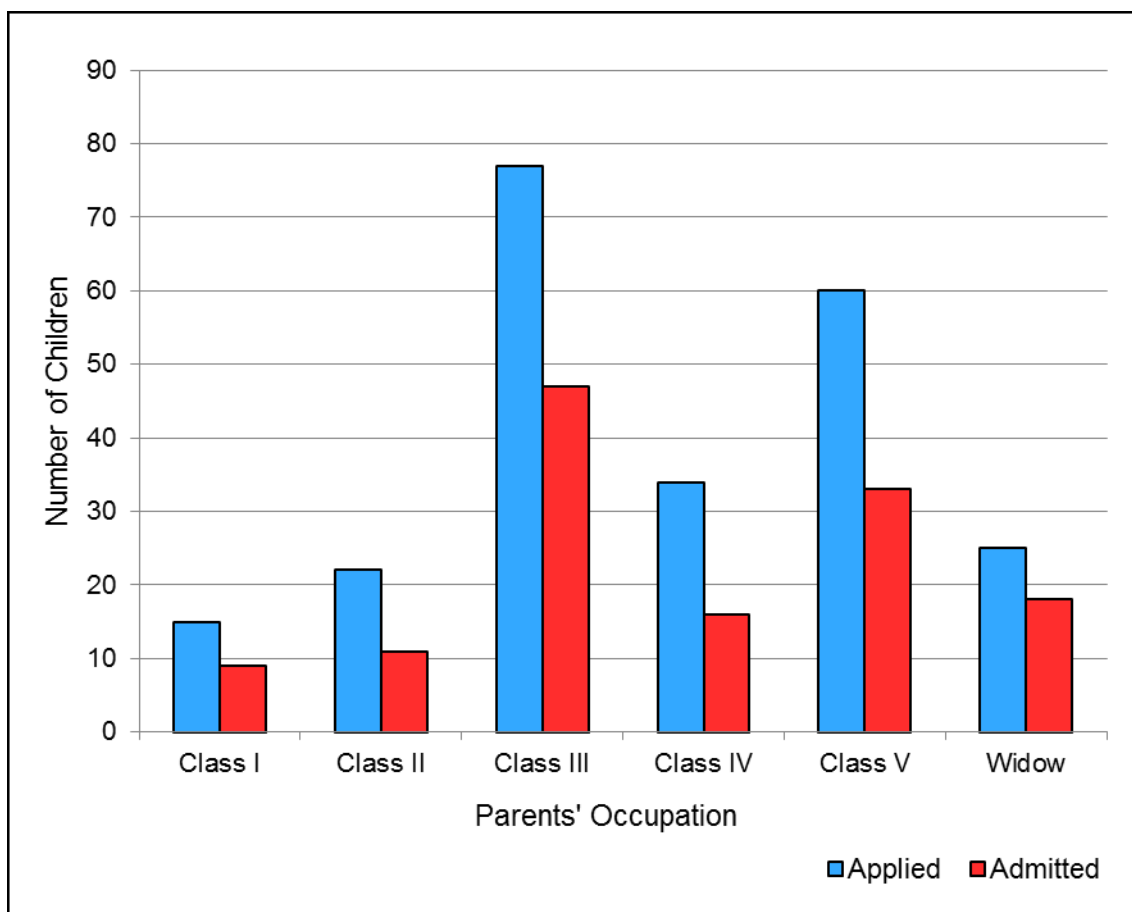


Figure 6.1 Proportion of applications and admissions to AH by occupation of parents, 1884-94

This occupational data is limited to the later part of the period covered by this study, therefore, it is not possible to assess whether there was a change in the class of patient, from those of earlier years. It is possible that the initial fervour of AH to help the poorest patients may have been replaced by an anxiety to ensure funding as the hospital grew, however there is scant evidence to prove this.

As with Ada Pearson, AH management made decisions regarding inpatients based upon funding as well as medical condition. Where a child was already an inpatient of AH, the hospital tried to help families in financial difficulties. In March 1889, Lionel Wyatt was moved to a free bed when his father could no longer afford his son's fees, providing that he cleared his arrears at a rate of 4s a week.²⁵³ It is not known whether Mr Wyatt paid his debts, but Lionel continued treatment as an inpatient until December 1890.²⁵⁴

²⁵³ SBHA, SBHA/HA/10/1, Letter book, p.6

²⁵⁴ AHAAD, *HHARP*

Free or endowed beds allowed AH to admit the poorest patients, while still covering costs. For an annual payment of £30, a sponsor named their cot and held the right of nominating occupying patients. The number of endowed cots in AH increased between 1875 and 1891 from 5 to 19. As the hospital was nearly always full, and had a capacity of 81 beds, by the end of this period, treatment was free for 23.5 per cent of patients.²⁵⁵ Where a sponsor used their right of nomination, AH had little control over the financial circumstances of patients, but in a number of cases, sponsors allowed the cots to be used at the discretion of AH management.

