

# A brief look at the history of the Deaconess Hospital, Edinburgh, 1894–1990

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## Abstract

The Deaconess Hospital, Edinburgh, opened in 1894 and was the first establishment of its kind in the UK, maintained and wholly funded as it was by the Reformed Church. Through its 96-year lifetime it changed and evolved to time and circumstance. It was a school: for the training of nurses and deaconesses who took their practical skills all over the world. It was a sanctum: for the sick-poor before the NHS. It was a subsidiary: for the bigger

hospitals of Edinburgh after amalgamation into the NHS. It was a specialised centre: as the Urology Department in Edinburgh and the Scottish Lithotripter centre. And now it is currently student accommodation. There is no single source to account for its history. Through the use of original material made available by the Lothian Health Services Archives – including Church of Scotland publications, patient records, a doctor's casebook and annual reports – we review its conception, purpose, development and running; its fate on joining the NHS, its identity in the latter years and finally its closure.

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## Introduction

On a November morning in 1888, two men stood in the Pleasance area of Edinburgh looking across the street to an old house, which 200 years before had been the town residence of Lord Carnegie. One of these men, the Very Reverend Professor A. H. Charteris, proclaimed to the other (George McAlpine, future secretary of the Deaconess Hospital board), 'tomorrow I hope to buy it and on its site to erect the first of our buildings in which we shall carry out the training of church workers, not only in mission work but in nursing.'<sup>1</sup>

This is not a fictitious account, it is recorded in a Church of Scotland pamphlet from 1944 (celebrating 50 years of the Deaconess)<sup>1</sup> and marks the beginning of one man's dream to try and develop the work of women in the church. The great house referenced, which had once belonged to Scottish aristocracy, became St Ninian's Mission (a practical training ground for Deaconesses) and the building beside became the Deaconess Hospital (Figure 1).

## Methods

The initial sourcing of primary and secondary material for this project was conducted through Google and Google Scholar, using the search term 'Deaconess Hospital, Edinburgh'. Only a few results were produced and no comprehensive secondary material was found. The top result was the

**Figure 1** Charteris Memorial Church, St Ninian's and the Deaconess Hospital, 1944



Lothian Health Services Archive (LHSA) website, the archive being located on the 6th floor of the University of Edinburgh Library. They are the current holders of all the records for the Deaconess Hospital, spanning four collections: Deaconess Hospital LHB12; Edinburgh Southern Hospitals board of Management LHB9; South Lothian District; and the Royal Infirmary of Edinburgh LHB1.

These collections encompass management and administrative documentation, publications, nursing records, and patient records. Our focus was concentrated on the material when the Deaconess was a hospital in its own right and not part of a collective body (LHB12 collection).

Church of Scotland publications which documented the activity of the hospital for its readership were also a great

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source of information. Consideration was taken that these may portray an embellished picture of things; however, we attempted to confine ourselves to factual information.

For the patient section, patient records from 1894–1919 were used in conjunction with the casebook of a serving physician. For the 1946–1990 period, annual progress reports were viewed, allowing for an overview of hospital activity.

## Discussion

### 1888–1894: Conception to opening

#### Beginnings: Charteris, recovery of the Church of Scotland and women's work

The Very Reverend Professor Archibald Charteris (1835–1908) was born in Dumfries and Galloway and left home aged 14 to attend the University of Edinburgh. He would later become a professor there on the subject of biblical criticism.<sup>2</sup> His name is closely associated with recovery of the Established Church of Scotland (in contrast to the Free Church of Scotland) after 'The Disruption' of 1845 in which 150 members left the Church of Scotland General Assembly in open protest of the encroachments of civil courts. In the successive decades, the Established Church of Scotland saw a decrease in evangelism and a reduction in numbers.<sup>3</sup>

Charteris recognised the need for the Church of Scotland to offer practical evangelism and to reach out to the lower classes at a time when 'the middle-class mission to the unchurched working class lost both bourgeois lay assistance and proletarian acceptance'.<sup>4</sup> In 1869, as the result of a motion put forward by Charteris, a committee for Christian Life and Work was formed to enquire as to the progress of Christian work throughout the country and promote evangelical efforts. The word 'evangelism', was at this point associated with revivalism and had little sympathy from many in the Church of Scotland; repeated attempts were made to discredit the committee and bring its labours to an end.<sup>3</sup> Charteris however, was not to be deterred.

