

# *Hospital Records and Record-Keeping, c. 1850 – c. 1950*

## *Part II: The Development of Record-Keeping in Hospitals*

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Before the latter part of the nineteenth century, documents created in the course of business were predominantly manuscripts. Records were kept by officers who combined record-keeping duties with other responsibilities. Hand labour and the integration of record-keeping with administrative functions and medical practice were the most important common features of record-keeping in all types of hospital. The administrative and medical records in hospitals were always kept separately.<sup>1</sup> This basic separation did not change in the period under examination. However, between c. 1900 and 1945 the preparation of both administrative and medical records and the organization of the offices responsible for keeping these records underwent significant changes.

### *Record-Keeping in Hospitals before c. 1900*

Generally, the main office of the hospital clerk, secretary, or superintendent kept the official books of record and the documentation associated with the administration of the institution.<sup>2</sup> There was a variety of organizational arrangements in the administrative offices of the selected voluntary hospitals. At the Royal Marsden Hospital, the Secretary was responsible for the day-to-day management and, until 1870, the paperwork was done by two clerks under the Secretary's direction. At the London Hospital, the House Governor, Secretary, and Steward, each with clerical assistants, handled daily administration, committee work and the keeping of financial and registration records. In Ontario's selected voluntary hospitals, a superintendent with part-time clerical help carried on the administrative duties of the main office.<sup>3</sup> In the public authority hospitals in both areas, the medical superintendent was ultimately responsible for both the administrative and medical records, but the two functions were quite distinct and the records never mixed.<sup>4</sup> At the Springfield Hospital, the Steward kept the financial records and stores accounts and at the Kingston Psychiatric Hospital, the Bursar assumed similar responsibilities under the supervision of the superintendent.

The record duties in hospital offices varied considerably among institutions according to their administrative arrangements; however, in the selected hospitals, records were prepared and kept in the same way and evidence from the wider survey indicates that their experience was typical. Minutes, ledgers, correspondence, and other books were

prepared by hand.<sup>5</sup> Important documentation such as agreements, bequests, letters patent, reports, and selected correspondence were transcribed or, less frequently, summarized in the minute books. With minor exceptions, all documents and multiple copies of documents needed for business were also produced by hand.<sup>6</sup> Transitory items which supported the books, such as bills, invoices, and workmen's tickets, and cash or day journals, were rarely bound but were frequently kept for an extended period of time.<sup>7</sup> It was customary for transitory items to be destroyed in the normal course of office business.<sup>8</sup> Patient registration provided the bridge between the administrative and the medical offices. Both the medical staff and the hospital clerks had legitimate interests in and uses for registration, so that by c. 1900 at the selected hospitals the administrative office undertook this function as a corporate responsibility.<sup>9</sup>

Patient records were created and kept by the medical staff and the house medical officers.<sup>10</sup> There was a variety of case-taking and record-keeping practices which constituted strong house styles in the selected hospitals.<sup>11</sup> At the London Hospital, notes were taken by the clinical clerks under the supervision of the honorary staff and, after 1874, under the direction of the Surgical and Medical Registrars.<sup>12</sup> The House Officer was responsible for taking notes and keeping the clinical records at the Royal Marsden Hospital. The Surgical and Medical Registrars, appointed in 1881, exercised general supervision.<sup>13</sup> The superintendents and later the assistant medical officers kept case records at public authority hospitals in both London and Ontario.<sup>14</sup> The official record, a medical journal usually called a casebook, was a large folio volume kept in a fixed



Figure 1: *The Bursar's Office, Asylum for the Insane, Brockville, Ont., c. 1906.* Courtesy: Archives of Ontario, R.G.10 20-H.



Figure 2: *The Assistant Physician's Office, Asylum for the Insane, Brockville, Ont., c. 1906.* Courtesy: Archives of Ontario, R.G.10 20-H.

place.<sup>15</sup> Although it was clear that there were certain records and charts kept at the bedside, or in the case of psychiatric hospitals, attendants' ward notes or notebooks, these records have not survived except as isolated examples, often included in the casebooks.<sup>16</sup> The preparation of the casebooks demonstrates the union between the creating and the keeping of case records. They were prepared retrospectively by one or two people, the medical officer in psychiatric hospitals and the registrar, house officer, or clinical clerks in voluntary hospitals. Case records were an aid to individual memories; consequently, the techniques of recording cases were idiosyncratic and varied according to the style of the house. The standards for recording cases were only generally defined. Institutional rules provided a basic framework for entries but they prescribed the form and not the details of content which must have been strongly influenced by the traditions of case recording within the profession and by the habits of individual keepers.<sup>17</sup> Casebook entries were made sometime after the event from direct observation and from supporting documents such as admission letters, warrants and orders, and other records which were produced on the wards.<sup>18</sup> Once information had been summarized or transcribed, these documents were destroyed or filed separately from the journal or casebook.<sup>19</sup> Indexes to the casebooks by name of patient were prepared at the time each case was begun and these were bound, usually with the casebook. Medical or surgical classification of cases or the preparation of statistics beyond a simple analysis of the year's movement of population was not done as an institutional function and little attention was paid to the coordination of ward and department documentation with the office books.<sup>20</sup>