When five year old Albert Shepperd was sent to Findon, West Sussex, for three months convalescence, AH paid his maintenance as his father was unemployed. Their condition, as with Mr Wyatt, was that Mr Shepperd continued to pay the arrears he owed AH.²⁵⁶ Albert was sent home a month early, as his landlady, Miss Schroeter, was 'unable to keep ... [him] any longer'.²⁵⁷ That this was a problem with Albert or his parents, rather than the circumstances of Miss Schroeter, is shown by her willingness to accept another child in Albert's place.²⁵⁸ AH continued to treat Albert at home, but stopped after Mr Shepperd rejected the advice of the visiting nurse.²⁵⁹

Children were sometimes deserted by their parents while in the care of AH, and hospital policy was to transfer them to the Parish infirmary. However, the wellbeing of patients was important to the hospital, and lengthy measures were taken to prevent a child's removal. Dorothea Bridge was abandoned by her mother in 1889. J.L. Steavenson wrote to Mr Spencer, Mrs Bridge's guarantor, to request he take on her fees.²⁶⁰ Mr Spencer must have refused, as two months later, Steavenson wrote to members of Bridge's family to request that they divide the yearly payment of £10 16s 8d (£10.83) between them.²⁶¹ Dorothea Bridge remained in the hospital until her death 11 December 1891, although it is not known

²⁵⁵ AH was the only children's hospital listed in Henry Burdett's survey 1876-8, in which the average daily number of occupied beds matched its capacity; Burdett, *Hospitals*, p.18

²⁵⁶ SBHA, SBHA/HA/10/1, Letter book, p.17

²⁵⁷ *Ibid.*, p.31

²⁵⁸ *Ibid.*, p.30

²⁵⁹ *Ibid.*, p.37

²⁶⁰ *Ibid.*, p.26

²⁶¹ *Ibid.*, p.38

who, if anyone, eventually paid for her.²⁶² Steavenson's letters make it clear that the management were reluctant to move her, believing it would 'put back' her treatment.²⁶³

The Committee of Management was sometimes conflicted between AH's charitable identity and opportunities to increase hospital revenue. In February 1875, the 'Son of a City Clerk' on a £200 salary, was admitted on receipt of a £10 donation from 'the gentleman interested in the case'. This was justified on the grounds that the father was a widower with six children, and there was limited pressure on beds at the time.²⁶⁴ This appears to have been an exception, but by April 1881 the committee decided that four beds in Bournemouth be made available for 'a richer class of patients paying not less than one guinea a week'. This decision, however, was revoked two months later.²⁶⁵ No reason is given for the reversal, although voluntary hospitals were often anxious about introducing pay beds, believing they would thereby lose more money from subscribers than would be made by the scheme.²⁶⁶ In 1889, J.L. Steavenson wrote to a Mr Williams explaining that the rules of AH prevented the readmission of his daughter, 'being only supported for the treatment of the children of the poor'.²⁶⁷ There was a temptation for AH management to accept wealthier patients with the opportunity of increasing hospital funding, however, they rarely succumbed to this.

Henry Burdett's 1876-8 survey of hospitals lists the weekly cost of AH patients at 11s 5½d (57p), therefore with a fee of 4s, or even the later, higher fee of 4s 2d, almost two-thirds of the cost of treatment was defrayed by the hospital.²⁶⁸ However, this was still more than many could afford. Closely associated with poverty, it was among the poorest families that hip-disease was most common. Overall AH policy was to treat those from among the working classes, and the majority probably could not have afforded private medical care. However, hospital fees were prohibitive for the very poorest, with financial circumstances, as much as medical ones, determining which patients were admitted. Despite this, once

²⁶² SBHA, SBHA/MR/15/143, Patient record card: Dorothea Bridge

²⁶³ SBHA, SBHA/HA/10/1, Letter book, p.38

²⁶⁴ SBHA, SBHA/HA/1/1, Minute book, p.50

²⁶⁵ *Ibid.*, p.107 and p.111

²⁶⁶ Waddington, *Charity*, pp.89-91

²⁶⁷ SBHA, SBHA/HA/10/1, Letter book, p.12

²⁶⁸ Burdett, *Hospitals*, pp.18-9

admitted to AH, the welfare of patients became the priority and where possible the hospital helped those families no longer able to pay their fees.

Conclusion

The ambition of AH to cure hip-disease in children of the poor was a hard challenge to meet. In the pre-antibiotic world, the options for treating tuberculosis were few. In addition, hospital provision for children of the poor was insufficient for those suffering from chronic conditions.