In 1879, he established the Church of Scotland magazine, *Life and Work* (a source of fruitful information on the Deaconess Hospital) to detail the activities of the committee and the Church at large.<sup>2</sup>

He was also a relentless advocate for women in the Church, founding the Women's Guild in 1887 and 'restoring' the Diaconate.<sup>2</sup> The current General Secretary of the Church of Scotland Guild, Iain Whyte, stated that 'His achievement in convincing the General Assembly of the need to recognise the place of women in the Church and to harness their skills and abilities has contributed to the shaping of the Church of Scotland over 127 years.'<sup>2</sup>

The revival of this ancient order of deaconesses, in which suitable women were solemnly set apart for special service,<sup>3</sup> was part of a vision for practical evangelism. Charteris

**Figure 2** St Ninian's Mission and the Deaconess Hospital, 1894



believed that in furnishing the Scottish Deaconess with an adequate education they must gain a knowledge of sick-nursing and be of practical benefit to their charges – whether at home or abroad. To this end he originally tried to work in connection with the great hospitals of the capital such as the Royal Infirmary of Edinburgh. However, he had found the regulations too stringent and thus became determined to found the Church of Scotland's own teaching ground.<sup>5</sup>

Charteris laid his ambitions before the Church of Scotland General Assembly for the Organisation of Women's Work, who agreed to provide a Deaconess house and hospital to train women for home and foreign mission fields.<sup>1</sup>

The St Ninian's mission (Figure 2) opened in 1889 providing practical training in an area of poverty and overcrowding,<sup>6</sup> and on 11 October 1894 Charteris' determination was rewarded with the opening of the Deaconess Hospital.<sup>1</sup>

### 1894–1948: dual purpose – to teach and treat

#### Purpose

As the first hospital in the UK to be built and maintained by a Reformed Church,<sup>5</sup> the Deaconess' functions were spiritually rooted. As a school for nurses, Charteris stated, 'it is the Christian visitor and not the mere nurse we educate here.'<sup>5</sup> The wellbeing of the soul was to be considered as well as that of the body.

In regard to treating patients, the aim was written above the door: 'Christo in Pauperibus' (To Christ in His Poor). This newly opened hospital stood in Pleasance – a poor, even squalid, neighbourhood<sup>5</sup> – and its purpose as stated by the board was to be a 'charitable and benevolent agency'. It was to be small, and offer a temporary home for the sick-poor and medical aid to those who would otherwise not be able to afford it.<sup>5</sup>

### A new concept?

This dual-purpose hospital was a unique project for the Reformed Church; however, the concept of charitable healthcare was not new to the city of Edinburgh and it would be remiss not to mention the other institutes carrying out similar work.

Voluntary hospitals had been around in Edinburgh from the 15th century when Trinity College Hospital and St Paul's Work had been founded. St Paul's Work later became a workhouse in the early 17th century, the first of its kind in Scotland.<sup>7</sup>

In 1845 the passing of a Poor Law Amendment Act saw the formation of Parochial Boards and the birth of the 19th century workhouse (known as the poorhouse in Scotland). Between 1845 and 1894 poor relief was administered by Parochial Boards composed partly of elected members and partly of elders nominated by the local Established Church. In 1894 the Boards were replaced by all elected parish councillors who continued to be dominated by representatives of the churches and of landowners.<sup>4</sup>

In 1894, when the Deaconess Hospital opened its doors, Edinburgh had several poorhouses operating throughout the city, akin to the medieval almshouse, which offered charitable housing; typically to elderly people or the poor of the locality.<sup>8</sup> While their primary purpose was not to offer medical aid this was a natural functioning of many.