Both the administrative and the medical records were retained where they were prepared.<sup>21</sup> Office clerks and the house medical officers assumed record responsibilities in association with other administrative or medical duties. The hospital Secretary, the Steward, the chief clerk, and the medical officers who prepared records were normally the same people who had a need to use them in the course of hospital business, and consequently they had a strong proprietary interest in their records.<sup>22</sup> The burden of paperwork, although it was laborious because it was done by hand, was not problematical, and traditional habits and customs of record-keeping which were associated with business clerkship and personal medical practice were sufficient for the keeping of institutional records.

### ***The Increased Production of Records***

After 1880, hospital administration and medical practices increased the production of records. This created an environment for innovation and change in the practices and functions of the administrative and medical record offices. Hospitals became larger and more complex as a greater number of in- and out-patients were treated and the establishment grew. More records produced by daily administration, by official management groups and hospital departments, and by patient registration, intensified the demand for record services in the main office.<sup>23</sup> There was also an increase in the production of documents in hospital medical practice. A larger professional staff, new medical procedures and techniques, and the care of more patients stimulated the creation of documents and new forms in the wards and in specialized departments. These records had to be integrated into patient care, and the departments needed to keep track of their activities to ensure the timely return of special information to the physicians and to audit and plan the department's activities and growth. The acceleration in the demand for and production of documents and records fundamentally affected the record-keeping routines of the administrative and medical record offices. Three influences interlocked to change the offices and to expand their functions: the introduction of machines to produce records; changes in filing practices; and the addition of communication, coordination and information services to the duties of the record offices.

### ***Changes in the Administrative Record Office***

Between 1890 and 1950, more people were employed in the main office to perform record related duties. Technology gradually altered customary record-keeping practices and the functions of the office were expanded by the addition of new services. At first, more clerks were added to keep pace with the demands of business by producing more records by hand. The growth of staff was particularly noticeable in large hospitals, but it was also a feature of smaller institutions.<sup>24</sup> However, by the 1880s, hospital clerks found it increasingly difficult not only to keep up production in traditional ways but also to coordinate record-keeping with the other administrative duties that each clerk had in the office. Production was increased by introducing technology into the preparation of records.<sup>25</sup>

Several different types of machines were used to reduce the time and labour required to prepare records and copies of documents for hospital business. Machines were first used as a supplement to traditional techniques but, by the 1940s, the process of mechanization was well underway and machines had replaced hand production for

official records. The first duplicators introduced were letter presses which were widely employed after 1870 to prepare blotter copies of manuscript correspondence. In the early 1880s, tissue copies of out correspondence and memoranda quickly replaced manuscript letters in the records of the main hospital offices in London and Ontario and, more importantly, began to infiltrate the minute books by the end of the decade.<sup>26</sup> Commercial printing of multiple copies of documents for public business meetings and for the general information of the staff was supplemented by reproduction carried out within the hospital. The first mechanical duplication machines which quickly produced a large number of copies from drawn or printed originals were spirit copiers. They were in use as early as 1880 in Ontario and certainly by 1903 in London. The evidence indicates that spirit copiers were used for large volume production in preference to the more customary but formal method of commercial printing.<sup>27</sup> By 1930, more sophisticated machines which employed typed stencils were used to duplicate reports, rules, notices, and circular letters.<sup>28</sup> Dictaphones were introduced for voice recording of letters and memoranda for later transcription.<sup>29</sup> Mechanized accounting machines were selectively employed to reduce the labour needed to coordinate complex series of financial records by speeding up arithmetical calculations and preparing records and tallies for audit.<sup>30</sup> Undoubtedly, typewriters had the most profound effect on records, and were in general use in all hospitals by 1910.<sup>31</sup>