The method of treatment adopted by AH surgeons, that is, rejecting excision of the joint, in favour of conservative treatment by weight and pulley, proved to be widely successful. By the end of the century, mortality of AH patients was low and the majority received significant benefit from their care. Longer periods of treatment within the hospital proved more successful than shorter periods, or treatment continued in patients' homes. Despite AH's success in curing hip-disease, a large proportion of patients was left with impaired movement, however the attention which was paid to the repositioning of limbs gave patients the greatest possible chance of mobility, even when this meant long-term use of crutches or high boot.

AH treatment, however, was compromised by the pressures of the Victorian voluntary system and the intense competition for charitable funding. The lack of treatment for hip-disease in other hospitals created the impetus for AH, but also placed higher pressure on its beds. Limited funding also restricted AH's own facilities. The hospital was forced, by the need to admit more acute cases, to discharge some patients before they were completely cured. This went against the initial aims of the hospital, however, AH's monitoring of patients following their discharge showed a commitment to patient wellbeing beyond the walls of the hospital.

Apart from changes in the method of limb repositioning and the treatment of abscesses, the method of treatment at AH remained consistent until the end of the nineteenth century, demonstrating the confidence AH surgeons had in their approach. Hospital management, on the other hand, was less resolute in the commitment to treating children of the poor. This was largely due to the pressure of maintaining funding for the hospital within the competitive voluntary system. The introduction of a 4s weekly fee would have been prohibitive for those poor families without sponsorship. Despite this, fees only represented a partial contribution towards the cost and did provide hospital access for families, who otherwise would have

been unable to afford private care. Decisions not to introduce pay beds and ultimately to refuse treatment to wealthier families reflect the commitment of AH to treating the poorer classes. The admission of patients to AH depended on financial as well as medical factors; however evidence also suggests that, once children became inpatients, the continuance of their treatment became the hospital's priority.

Without State provision for the treatment of hip-disease beyond Poor Law infirmaries these children fell to the care of voluntary hospitals. The Alexandra Hospital for Children with Hip Disease was founded with high ambitions, not only to provide accommodation for more of these cases to be treated conservatively, but also to care for its patients, where possible, until they were cured. In these aims AH proved to be both unique and successful.

Appendix I: Structure of the Alexandra Hospital for Children with Hip Disease, 1867-1900

Year	Hospital Name	Premises		Management	Medical Officers				Lady Superintendent	Nurses (Main Hosp.)	Patients													
		Main Site	Convalescent Homes		Surgeons	Physician	Surgeon -Dentist	Chloroformist			Est. Inpatients Admitted/Total	Outpatients /Total visits		Home visits introduced in May 1877										
1867	House of Relief for Children with Chronic Diseases of the Joints	19 Queen Square, Bloomsbury		Ladies' Committee					Miss Madden	3 Ladies, 3 assistants	35	35	Outpatient department.											
1868											16	45												
1869											10	39												
1870											21	51												
1871	Hospital for Hip Disease in Childhood	17, 18 & 19 Queen Square, Bloomsbury	Parkstone, Dorset	Committee of Management [initially 3 monthly then monthly meetings]	Howard Marsh	Howard Marsh	Consulting surgeon 1888-91	Edward Bartlett	Unknown	Miss Pearson	6 wards: 1 Lady and 1 nurse for each ward	16	51	Home visits introduced in May 1877										
1872			18-19 Queen Square, 50 beds									Bournemouth Branch	12 beds			Henry T. Butlin	Assistant	Samuel Gee	Consulting physician 1884-1911	Miss Townsend	39	75		
1873																					29	83		
1874																					58	112		
1875																					76	140		
1876																					33	108		
1877																					51	102		
1878																					66	116	152	608
1879																					89	153	-	550
1880																					93	163	-	681
1881																					83	154	167	619
1882																					63	135	183	1039
1883																					64	136	175	801
1884																					82	154	220	891
1885		92	170	176	622																			
1886		67	143	-	-																			
1887		62	143	-	-																			
1888		69	142	-	-																			
1889		58	142	-	-																			
1890		60	141	-	-																			
1891		61	143	-	-																			
1892		59	142	-	-																			
1893		56	146	-	-																			
1894		76	-	-	-																			
1895		-	-	-	-																			
1896		-	-	290	1703																			
1897		-	-	-	-																			
1898		-	-	-	-																			
1899		-	-	-	-																			
1900		-	-	-	-																			
1901-20		Painswick, 1900 Clandon Branch, 1903																						
1920-40		Kettlewell, Swanley	Previously a St. Bartholomew's Hospital convalescent home. Patients were evacuated to Stockwood Park, Luton in 1940.																					
1940-58		Stockwood Park, Luton	Alexandra Hospital became, 'Part of the Teaching Group of the Royal Hospital of St. Bartholomew' in 1948. The hospital closed in 1958.																					