Of note is the current Western General Hospital which had its beginnings as the Craighleith Poorhouse; formally opened on 21 December 1868. A sizeable infirmary had been included in the design of this poorhouse, with north and south wings for ordinary cases, male and female fever wards accommodating 40 patients, children's wards and a whopping cough ward.<sup>7</sup> In 1869 the construction of another new poorhouse had been completed in Craiglockhart (south-west of the city centre), with its official opening in 1870. This included an infirmary which is recorded as being designed on the 'pavilion system' (a design system in which separation and segregation of patients was encouraged to prevent infection<sup>9</sup>) with a detached designated 'pavilion' to be used as a fever hospital.<sup>8</sup>

As impressive as this may sound, these vast workhouses tended to have only a single resident Medical Officer whose job was to examine every inmate on admission, in order to certify who might be fit for work; to assess the diet and treatment of all persons actually sick; and to supervise the arrangements for children and infants. In many of the large wards there were no trained nursing attendants and extensive use was made of the pauper inmates to care for the sick.<sup>7</sup> The Deaconess Hospital was to be different.

### Humble beginnings

The hospital opened its doors for the sum of £3760 (£225,000 in the 21st century),<sup>10</sup> wholly funded by the Church of Scotland and its members. It had 24 beds and was opened at a cost of £155 per bed (equating to £9,000). In context, £500 per bed (equating to £30,000) had been

thought to be the lowest cost in hospital construction,<sup>5</sup> yet the Church of Scotland had successfully opened its doors at a fraction of the cost.

However, opening the doors was one thing, keeping them open was another thing altogether. This was made possible by the charity offered by Church of Scotland congregations and personal patronage. In 1907, endowment of a bed cost £1300 and of a cot £650, with annual upkeep of £40 and £20 per annum, respectively. In that year it was recorded that St Stephen's, St Giles, and St Cuthbert's churches all each annually supported a special bed. One lady is recorded as personally supporting 4 beds – each in memory of a deceased loved one.<sup>5</sup> This kind of generosity allowed the hospital to successfully function, debt-free, for the next 50 years.<sup>1</sup>

### Development

Over the next 50 years, this small hospital cared free of charge for its underprivileged locals. In contrast to other institutes offering like-care, it was a hospital rather than a poorhouse and had patients rather than inmates. As it became more in demand it naturally needed to expand and develop. In 1912 the accommodation was increased to 42 beds and during the First World War emergency beds were brought in, bringing the total to 68. By 1920 the annual report stated that the 'the ordinary accommodation for patients now consists of 50 beds including open-air beds and children's cots'.<sup>1</sup>

In 1934 the hospital underwent reconstruction and extension and appeals for funding went out in *Life and Work*.<sup>11</sup> The total cost of renovation came to £45,000, and with generous contributions from Church of Scotland members and the church itself, this whole sum was paid and the record of being debt-free maintained.<sup>1</sup> What had started as a 1 ward, 24-bed hospital, 40 years later it was a 5 ward, 54-bed hospital with a busy outpatient department (Figure 3).<sup>1</sup>

The 5 wards in 1934 were:<sup>1</sup>

- The Charteris Ward (in memory of their founder)
- The Houldsworth Ward (in memory of three sisters who had been generous subscribers to the funds of the hospital)
- The Children's Ward with 18 beds (later renamed Princess Elizabeth Ward by permission of the then HRH Duchess of York on 1 December 1936)
- The Deaconess Ward (designed to accommodate deaconesses and other church workers in need of hospital treatment)
- The Moray Ward

### As a nurse training school: equipping for a life of mission through medicine

While the hospital continued to expand, Charteris' original objective of creating an environment in which deaconesses would be given practical nurse training had not been forgotten. The hospital as a teaching centre had been a long-standing tradition in Edinburgh (Charles Newman in his paper 'The Hospital as Teaching Centre' attributed it as the first place in Britain to practise and consolidate clinical teaching in



**Figure 3** Charteris Ward

hospital).<sup>12</sup> The role of the nurse, however, had only radically changed in the few decades prior to the opening of the Deaconess.