The introduction of the typewriter had a fundamental impact on the office. Firstly, typewriters enabled the office staff to keep pace with increased business. Most particularly, these writing machines facilitated the production of copies for filing and for distribution within the hospital to keep people informed of activities and decisions.<sup>32</sup> A single clerk with a typewriter and either a letter press or later, carbon paper, could prepare many more copies of a document with the same effort and in a fraction of the time required to produce those items by hand. Typescript copies increased the total volume of records created and established a technological definition of original and copy.<sup>33</sup> Secondly, the typewriter also permitted records to be prepared by subordinate staff with specialized typing and stenographic skills.<sup>34</sup> Thirdly, the typewriter not only increased the production of records but also led to an alteration in traditional filing habits. Binding was discontinued for records in favour of loose files and filing equipment was purchased for the office.<sup>35</sup> Individual items could be retrieved from the files and new collections of records could be created by combining documents located in various places. Blotter and tissue copy letterbooks, arranged chronologically, required labour-intensive indexing to make them useful for reference.<sup>36</sup> Bound and indexed books of correspondence, reports, and memoranda were gradually replaced by loose files arranged by subject.<sup>37</sup> In this way the file itself became the index. Indexes continued to be prepared only for official minutes.<sup>38</sup>

While loose files arranged alphabetically in a subject classification system gave flexibility to the creation of files, the growth of records placed pressures on the physical space allotted for their keeping. By 1890, the administrative office and associated strong vault were inadequate for both staff and records. In some hospitals, the office functions and their records were dispersed to various locations, while in others the office remained as a physical unit but the records were moved into supplementary storage areas.<sup>39</sup> The dispersal of records had some profound effects. Without careful indexes, memory was not adequate for reference, particularly as the office staff grew and personnel changed. The absence of control must account, in part, for the loss of those official records which are referred to in the minute books as associated support documents. At one time, these

documents would have been copied into the books. The dispersal of records made unplanned loss and destruction more likely by breaking the unity conferred by contiguous physical space. The separation of records into various locations led to a physical definition of value rather than an intellectual one.

The traditional function of the record office as the keeper of official records was expanded to include the provision of communication and information services. Large hospitals required a network of communications to ensure that information was circulated to numerous management groups, departments, and staff. The regular distribution of copies was the recorded aspect of communications. Typists, clerks, and stenographers were hired to provide record services to the hospital and to increase the production of copies for use in daily administration.<sup>40</sup> New communication services were also added to the traditional functions of the administrative office. Telephones were introduced to provide direct voice communication between areas in the hospital and with the outside, and the switchboard was manned by office personnel. The medical staff were summoned in emergencies, meetings were arranged by telephone, and all hospitals immediately established links with local fire brigades.<sup>41</sup> Runners were employed to ensure the timely distribution of the post and messages, and clerks were hired to maintain the office files in good order and to see that access was promptly given and properly controlled.<sup>42</sup>

But at the same time that the office developed as a communications centre for the hospital, it also became a funnel, receiving and processing information about the



Figure 3: *Switchboard, Asylum for the Insane, Brockville, Ont., c. 1906.* Courtesy: Archives of Ontario, R.G.10 20-H.

hospital for planning and management purposes. The administration of more sophisticated institutions required detailed knowledge about hospital activities and about business practices generally. By the end of the First World War, voluntary hospitals found it increasingly difficult to operate on a cash basis. Greater competition for charitable donations and rising costs which affected all hospitals made it necessary to introduce the accounting skills of business to support institutional management and long-range planning. The growing standardization of financial statements in London and Ontario reflected the general impact of cost accounting techniques. Cost accounting not only affected the form of structure of records, but also increased the demand for financial and statistical information about hospital activities, patient services, equipment and staff. The collection, collation, and analysis of information was undertaken by the chief administrative officer and his staff. Hospital clerks were expected to have a wide range of management skills, and special training for hospital work was generally expected of these officers. Writing skills and the careful keeping of books for an annual audit which proved fiscal responsibility was just one desideratum of clerkship. The efficient daily management of the hospital required a thorough knowledge of accounting and sophisticated analytical skills to integrate the information in records with budgeting and long-term planning.<sup>43</sup> By 1939, clerks with book-keeping and writing skills had been replaced by accountants and clerks with training in particular aspects of administration.<sup>44</sup>

#### *Changes in the Medical Record Office*

The typewriter and clerical assistants were introduced into the medical record office somewhat later than into the main office. They reinforced innovations in record-keeping which had been initiated by the increased production of documents in a more complex medical environment.<sup>45</sup> Developments in the medical record office were focused on the clinical record and indexing. Between c. 1880 and 1950, changes in the preparation and keeping of clinical records brought in their wake a reorganization of the medical record office. Casebooks were replaced by case files, more people participated in the creation of documents destined for the file, and there were changes in filing practices and in indexing.