This information has been collated from the Alexandra Hospital for Children with Hip Disease Archive Records at St Bartholomew's Hospital Archive, *Select Committee of the House of Lords on Metropolitan Hospitals, Third Report*, British Parliamentary Papers, 1892, XIII, and Burdett, H., *Hospitals and the State: with an account of the Nursing at London Hospitals and Statistical Tables*, (London, 1881).

Appendix II: Glossary of Medical Terms

Abduction	Movement of a limb away from the body, [opposite adduction].
Abscess	A cavity containing pus and surrounded by inflamed tissue, formed as a result of supuration in a localised infection.
Acetabulum	The cup-shaped hip socket into which the head of the femur is set.
Acute	(Of a disease or disease symptoms) beginning abruptly with marked intensity or sharpness, then subsiding after a relatively short period, [opposite chronic].
Adduction	Movement of a limb toward the median axis of the body, [opposite abduction]
Adhesion	A band of scar tissue that binds anatomic surfaces that normally are separate from each other.
Amputation	The surgical removal of part of a body or a limb or part of a limb.
Ankylosis	Fixation of a joint, often in an abnormal position.
Antisepsis	Destruction of microorganisms to prevent infection, [process of antiseptic surgery]
Aspirate	To withdraw fluid or air from a cavity.
Atrophy	A wasting or decrease in size or physiologic activity of a part of the body because of disease or other influences. A skeletal muscle may undergo atrophy as a result of lack of physical exercise or neurologic or musculoskeletal disease.
Bovine tuberculosis	A form of tuberculosis caused by <i>Mycobacterium bovis</i> that primarily affects cattle but can also affect humans, transmitted through infected milk.
Chronic	(Of a disease or disorder) persisting for a long period, often for the remainder of a person's lifetime. [opposite Acute]
Excise	To remove completely [excision of the hip-joint: to remove the head of the femur].

Femur	The thigh bone, which extends from the pelvis to the knee. It has a large round head that fits the acetabulum of the hip.
Fibrous	Consisting mainly of fibers or fiber-containing material (composed mainly of the protein collagen, which forms elastic threads of loose connective tissue in skin and other organs).
Flexion	A movement allowed by certain joints of the skeleton that decreases the angle between two adjoining bones. [flexion of the hip-joint decreases the angle between the femur and the pelvis]
Infectious disease	Any communicable disease, or one that can be transmitted from one human being to another or from animal to human by direct or indirect contact.
Insidious	Describing a development that is gradual, subtle, or imperceptible. Certain chronic diseases can develop insidiously with symptoms that are not detected by the patient until the disorder is established.
Lameness	A condition of diminished function, particularly because of a foot or leg injury.
Lordosis	An abnormal anterior concavity of the lumbar part of the back.
Lupus vulgaris	A rare cutaneous form of tuberculosis in which areas of the skin become ulcerated and heal slowly, leaving deeply scarred tissue.
Muscular atrophy	See Atrophy
Muscular spasm	An involuntary muscle contraction.
<i>Mycobacterium tuberculosis</i>	A genus of rod-shaped acid-fast bacteria, which causes tuberculosis.
Necrosis	Localised tissue death that occurs in groups of cells in response to disease or injury. [Necrosed: dead tissue]
Pulmonary	Pertaining to the lungs or respiratory system.
Scrofula	A form of tuberculosis cutis with abscess formation, usually of the cervical lymph nodes. <i>archaic</i> .
Sepsis	Infection, contamination.

Sputum	Material coughed up from the lungs and expectorated through the mouth.
Suppuration	The production and exudation of pus.
Tubercle bacillus	The bacteria which cause tuberculosis , see also <i>Mycobacterium tuberculosis</i> .
Tubercular meningitis	Any infection or inflammation of the membranes covering the brain and spinal cord caused by <i>Mycobacterium tuberculosis</i> .
Tuberculosis	A chronic granulomatous infection caused by an acid-fast bacillus, <i>Mycobacterium tuberculosis</i> . It is generally transmitted by the inhalation or ingestion of infected droplets and usually infects the lungs, although infection of multiple organ systems occurs. Persons who are immunodeficient, such as those infected with human immunodeficiency virus (HIV), may have extrapulmonary tuberculosis.