Until 1860, nursing was, as noted by R. R. Trail in his paper 'The History of Hospital Finance and Administration',<sup>13</sup> at a very low standard everywhere. In the 18th century the role of a nurse was for 'the lowest type of woman' as only they 'would undertake such disagreeable work'.<sup>13</sup> Evolution in nursing had only really occurred with the opening of Elizabeth Fry's training house and accelerated with the opening of Florence Nightingale's School for Nursing at St Thomas's Hospital in 1860. Under their guidance a new nurse had emerged who was to be 'clean, quiet and punctual' and trained 'to undertake the personal care of patients'.<sup>14</sup>

This was the kind of nurse that Charteris envisioned his deaconesses to be. His hope was that after 12 months spent as a probationer in the hospital, his deaconesses would be able to make the best of sometimes limited resources and be esteemed as some of the best nurses in the world, in homes of the poor.<sup>5</sup> Training was to be given by means of daily work in the hospital and later on through district nursing in the local area, under supervision of trained staff. In its infancy, the nursing department was commandeered by Deaconess Superintendent Miss Pirrie (until 1913<sup>1</sup>), who had varied experience of hospital nursing both in the UK and in the Deaconess Hospitals of Germany (Figure 4).<sup>5</sup>

The usual course of training involved 1 year in the Deaconess House followed by 1 year in the actual hospital. Those who were desirous of making nursing their life's work or wished to be missionary nurses were required to complete a further 3 years. Many successfully completed this course and in the first 20 years of the hospital's existence 140 nurses completed training, of whom 97 went into the foreign mission field.<sup>5</sup> These Deaconess Hospital trained ladies ended up in all corners of the globe, e.g. in Ichang Hospital, China; Blantyre Hospital, Africa and Poona Hospital, India (to name a few) and took with them their experiences of this 'Pleasant' training.

**Figure 4** Nurses carrying out duties on the children's ward**Table 1** Staffing arrangements in 1907<sup>1</sup>

- 2 Consulting Physicians
- Physician in Ordinary
- Assistant Physician
  
- Consulting Surgeon
- Surgeon in Ordinary
- Assistant Surgeon
  
- Extra physician for diseases of women
  
- Extra physician for diseases of women
- Extra surgeon for diseases of the eye
- Extra surgeon for diseases of the throat and ear
- Anaesthetist
  
- House physician and surgeon
  
- Nursing staff: Deaconess Superintendent, Staff nurse in charge of District Nursing, Staff Nurses and Probationers

#### Doctors and patients: some of the men and women of the Deaconess Hospital

It is not possible to list every doctor and nurse who contributed to the daily running of the Deaconess Hospital and so only a few original staff members are mentioned (Table 1) and those whose names have become synonymous with medicine in Edinburgh and further afield.

Dr Claud Muirhead was the first Consulting Physician and remained in that position until his death in 1909.<sup>1</sup> Dr John Duncan was the first Consulting Surgeon.<sup>1</sup> John Comrie, editor of the first edition of Black's Medical Dictionary<sup>15</sup> and author of History of Scottish Medicine to 1860,<sup>16</sup> was Physician in Ordinary from 1913 until 1922 and then succeeded to Consulting Physician.<sup>1</sup> Mr Norman Dott (whose life and work is currently under examination by the LHSA<sup>17</sup>) was at the forefront of pioneering and promoting neurosurgery in Scotland in the 1920s and 1930s and had his first experiences as a newly qualified doctor in the corridors of the Deaconess. He began as House physician and Surgeon in 1919, moving up the ranks to Assistant Surgeon in 1923 and Surgeon in Ordinary in 1928. He relinquished his post

**Table 2** Dr Francis Boyd's casebook patients 1–25

- Age range: 3–67
- Deaths: 1
- Conditions mentioned:
  - impetigo contagiosum
  - anaemia
  - acute rheumatica
  - diarrhoea
  - abdominal TB
  - dyspepsia
  - appendicitis
  - gastric ulcer
  - gastritis
  - appendicitis
  - stomach carcinoma
  - gastrointestinal catarrh (in the 19th century catarrh – as in the inflammation of mucous membranes resulting in increased secretions – was applied to internal organs as well<sup>26</sup>)
  - dyspepsia
  - phthisis
- Most common presentation was phthisis – recorded 3 times. This categorisation that later became known as pulmonary TB and was common in context of Victorian Britain<sup>27</sup>

at the Deaconess in 1930 due to pressures of other work.<sup>1</sup> Dott went on to help set up Scotland's first dedicated neurosurgical ward at the Royal Infirmary of Edinburgh in 1938 and later helped establish the department of Surgical Neurology at the Western General Hospital in 1960.<sup>17</sup>