The growth of the medical staff, the increase in both in- and out-patient work, and the development of special departments and services which contributed to the care of the patient fundamentally affected the traditional union of the creating and keeping of medical records. The record office initially coped with increased business in three ways. Firstly, additional house staff were assigned the responsibility of entering cases under the supervision of the medical superintendent or registrar.<sup>46</sup> However, there were increasing demands on the time of the medical officers. The staff were torn between medical and record-keeping duties and the accuracy and completeness of the casebooks suffered accordingly.<sup>47</sup> Secondly, clerical assistants, periodically assigned to the medical record office, were unable to keep pace with transcription and there were delays in preparing the books.<sup>48</sup> Moreover, these clerks were often on temporary loan from the main office and lacked sufficient skill in medical terminology to ensure accurate copying from records or dictation. Thirdly, to help overcome the difficulties in transcription, the documents produced as a result of new functions were added to the books rather than being summarized or transcribed.<sup>49</sup> These were tipped or pasted in at the discretion of the keeper. But the large, rigid casebook fixed in place on a stand could not accommodate the increase in the production of medically relevant documentation.

The change from casebook to case file liberated the creation of the clinical record and helped to direct the development of the office. All documents produced in the process of caring for the patient at the bedside and in special units or departments could now be filed as they were created.<sup>50</sup> In Ontario's public authority and voluntary hospitals, case files were introduced at once with no period of transition. They were in place in psychiatric hospitals in 1907, and by 1930 in general hospitals for medicine and surgery.<sup>51</sup> In London's hospitals, loose files, first used in out-patient departments, were introduced for in-patient records at various times between 1880 and 1920.<sup>52</sup> However, in-patient records continued to be bound by year so that the protection and integrity of the fixed format volumes were continued in the newer system. Binding was eventually discontinued; at the Marsden in 1928, at the London in 1911, and at the Springfield in c. 1941. Thereafter, the assortment of loose documents which comprised each file was kept in individual folders.<sup>53</sup>

The switch from casebook to case file not only permitted the natural accumulation of documents and culminated in the separation of the functions of creating and of keeping records, but also encouraged the alteration of traditional office practices. Although binding was continued in London's hospitals, it was consistently executed some years after the file had been created. There were reasons for this delay. The continuation of the concept of a book was associated with other tasks which were time consuming and laborious. Checking the order of documents required time which was not allotted as part of hospital routine. Delays were also inevitable as larger numbers of patients were admitted and were subsequently seen on follow-up in the out-patient department. The coordination of in- and out-patient records and the more frequent need to refer to records for the purposes of care, research, and teaching inevitably delayed binding because it was physically impossible to extract individual files from a book.<sup>54</sup> Binding was also hampered by the greater variety in the size of individual documents.

The problem of binding documents of diverse size was responsible, in part, for a drive to develop new standards for records to replace those which had been automatically conferred by the format of the journals and casebooks. The proliferation of numerous small forms and unique documents did not pose immediate problems for the record office when these were selectively added to the large casebooks which could safely hold discrete items which were tipped in. But once loose files were adopted, the lack of a standardized size for forms caused problems. Documents of various sizes were difficult to keep in place within the file, easy to lose when the file was in transit, and impossible to bind without a great deal of labour to ensure their proper place and positioning.<sup>55</sup> Printed forms of the same size were introduced and fully employed in individual medical record offices to achieve uniformity in recording and filing which was now undertaken by many people. The concept of the standardized form was well developed for bound registers and ledgers and was soon adapted to the new file. Special units and departments developed forms of standard size so that the physical dimensions of each document and consequently of the file itself were uniform.<sup>56</sup> The case records inevitably gained in bulk under the new democracy of the file room where each bit of information, however small, was recorded on a piece of paper which was the same size as that for observations and histories *in extenso*. By 1930, the size of some individual files was so large that several folders were needed, and in some institutions nurses' notes were assigned to an overflow file.<sup>57</sup> Photo reproduction by photostat and microfilm was introduced in the 1940s to reduce the amount of space used by inactive clinical files.