Definitions are taken from T. Myers, (ed.), *Mosby's Dictionary of Medicine, Nursing and Health Professions*, (St. Louis, Mo., 2006)

Bibliography

Contemporary Sources

Manuscript

Alexandra Hospital for Children with Hip Disease, St. Bartholomew's Hospital Archive

SBHA/HA/1/1, Minute book of the Committee of Management, (1871-87)

SBHA/HA/1/2, Minute book of the Committee of Management, (1887-94)

SBHA/HA/1/3, Minute book of the Committee of Management, (1894-98)

SBHA/HA/1/4 , Minute book of the Committee of Management, (1899-1906)

SBHA/HA/3/1, Medical Reports with Statistics, (1884-99)

SBHA/HA/4/1, *The Thirty-first Annual Report of The Alexandra Hospital for Children with Hip Disease*, (London, 1897)

SBHA/HA/7, List of Committee of Management members, (1879-91)

SBHA/HA/10/1, Letter Book, (26 March 1889-1 December 1893)

SBHA/HA/11/13, Rules etc. for The Alexandra Hospital for Children with Hip Disease, (c.1889)

SBHA/HA/13/3/1, Letter received from James Paget, (16 November 1866)

SBHA/HA/13/3/2, Letter received from James Paget, (17 November 1866)

SBHA/HA/13/3/3, Letter received from James Paget, (15 December 1866)

SBHA/HA/13/3/4, Letter received from George Callender, (22 November 1866)

SBHA/HA/13/3/5, Letter received from Henry Thompson, (24 January 1867)

SBHA/HA/13/3/6, Letter received from Prescott Hewett, Surgeon at St George Hospital, (27 December 1866)

SBHA/HA/13/3/7, Letter received from Frederick Carpenter Skey surgeon, (11 December 1866)

SBHA/HA/13/3/8, Letter received from William Jenner, (January 1867)

SBHA/HA/13/3/9, Letter received from T. Holmes, with statement to a committee, (16 November 1866)

SBHA/HA/13/3/10, Letter Received from John Hilton, (17 January 1867)

SBHA/HA/14, Notes from Housing Sub-Committee, (1871)

SBHA/HB/4/1, 'An Unknown Haven', (c.1899)

SBHA/HB/4/2, 'Safe in Harbour', fundraising pamphlet, (c.1900)

SBHA/HB/4/3, 'The Alexandra Hospital', fundraising pamphlet, (c.1903)

SBHA/HB/4/4, 'A Story with a Moral', fundraising pamphlet, (c.1900)

SBHA/HB/4/5, 'His Little Ones', fundraising pamphlet, (c.1900)

SBHA/HB/4/7, 'The Good Old Times?', fundraising pamphlet, (c.1900)

SBHA/HB/4/8, Typescript history of the Alexandra Hospital, (c.1920)

SBHA/HB/4/9, Fundraising pamphlet in the form of a history of the Hospital, (1891)

SBHA/HB/4/10, Transcript history of the Hospital to 1948, (c.1949)

SBHA/HB/7/15, General account book, (1867-86)

SBHA/HB/19/1, Staff wages account book, (1887-93)

SBHA/HC/4/8, Agreement for tenancy of 19 Queen Square between Mrs Marsh and the Secretary of the Hospital, (31 August 1889)

SBHA/HI/6, The Alexandra Hospital for Children with Hip Disease, original hospital in Queen Square, (c.1898)

SBHA/MO/8, Rules and regulations for ward sisters, (1902)

SBHA/MR/14, Patient record cards, James Berry, (1885-1906)

SBHA/MR/15, Patient record cards, Anthony Bowlby, (1884-1907)

SBHA/MR/15/143, Patient record card, Dorothea Bridge

SBHA/MR/18/1, Case notes of outpatients: Book I, (1877-8)

SBHA/MR/18/2, Case notes of outpatients: Book II, (1878-85)

SBHA/MR/22/1, Statistics relating to named cots established and withdrawn, (1875-91)

SBHA/PG/71, Photograph of external balcony of the new hospital in Queen Square, (c.1900)

SBHA/TH/1/1, Operating theatre register, (1893-1958)

SBHA/XP/1/1, Newspaper cuttings, (1867-1902)

SBHA/XP/1/2, Newspaper cuttings, (1870-1893)

Historic Hospital Admission Records Project, Kingston University

Alexandra Hospital Application and Admission Database, 1867-94

British Parliamentary Papers and Government Papers

1881 Census Returns of England and Wales, General Register Office, (3 April 1881), RG 11/93 f.69 p.1, *Historyscape*, www.historyscape.org.uk, [22/08/2011]

Frederick Howard Marsh, Marriage Record, 25 August 1870, London, England, Marriages and Banns, 1754-1921, *Ancestry.com*, www.ancestry.com, [22/09/11]