While a hospital is not a hospital without its doctors, it also serves no purpose without its patients. So, who was being treated, and why? The Admissions book for 1894<sup>18</sup> dating from 15 October (the day the first patient was admitted) to the same date the following year records 245 admissions. Addresses of patients show that they were mainly central to Edinburgh and the Pleasance area but also from further afield such as Portobello, Balerno, North Berwick, Bathgate, Whitburn and even Cupar, St Andrews and Dundee.

The Deaconess was a general hospital with admissions ranging over nearly every medical specialty. Patient records from 1894–1919<sup>19</sup> show that patients were surgical, medical or gynaecological. The casebook of Dr Francis Boyd (who started as Assistant Physician and worked his way to Consultant) has survived and documents 1894 patients who were treated for various diseases and disorders from October 1897 to July 1912.<sup>20</sup> Some information on the first 25 patients is recorded in Table 2.

The statistics for 1946 give a snapshot of patient turnover<sup>21</sup> (Table 3). As can be seen, patients were still predominantly from Edinburgh and Midlothian, but with a number travelling from further afield (Figure 5).

**Table 3** Patient statistics for 1946

Remaining in from 1945: 56  
Admitted in 1946: 1571

Died during 1946: 67  
Discharged during 1946: 1495

Remaining at close of year: 65

Mortality of total number treated: 4.11%  
Av. Stay of patient in hospital: 16.28 days  
Av. Number of beds occupied per day: 72.56 (of 92)

Of 1571: Edinburgh and Midlothian (1299), East Lothian, Berwickshire, Peebleshire, Selkirkshire and Roxburghshire (93), West Lothian, Stirlingshire, Kinross-shire, Clackmannanshire and Fife (142), from further afield in Scotland (31), Lancashire (4) and Northumberland (2)

## 1946–1990: move from Church to State

In 1946 the National Health Service (Scotland) Bill was presented to Parliament. The Committee on Social Service and the Board of Management for the Deaconess was forced to meet and give full consideration to whether the hospital should seek exemption from the NHS.<sup>21</sup>

Previously in 1937, a whiff of medical nationalisation had reached the nostrils of the Deaconess Hospital Administration, evidenced by Sir John Fraser's (Professor of Clinical Surgery at the University of Edinburgh and on staff at the Deaconess) speech at the annual meeting of the Deaconess Hospital. He had stated that 'there was a growing tendency to accept the principle that the State should make itself responsible for the care and maintenance of the sick'. However, he believed that 'the very thought brought into prominence the joy of giving voluntarily'. He believed that if the opportunity to willingly give was taken then the heritage of the hospital may be lost.<sup>22</sup>

However, when the question became a 'what now?' rather than a 'what if?' the main concern was 'what would the future of the hospital be if it sought and obtained exemption?' Key considerations were:<sup>21</sup>

- If the Deaconess stood alone as an isolated hospital it may impair its quality of medical and teaching staff. For years the hospital had shared its staff with the larger hospitals of Edinburgh such as the Royal Infirmary; however, with these hospitals coming under the NHS, government regulations may no longer make it possible for staff to conjointly work at a hospital not under this National Scheme
- Professor Charteris had conceived the Deaconess as an institute for training of women who wished to serve the Church at home and abroad, with the opportunity to gain a full nursing degree. If the hospital chose to remain outside the NHS it may be deprived of recognition as a School

**Figure 5** Deaconess Hospital, 1944

of Training for Nurses and thus lose one of its original fundamental functions

- The majority of patients treated in the Deaconess came from the working classes. If they were now able to obtain a free service at other hospital establishments they may choose these over the Deaconess