Unlike the machines for direct duplication, photo reproduction had the capability of enlarging and, more importantly, of reducing records; consequently, these machines were expensive, and by 1952 were only employed in hospitals which could justify the capital and operating costs.<sup>58</sup>

The growth of the files and reference to them for both in- and out-patient work prompted the development of new methods of filing and forms of indexing to permit efficient retrieval of the files and, more importantly, to classify the information which was dispersed in many records for the purposes of research and teaching.<sup>59</sup> Between 1920 and 1952, those hospitals which maintained their clinical records alphabetically discontinued the practice and filed their cases in numeric order by register number.<sup>60</sup> A numeric arrangement made it easier to spot misfiled items and to control the discharge of records to physicians or to the wards. File room space was also more efficiently used because additions were always made at the end of the sequence. It was no longer necessary to undertake periodic rearrangements to open up space for new records within a fixed alphabetical order. The increased efficiency in the use of space and staff was particularly important in large hospitals where the accumulation of records led to the separation of blocks of the files which were stored in various locations. Two systems of numbering were widely used. The serial numeric system maintained an exact correlation between the register number and the file, so that a patient admitted on separate occasions would also have separate numbers and corresponding files. Many hospitals adopted serial numbering, and some introduced variations such as starting the sequence again each January. The unit numbering system, first introduced in New York in 1916, became the generally favoured method of filing case records.<sup>61</sup> Each patient was assigned a register number on his first admission and this number and its file was reactivated for each visit. The unit system ensured that all relevant documentation was filed in one place. Although numeric systems were favoured for central and departmental records, the custom of filing clinical records was still strongly influenced by individual house styles.<sup>62</sup> A numeric arrangement for clinical records was introduced into the selected hospitals at various times. After 1880, the Springfield and Kingston Psychiatric hospitals employed a numeric system based on the register number of the patient. Both these institutions eventually adapted the unit system, the Springfield in c. 1948 and Kingston Psychiatric in c. 1941. Alphabetical arrangements by physician and surgeon were used at the London Hospital until 1911 and at the Royal Marsden Hospital until the early 1930s. At the Marsden, a variation in the serial numeric system was introduced in 1933, and in 1938 the unit system was adopted for all the clinical records of the hospital. The London Hospital used separate sequences of numbers each year for the surgical and medical in-patients and separate sequences for the out-patient departments. In 1948, the hospital began the unit system for all records.<sup>63</sup>

The indexes controlled file room operations for the daily discharge and receipt of records from the wards and for supplementary purposes such as teaching and research. They provided the link for separate case records for individuals who, admitted several times as in- and out-patients, would have several hospital numbers each controlling a file, or, in the case of the unit system, would have only one number registered on the date of first admission.<sup>64</sup> Indexing was not an innovation in the medical record office. Indexes by name of patient had long been prepared for the casebooks and this habit continued when these books were supplanted by files. Separate sets of alphabetical index books were kept and regularly updated as a patient left or died. New books were

periodically started when the old ones were filled up and when no further space was available in particular alphabetical ranges in the books. These indexes were necessary to provide a link between the patient's register number and his or her casebook entry or case file. The change to loose files necessitated a change in indexing. Index books were replaced by individual cards filed alphabetically in drawers.<sup>65</sup> The development of card indexes was, in part, a physical necessity in offices which had more staff and more active files. Card indexes permitted a search for a patient by name, particularly important for repeat visits and in out-patient work when files were regularly reactivated. Card indexes also allowed more than one staff member to have access to the index at one time. It was easier for staff to maintain and update card indexes; entries could be removed, added to, or deleted without elaborate cross referencing to numerous sets of books.

Classified indexes were an innovation in the medical record office. They were introduced to support statistical reporting and to assist clinically-based research and teaching for the whole institution. Medical and surgical indexes began at the London Hospital in 1895 and at the Royal Marsden Hospital after 1886.<sup>66</sup> The compilation of statistics and the classification of records was a duty undertaken by the registrars in London's voluntary hospitals and the medical superintendents in public authority institutions. In Ontario, the new medical records departments which developed after 1920 as a response to the accreditation programme of the American College of Surgeons undertook the classification of clinical files. Standard nomenclatures were developed in England and in North America after 1880 and, following the First World War, several classification systems were introduced. But without standardization there was little coordination among hospitals in the collection and presentation of statistics. It was not until after the Second World War that general acceptance of the international system of classification permitted standardization of statistics among hospitals.<sup>67</sup>

The function of keeping the official record continued to be exercised by the medical records office which was enlarged and re-organized over a period of time to provide technical record services to the medical departments and to coordinate the compilation, filing, and retrieval of records. Records were created by the professional staff and specialized services. Stenographers, dictaphone specialists, shorthand clerks, and typists provided services to the medical staff and departments and the records office staff filed, indexed, and serviced the clinical records.<sup>68</sup> In both London and Ontario, the medical records staff were specially trained for records work. In Ontario, formal courses were established for medical records librarians in the 1930s in association with the North American Association of Medical Records Librarians which had been founded in 1928. By 1945, trained medical records librarians supervised the medical records clerks and were responsible for ensuring that the clinical files conformed to the standards for hospital accreditation.<sup>69</sup> In London, formal training courses were developed after the formation of the Association of Medical Records Officers in 1948.<sup>70</sup> Medical records officers in London were responsible for the maintenance of the clinical records and for the administration of the out-patient appointment system.<sup>71</sup> By 1952, distinct medical records departments had developed in many hospitals and it was generally recognized that the expertise of personnel trained for medical records work was desirable.<sup>72</sup>