Select Committee of the House of Lords on Metropolitan Hospitals, Third Report, British Parliamentary Papers, 1892, XIII

Printed

Books

Ashby, H., and Wright, G.A., *The Diseases of Children: Medical and Surgical*, (London, 1899)

Booth, C., *Life and Labour of the People in London: Final Volume*, (London, 1902)

Booth, C., *Life and Labour of the People in London: First Series: Poverty I*, (London, 1904)

Booth, C., *Life and Labour of the People in London: Second Series: Industry I*, (London, 1903)

Burdett, H., *Hospitals and the State: with an account of the Nursing at London Hospitals and Statistical Tables*, (London, 1881)

Holmes, T., *The Surgical Treatment of the Diseases of Infancy and Childhood*, (London, 1869)

Owen, E., *The Surgical Diseases of Children*, (London, 1897)

Thomas, H.O., *Diseases of the Hip, Knee, and Ankle Joints*, (Liverpool, 1875)

West, C., *Lectures on the Diseases of Infancy and Childhood*, (London, 1884)

West, C., *On Hospital Organisation, with Special Reference to the Organisation of Hospitals for Children*, (London, 1877)

Wood, C., *A Handbook of Nursing for the Home and the Hospital*, (London, c.1899)

Articles

'Medical charities of London', *Quarterly Review*, Vol.136, (April 1874), pp.371-94

'Obituary: Frederick Howard Marsh', *British Medical Journal*, Vol.2, (1915), pp.35-8

'Obituary: Lady Berry, M.D.', *British Medical Journal*, Vol.1, (1934), p.780

'The Alexandra Hospital, Queen Square', *Nursing Record and Hospital World*, 29 July, 1899, p.94

'The desirability of special hospitals for hip-joint disease in children', *Lancet*, (13 April 1901), pp.1090-1

'The tuberculous children of the Metropolis', *British Medical Journal*, Vol.2, (1905), pp.1533-5

Bowlby, A., 'Nine hundred cases of tuberculous disease of the hip, treated at the Alexandra Hospital, with a mortality of less than 4 per cent', *British Medical Journal*, Vol.1, (1908), pp.1465-9

Burdett, H., 'Public support of hospitals', *British Medical Journal*, Vol.1, (1877), pp.405-6

Croft, J., 'The present stage of surgical treatment of tubercular disease of joints', *Lancet*, (8 February 1890), pp.281-3

Elmslie, R.C., 'Tuberculous disease of the bones and joints: Present position of treatment in London', *Lancet*, (17 Feb 1912), pp.424-6

Holmes, T., 'Address in surgery', *British Medical Journal*, Vol.2, (1880), pp.252-8

Holmes, T., 'An address on children's hospitals as medical schools', *British Medical Journal*, Vol.2, (1886), pp.806-9

Marsh, H., 'Lectures on the diagnosis and treatment of hip-disease in children: Lecture I', *British Medical Journal*, Vol.2, (1877), pp.37-9

Marsh, H., 'Lectures on the diagnosis and treatment of hip-disease in children: Lecture II', *British Medical Journal*, Vol.2, (1877), pp.69-71

Marsh, H., 'Lectures on the diagnosis and treatment of hip-disease in children: Lecture III', *British Medical Journal*, Vol.2, (1877), pp.97-9

Marsh, H., 'Lectures on the diagnosis and treatment of hip-disease in children: Lecture IV', *British Medical Journal*, Vol.2, (1877), pp.129-31

Marsh, H., 'On the treatment of chronic inflammatory affections of the joints in children, with especial reference to excision', *Lancet*, (31 July 1880), pp.167-9

Marsh, H., 'On the treatment of tubercular disease of joints', *Lancet*, (26 July 1890), pp.167-72

Martin, W., 'Special Hospitals', *British Medical Journal*, Vol.2, (1861), pp.301-4

Morton, C., 'The results of excision of the hip-joint in 34 cases of suppurating tuberculous disease', *British Medical Journal*, Vol.1, (1913), pp.330-2

Pattison, C.L., 'Three hundred cases of tuberculosis of the hip-joint: Their late end-results, after an average period of six years and nine months', *British Medical Journal*, Vol.2, (1929), pp.532-3

Wright, G.A., 'Treatment of hip-joint disease; To the Editors of *The Lancet*', *Lancet*, (10 August 1889), p.290

Newspapers and Journals

Bournemouth Observer

British Journal of Nursing

London Mirror

Medical Times and Gazette

Nursing Record and Hospital World

The Times

Truth

Secondary Sources

Books

Borsay, A., and Shapely, P., (eds.), *Medicine, Charity and Mutual Aid: The Consumption of Health and Welfare in Britain, c.1550-1950*, (Aldershot, 2007)