The conclusion was that in the best interests of the Church and the community, application should not be made to the Secretary for State for Scotland for exemption from the NHS. However, every effort should still be made to conserve the identity of the Deaconess and its purpose. This was to be achieved by having an adequate representation of the Church sit on the Board of Management under the NHS.<sup>21</sup>

### Amalgamation

When the Deaconess was inaugurated into the NHS it became part of the Edinburgh Southern Hospital Group. Other hospitals in the group were: Elsie Inglis, Bruntsfield, Royal Edinburgh Hospital for Incurables: Longmore, Liberton, and Gilmerton Convalescent Home for Adults and Children.<sup>23</sup>

Each individual hospital had its own Finance and Nursing committee and could choose to have a house committee. However, they were no longer autonomous bodies but reported to and were governed by a Regional Hospital Board (who first started meeting on 17 June 1948).<sup>23</sup> Overnight the Deaconess had lost the individuality it had so long enjoyed – it was now part of a hospital group under regional and national governance.

### The last days

We fast forward to the 1970s when, in 1974, the Deaconess Hospital became part of the South Lothian District. In 1984, it altered again and came under the classification: Royal Infirmary of Edinburgh and Associated Hospitals.<sup>24</sup>

Yet, while the Deaconess served as an associate of the Royal it also functioned in its own right. In the context of 1989, the Deaconess was now Edinburgh's Urology Department and the Scottish Lithotripter Centre.<sup>24</sup> From 1989–1990 the Urology based ward (Ward D1) and Day Unit were both reporting a steady workload.<sup>24</sup> The number of major surgical procedures – cystectomy, cystoplasty, open renal surgery and endoscopic renal surgery – was on the increase. However,

this had a knock-on effect: maximum utilisation of beds was required and the increased dependency of patients imposed a greater workload on nursing staff. A Waiting List Initiative had to be carried out during 1989 and 28 extra patients requiring transurethral resection had to be treated in the private sector. The number of emergency referrals and consultations from the Royal Infirmary was also on the rise and the geographical separation of the department from the Royal Infirmary posed some issues. There were occasional delays in transfer of patients but overall, due to close cooperation and understanding of all units, an acceptable level of patient care was maintained.<sup>24</sup>

The Lithotripter Centre carried out 1871 treatments in 1989/1990. The majority of these were on an outpatient basis, but an 8-bed 5-day ward was available for those requiring further care. The Centre also held an annual meeting in May co-sponsored by the Scottish Urology Society.<sup>24</sup>

Despite its continued usefulness, the days of the Deaconess were drawing to a close. A £22 million overspend by Lothian Health Board in 1990/1991 led to a rationalisation of acute services across the Board and affected the Royal Infirmary and Associated hospitals considerably. In 1991, it was decided that the Urology and Lithotripsy service should transfer to the Western General Hospital in 1991.<sup>25</sup> The hospital closed its doors in 1990 and for a time became the headquarters of NHS Lothian. It is now owned by the University of Edinburgh and has been sensitively converted into student living accommodation.<sup>2</sup>

### Concluding remarks

Throughout its 96-year lifetime the hospital changed and evolved with time and circumstance. It was a school: for the training of nurses and deaconesses who took their practical skills all over the world (an original concept for the Church of Scotland). It was a sanctuary for the sick-poor. It was a subsidiary for the bigger hospitals of Edinburgh after amalgamation into the NHS and it was a specialised centre as the Urology Department in Edinburgh and the Scottish Lithotripter centre.

Despite its usefulness in the city of Edinburgh and particularly that of the Pleasance area, it is a lesser known establishment. There are no books detailing the hospital's near century-long run and very little secondary material to be found; the bulk of material available being primary sources.