### ***Conclusion***

Between 1890 and 1950, record-keeping became only one activity among many in enlarged and hierarchical offices whose staff provided diversified administrative,



Figure 4: *The Medical Records Department at the London Hospital, London, England, February 1950.* Courtesy: London Hospital, LH/P/2/41 1950.

communication, and coordination services to the hospital. The increased complexity of institutional management and the introduction of technology to writing and communications accelerated the differentiation of office jobs. The routine and repetitive clerical operations associated with the preparation of records were divorced from

management functions and medical practice. The jobs in the main office were separated into management, clerical, and communication tasks, and the enlarged establishment was organized in a hierarchical structure under the chief administrative officer of the hospital. There was a similar diversification of jobs and duties in the medical records office. The transition from a casebook to a case file environment accompanied an expansion of the office, which assumed a new role as the coordinator of the record. Staff were hired to perform the clerical functions of record-keeping under the authority of a registrar, the superintendent, or a medical records committee.<sup>73</sup> The introduction of the typewriter and printed forms, in association with the increase in clerical staff with special training in medical records work, smoothed the separation of the creating and the keeping of medical records. In London, the lay medical records officer assumed responsibility for the maintenance of the clinical files and supervised assistants who performed record duties and operated the out-patient appointment system. In Ontario, the medical records librarian did not manage the out-patient department, but that person had similar responsibilities for maintaining the clinical files and for supervising the clerks who provided record services to the medical staff and departments.

### *Summary*

Until the latter part of the nineteenth century, hospital records were prepared by hand by clerks and medical officers who kept records in addition to administering the hospital and caring for its patients. Administrative and financial record-keeping required book-keeping skills, while clinical records were kept by the physician or surgeon as an aid to his own practice. There were distinct house styles and the proprietary interest of individual keepers in their records was very strong. Change in the hospital eventually and fundamentally affected record-keeping. The growth in the size of hospitals and the increased complexity and sophistication of administration and medical practices demanded more records, new office skills, and better communications among departments. Between c. 1890 and c. 1952, the traditional administrative and medical records offices were transformed into hierarchical departments where jobs were diversified to meet the clerical, information, and communication needs of hospital business. Hand labour to prepare records was supplanted by the typewriter which increased the production of documents, permitted the separation of professional, management, and clerical functions, and changed the file room. In the main office, loose files replaced bound volumes which were retained only for a small group of official administrative records. In the medical records office, change was focused on the clinical record which was transformed from casebook to case file. The creation of records was divorced from their keeping. Records and documents were produced by all groups and departments in the hospital, and the records office provided coordination and filing services and undertook new communications and information jobs. The functions of the administrative records office developed to resemble their counterparts in modern business.<sup>74</sup> The medical records office also changed, but with features unique to the hospital. The special record skills required by hospital medical practice led to the development of personnel trained in medical records work. The process of change in records and records-keeping was a gradual one, and innovation took place within the traditional records office where custom and customary uses influenced the timing and impact of change.

## Notes

\* Abbreviations used throughout the notes are as follows:

<i>Brook General Hospital</i>	<i>BGH</i>
<i>Cornwall General Hospital</i>	<i>CGH</i>
<i>Kingston General Hospital</i>	<i>KGH</i>
<i>Kingston Psychiatric Hospital</i>	<i>KPH</i>
<i>London Hospital</i>	<i>LH</i>
<i>Queen Elizabeth Hospital</i>	<i>QEH</i>
<i>Royal Marsden Hospital</i>	<i>RMH</i>
<i>Springfield Hospital</i>	<i>SPH</i>
<i>American Archivist</i>	<i>AA</i>
<i>American Medical Association Journal</i>	<i>AMAJ</i>
<i>Boston Medical and Surgical Journal</i>	<i>BMSJ</i>
<i>British Medical Journal</i>	<i>BMJ</i>
<i>Bulletin of the American College of Surgeons</i>	<i>BACS</i>
<i>Bulletin of the Johns Hopkins Hospital</i>	<i>BJHH</i>
<i>Bulletin of the New York Academy of Medicine</i>	<i>BNYAM</i>
<i>Bulletin Medical Library Association</i>	<i>BMLA</i>
<i>Bulletin of the History of Medicine</i>	<i>BHM</i>
<i>The Hospital</i>	<i>TH</i>
<i>The Canadian Hospital</i>	<i>TCH</i>
<i>The Hospital, Medical and Nursing World</i>	<i>THMNW</i>
<i>Journal of the History of Medicine</i>	<i>MH</i>
<i>Journal of the Society of Archivists</i>	<i>JSA</i>
<i>Medical and Surgical Report of the Presbyterian Hospital of New York</i>	<i>MSRPHNY</i>
<i>The Medical Record</i>	<i>TMR</i>
<i>The Modern Hospital</i>	<i>TMH</i>
<i>Society for the Social History of Medicine Bulletin</i>	<i>SSHMB</i>