Bryder, L., *Below the Magic Mountain: A Social History of Tuberculosis in Twentieth-Century Britain*, (Oxford, 1988)

Cooter, R., (ed.), *In the Name of the Child: Health and Welfare, 1880-1940*, (London, 1992)

Digby, A. and Stewart, J., (eds.), *Gender, Health and Welfare*, (London, 1996)

Girdlestone, G.R., and Somerville, E.W., *Tuberculosis of Bone and Joint*, (London, 1952)

Granshaw, L., and Porter, R., (eds.), *The Hospital in History*, (London, 1989)

Hardy, A., *The Epidemic Streets: Infectious Disease and the Rise of Preventive Medicine, 1856-1900*, (Oxford, 1993)

Henderson, J., Horden, P., and Pastore, A., (eds.), *The Impact of Hospitals, 300-2000*, (Bern, 2007)

Hendrick, H., *Children, Childhood and English Society, 1880-1990*, (Cambridge, 1997)

Hendrick, H., *Child Welfare: Historical Dimensions, Contemporary Debate*, (Bristol, 2003)

Kayne, G.G., *The Control of Tuberculosis in England: Past and Present*, (London, 1937)

Klenerman, L., (ed.), *The Evolution of Orthopaedic Surgery*, (London, 2002)

Kosky, J., *Mutual Friends: Charles Dickens and Great Ormond Street Hospital*, (London, 1989)

Kosky, J., (ed.), *Queen Elizabeth Hospital for Children: 125 Years of Achievement*, (London, 1992)

Lawrence, C., (ed.), *Medical Theory, Surgical Practice: Studies in the History of Surgery*, (London, 1992)

Lawton, R., (ed.), *The Census and Social Structure: An Interpretive Guide to Nineteenth Century Censuses for England and Wales*, (London, 1978)

Lomax, E., *Small and Special: The Development of Hospitals for Children in Victorian Britain*, (London, 1996)

Meachen, G.N., *A Short History of Tuberculosis*, (London, c.1936)

Medvei, V.C., and Thornton, J.L., (eds.), *The Royal Hospital of Saint Bartholomew, 1123-1973*, (London, 1974)

Orr, H.W., *On the Contributions of Hugh Owen Thomas of Liverpool, Sir Robert Jones of Liverpool and London, John Ridlon, M.D., of New York and Chicago to Modern Orthopaedic Surgery*, (Springfield, 1949)

Paris, G., *A Child of Sanatoriums: A Memoir of Tuberculosis Survival and Lifelong Disability*, (London, 2010)

Peterson, M.J., *The Medical Profession in Mid-Victorian London*, (London, 1978)

Pinchbeck, I., and Hewitt, M., *Children in English society, Volume II: From the eighteenth century to the Children Act, 1948*, (London, 1973)

Pollock, L.A., *Forgotten Children: Parent-Child Relations between 1500 to 1900*, (Cambridge, 1983)

Poynter, F.N.L., (ed.), *The Evolution of Hospitals in Britain*, (London, 1964)

Priestley, H.E., *The Evelina: The Story of a London Children's Hospital, 1869-1969*, (London, 1969)

Prochaska, F.K., *Philanthropy and the Hospitals of London: The King's Fund, 1897-1900*, (Oxford, 1992)

Rivett, G., *The Development of the London Hospital System, 1823-1982*, (London, 1986)

Robertson, E., *The Yorkhill Story: The History of The Royal Hospital for Sick Children Glasgow*, (Glasgow, 1972)

Saunders, C., *The Bristol Royal Hospital for Sick Children*, (Bristol, 1961)

Smith, B. Abel, *The Hospitals, 1800-1948: A Study in Social Administration in England and Wales*, (London, 1964)

Smith, F.B., *The Retreat of Tuberculosis, 1850-1950*, (London, 1988)

Waddington, K., *Charity and the London Hospitals, 1850-1898*, (Woodbridge, 2000)

Waterhouse, R., *Children in Hospital: A Hundred Years of Child Care in Birmingham*, (London, 1962)

Woodward, J., *To Do the Sick No Harm: A Study of the British Voluntary Hospital System to 1875*, (London, 1978)

Articles

Apple, R.D., 'Constructing mothers: Scientific motherhood in the nineteenth and twentieth centuries', *Social History of Medicine*, Vol.8, (1995), pp.161-78

Atkins, P.A., 'White poison? The social consequences of milk consumption, 1850-1930', *Social History of Medicine*, Vol.5, (1992), pp.207-27

Bryder, L., "'Not always one and the same thing": the registration of tuberculosis deaths in Britain, 1900-1950', *Social History of Medicine*, Vol.8, (1995), pp.253-65