In this paper, we aimed to do justice to the material we were graciously given access to and hope we have been able to bring the Deaconess Hospital back to life. 📌

### Acknowledgements

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## References

- 1 The Jubilee of the Church of Scotland – Deaconess Hospital; 1944. C.J. Cousland & Sons Ltd. Edinburgh [Courtesy of Lothian Health Service Archive LHB12/13/3/9].
- 2 Greyfriars Charteris Centre. 2017. <https://www.charteriscentre.com/history>
- 3 Burleigh J. *A Church History of Scotland*. Oxford; OUP 1960.
- 4 Brown C. *Religion and Society in Scotland since 1707*. Edinburgh: Edinburgh University Press; 1997.
- 5 Church of Scotland Committee on Christian Life and Work 1907. In: *Organisation of Women's Work; 1907* [Courtesy of Lothian Health Service Archive LHB12/13/1/2].
- 6 Deaconess Hospital history. 2016. [http://www.lhsa.lib.ed.ac.uk/exhibits/hosp\\_hist/deaconess.htm](http://www.lhsa.lib.ed.ac.uk/exhibits/hosp_hist/deaconess.htm)
- 7 Eastwood M, Jenkinson A. *A History of the Western General Hospital*. Edinburgh: John Donald Publishers; 1995.
- 8 The Workhouse in Edinburgh, Midlothian. 2017. <http://www.workhouses.org.uk/Edinburgh>
- 9 Duncum B. The Development of Hospital Design and Planning. In: Poynter FNL. *The Evolution of Hospitals in Britain*. London: Pitman Medical Pub. Co; 1964. p. 207–29.
- 10 The National Archives. Currency converter. 2017. <https://www.nationalarchives.gov.uk/currency/results.asp#mid>
- 11 Millar JAS. Appeal for £25,000 for reconstruction and extension. In: *Life and Work*; June 1934 [Courtesy of Lothian Health Service Archive LHB12/13/3/2].
- 12 Newman C. The Hospital as Teaching Centre. In: Poynter FNL. *The Evolution of Hospitals in Britain*. London: Pitman Medical Pub. Co; 1964. p. 187–205.
- 13 Trail RR. The History of Hospital Finance and Administration. In: Poynter FNL. *The Evolution of Hospitals in Britain*. London: Pitman Medical Pub. Co; 1964. p. 231–43.
- 14 Simpson HM. The Influence of Professional Nursing on the Development of the Modern Hospital. In: Poynter FNL. *The Evolution of Hospitals in Britain*. London: Pitman Medical Pub. Co; 1964. p. 245–53.
- 15 Comrie JD. *Black's Medical Dictionary*. London: Black; 1942.
- 16 Comrie JD. *History of Scottish Medicine to 1860*. London: Baillière, Tindall & Cox; 1927.
- 17 The Life of Norman Dott examined. 2016. <http://lhsa.blogspot.co.uk/2012/11/the-life-of-norman-dott-examined.html>
- 18 Admissions Book 1894 [Courtesy of Lothian Health Service Archive LHB12/29/1].
- 19 Patient records 1894–1919 [Courtesy of Lothian Health Service Archive LHB12/28/1].
- 20 Boyd F. Casebook of Dr. Boyd – Deaconess Hospital; 1897–1912 [Courtesy of Lothian Health Service Archive LHB12/34/8].
- 21 Annual Report 1946 [Courtesy of Lothian Health Service Archive LHB12/12/52].
- 22 Buzzard E, Jewesbury R. The Oxford University Appeal. *BMJ* 1937; 1: 1043.
- 23 Board of Management of the Edinburgh Southern Hospital Group Minutes; 17th June 1948–1949. 1949 [Courtesy of Lothian Health Service Archive LHB9/1/1].
- 24 Royal Infirmary of Edinburgh and Associated Hospitals Annual Report 1989–1990. Spectrum Printing Company Limited, Livingston [Courtesy of Lothian Health Service Archive LHB42/7/2].
- 25 Royal Infirmary of Edinburgh and Associated Hospitals Annual Report 1990–1991. Publishers: Royal Infirmary of Edinburgh. Printed: Metro Press, Edinburgh [Courtesy of Lothian Health Service Archive LHB42/7/3].
- 26 Catarrh gastrointestinal – definition. 2016. <http://www.hharp.org/medical-terms/Catarrh%20gastrointestinal>
- 27 Dubos R, Dubos J. *The White Plague*. Boston: Little, Brown; 1952.