- 1 For example, see SPH/AR/1850, pp. 18-19, and LH/A/1/16 Standing Orders, 1868.
- 2 LH/A/1/16 Standing Orders 1868; RMH/HCM/1933.11.09, p. 252; SPH/AR/1850, pp. 18-19; KGH/B102/1924.09.12, p. 560; KGH/B601/1908.08.17, p. 57, and Archives of Ontario (AO) R.G.63 A-1 190/no.6115 1890.
- 3 KGH/B102/1896.02.03; KGH/B103/Annual Report 1909 (Bye-Laws); R.G.66/CGH/36 1911.11.14, p. 6, and QEH/A2/1879-1903.
- 4 SPH/AR/1843; AO, R.G.63 A-1 190/no.6115 1890.
- 5 For examples, see RMH/CM/1851-1946; RMH/HCM/1851-1896; RMH/MCM/1900-1931; LH/A/5/40 1880-1882; QEH/A1/1974-1903; KGH/B102/1874-1934; R.G.66/CGH/33-38; SPH/GCM/1863-1919, and AO, R.G.10 20-F-1, vols. 1-8.
- 6 RMH/CM/1851-1868; LH/A/5/40 1880-1882. The exceptions were usually notices, addresses, or other repetitive items needed in quantity for wide distribution. These were generally printed as needed.
- 7 There were examples of such records located in the survey. See the pay lists of the Queen Street Mental Health Centre in Toronto (Salaries and Wages Ledgers), the Cash and Day Books of the Homewood Sanitarium in Ontario, and the Requisition Books in London. These latter three series are bound.
- 8 See Figure 1: at the back left of the picture, note the ledgers on a stand and similar books stored in sections below. Also note the various loose vouchers and bills filed on boards suspended on the mantle, front left. R.G.10 20-H, The Bursar's Office, Asylum for the Insane, Brockville, Ontario, c. 1906.
- 9 RMH/HCM/1913.12.10, p. 318; LH/A/5/17/; LH/A/1/16 Standing Orders 1868. SPH/AR/1850, pp. 18-19; KGH/B102/1883.02.05 and later, KGH/B40/1909, p. 8. For a discussion of registration books, see "The Admission Department of a General Hospital," *TH*, I(1907), pp. 103-104.
- 10 RMH/MCM/1900-1907; KGH/B102/1883.02.05; LH/A/1/16 Standing Orders 1868. AO, R.G.8 I-I-A-1, Box 39, file "C.K. Clarke," letter Clarke to W.J. Hanna, 3 Sept. 1908.
- 11 The distinctive medical record-keeping practices of several voluntary hospitals in London are discussed in "Hospital Medical Registration," *BMJ*, I(1879), p. 900; "Hospital Registration," *The Lancet*, II(1880), p. 635; "Hospital Registration," *BMJ*, II(1880), pp. 638-639.
- 12 LH/A/5/44, pp. 313 attachments; LH/A/5/47 1899.04.10, p. 338; LH/A/1/16 Standing Orders 1868, and LH/A/1/43 Standing Orders 1949.