Cherry, S., 'Accountability, entitlement, and control issues and voluntary hospital funding c1860-1939', *Social History of Medicine*, Vol.9, (1996), pp.215-33

Cherry, S., 'Hospital Saturday, workplace collections and issues in late nineteenth-century hospital funding', *Medical History*, Vol.44, (2000), pp.461-88

Cowan, P., 'Some observations concerning the increase of hospital provision in London between 1850 and 1960', *Medical History*, Vol.14, (1970), pp.42-52

Daunton, M.J., 'Health and housing in Victorian London', *Medical History*, Supplement No.11, (1991), pp.126-44

Dupree, M.W., 'Family care and hospital care: the 'sick poor' in nineteenth-century Glasgow', *Social History of Medicine*, Vol.6, (1993), pp.195-211

Gaw, J.L., "'A time to heal": The diffusion of Listerism in Victorian Britain', *Transactions of the American Philosophical Society*, Vol.89, (1999), pp.1-173

Hardy, A., 'Rickets and the rest: Childcare, diet and the infectious children's diseases, 1850-1914', *Social History of Medicine*, Vol.5, (1992), pp.389-412

Helmstadter, C., 'Early nursing reform in nineteenth-century London: A doctor-driven phenomenon', *Medical History*, Vol.46, (2002), pp.325-50

Huch, R.K., 'The National Association for the Promotion of Social Science: Its contribution to Victorian health reform, 1857-1886', *Albion: A Quarterly Journal Concerned with British Studies*, Vol.17, (Autumn, 1985), pp.275-99

Lomax, E., 'The control of contagious disease in nineteenth-century British paediatric hospitals', *Social History of Medicine*, Vol.7, (1994), pp.383-400

Philips, J., and French, M., 'State regulation and the hazards of milk, 1900-1939', *Social History of Medicine*, Vol.12, (1999), pp.371-88

Swain, V.A.J., 'East London Hospital for Children', *Medical History*, Vol.8, (1964), p.136

Tanner, A., 'Community private nurses at GOSH', *Roundabout*, (March, 2008)

Tanner, A., 'The sentimental hard sell: Establishing the idea of the children's hospital', *Proceedings*, "Ospedali e Sanita; Strutture, risorse, modelli gestionali, professioni, politiche", Cicloseminariale Citta capitali Europe', (Rome, 2004), pp.4-6

Waddington, K., 'The nursing dispute at Guy's Hospital, 1879-1880', *Social History of Medicine*, Vol.8, (1995), pp.211-30

Waddington, K., 'To stamp out "so terrible a malady": Bovine tuberculosis and Tuberculin testing in Britain, 1890-1939', *Medical History*, Vol.48, (2004), pp.29-48

Waddington, K., 'Unsuitable cases: The debate over outpatient admissions, the medical profession and late-Victorian London hospitals', *Medical History*, Vol.42, (1998), pp.26-46

Wilson, L.G., 'The historical decline of tuberculosis in Europe and America: Its Causes and Significance', *Journal of the History of Medicine and Allied Sciences*, Vol.45, (1990), pp.366-96

Websites

Ancestry.com, www.ancestry.com, [last accessed 22/09/11]

British History Online, www.british-history.ac.uk, [last accessed 25/08/11]

Charles Booth Online Archive, www.booth.lse.ac.uk, [last accessed 24/08/2011]

Historic Hospital Admission Records Project, (HHARP), www.hharp.org, [last accessed 25/08/11]

Historyscape, www.historyscape.org.uk, [last accessed 22/08/2011]

Nobelprize.org, www.nobelprize.org, [last accessed 25/07/2011]

Our Family History, www.thepeerage.com, [last accessed 20/08/11]

Oxford Dictionary of National Biography, www.oxforddnb.com, [last accessed 22/08/11]

Who's Who, www.ukwhoswho.com, [last accessed 19/09/11]

'2010/2011 Tuberculosis global facts', *World Health Organization*, http://www.who.int/tb/publications/2010/factsheet_tb_2010_rev21feb11.pdf, [last accessed 30/08/11]

'Catherine Jane Wood', *Historic Hospital Admission Records Project*, (HHARP), www.hharp.org/library/gosh/nurses/catherine-jane-wood.html, [last accessed 22/06/2011]

'Invalid Children's Aid Nationwide (I CAN)', *The National Archives, Access to Archives*, <http://www.nationalarchives.gov.uk/a2a/records.aspx?cat=074-lma4248&cid=0#0>, [last accessed 25/08/11]

'The Health Academy: Avoiding tuberculosis: Selfstudy program on tuberculosis,' *World Health Organization*, http://www.who.int/healthacademy/WHO_TB.pdf, [last accessed 10/09/11]