- 13 RMH/CM/1882.01.20, p. 4; RMH/MCM/1904.01.12, p. 132; RMH/HCM/1935.11.27. There are no surviving early clinical records in Ontario's voluntary hospitals, but evidence in the minute books indicates that clinical records were kept by the staff and, after 1928, by the interns under the direction of the staff, KGH/M202/1919.04.02, p. 19; KGH/M202/1923.06.26, pp. 67-68.
- 14 AO, R.G.10 20-A-1 "Minutes of the Meetings of the Superintendents of Ontario Hospitals," 1931.09.29 attachments, and AO, R.G.8 1-1-A-1, Box 39, file "C.K. Clarke," letter of Clarke to Dr. Hunt, 11 December 1906.
- 15 See Figure 2: At the back left of the photograph, see a casebook (left) and a register (right) open on the stand and the other books filed below in special slots. AO, R.G.10 20-H, the Assistant Physician's Office at the Brockville Asylum, c. 1906. Although the photograph comes from a hospital in Ontario which was not included in the survey, the books depicted and the office arrangements were similar in every respect to those in the other public authority psychiatric hospitals in Ontario.
- 16 See for example AO, R.G.10 20-F-O no.1521, no.339 and no.1505.
- 17 LH/A/1/16 Standing Orders 1871 concerning house surgeons and record-keeping and LH/A/1/34 Standing Orders 1909 concerning the duties of the Registrar. Also see KGH/B103/Annual Report 1909 (Bye-Laws), pp. 7-8, 13, and 1929, pp. 8, 12, 21.
- 18 See particularly SPH/CB/letter 1908.07.01 concerning the method of making casebook entries. For an important discussion of the record-keeping routine in the medical record office at the Springfield hospital, see the detailed explanation of Dr. Strange Biggs in SPH/GCM/1874.01.18, pp. 89 *et seq.*
- 19 RMH/AR/1885, p. 21; RMH/HCM/1903.10.20, p. 218. In 1913, the Medical Superintendent at the Springfield Hospital suggested that the preparation of the casebooks should be staggered because of the amount of time required to prepare all the books in each quarter. SPH/CLR/1913.03.04. Explicit orders at the Royal Marsden Hospital forbade the preparation of records in the wards, RMH/1928/07.04, p. 302; Also see LH/A/5/51 1908.04.06, p. 450 attachments.
- 20 LH/A/1/16 Standing Orders 1868. T. Gilbert-Smith, "Registration of Disease," *Transaction of the National Association for the Promotion of Social Science*, 1883, p. 421.
- 21 Loose documents were tied in bundles and stored on shelves or in pigeon-hole filing racks. For a discussion of the problems with such filing in Ontario's psychiatric hospitals, see AO, R.G.8 1-1-A-1, Box 27, file "S. A. Armstrong."
- 22 For examples, see LH/A/5/44 1889.10.01, p. 8, and LH/A/5/45 1893.01.10, p. 169, for gratuities for clerks who prepared statistics; SPH/GCM/1897-1899, p. 186, and AO, R.G.10 20-F-2 #13 which was taken by Dr. C.K. Clarke when he left the hospital to take up practice in Toronto. Also see "Institutional Defalcation," *TH*, lvi(1914), p. 394.
- 23 Concerning the increase in work, see SPH/AR/1879, pp. 8-9; SPH/AR/1892, pp. 3-4; KGH/B102/1899.08; KGH/M202/1921.02.15, p. 34; AO, R.G.8 1-1-A-1, Box 39, file "C.K. Clarke" letter, Clarke to Hanna, 3 September 1908. Also see "The Making of the Modern Hospital: IV — The Departments of the Modern Hospital," *TH*, II(1911), pp. 105-106.
- 24 LH/A/5/40 1881.07.08, p. 137; 1881.03.15, p. 168; LH/A/5/44 1889.02.05, p. 26 and 1891.03.24, p. 410. SPH/AR/1892, p. 34; RMH/HCM/1860.10.26, pp. 161-162.
- 25 For very clear examples of the rationale for introducing technology to aid in paper work, see LH/A/5/40 1881.06.21; KGH/B102/1931.01.21, and AO, R.G.66/CGH/37/1928.01.03.
- 26 LH/A/5/40 1881.10.05, pp. 395 attachments. Concerning the procedure of copying see "The Junior Clerk," *The Institutional Worker* (Supplement to *The Hospital*), 22 May 1915, p. 1.
- 27 AO, R.G.10 20-F-0, no.1521, no.1505 for samples of forms prepared by spirit copiers, and RMH/CM/1910.02.23, and LH/A/5/44 1890.12.09, pp. 356 attachments, and 1890.06.17, pp. 275 attachments, for spirit copies in minute books. Also see BGH/MSR/1906.01.31, and 1906.02.14, concerning mimeograph duplicators.
- 28 See Edna Van Valkenburg, "Typewritten and Drawn Forms for Hospital Use: An Inexpensive Method of Duplication," *TCH*, (July 1934), p. 6.
- 29 GLRO A/KE/633 "Some Observations on Hospital Admissions Rooms," July 1948, p. 8. Also see Frank E. Chapman, "Dictaphone in the Hospital," *TMH*, 12(1919), pp. 10-11; KGH/B102/1931.01.21, and RMH/MCM/1947.06.18, p. 22.
- 30 H. White, "Mechanized Accounting," *TH* (January 1947), pp. 39-40, 135-141. See Figure 1: on the back table there is an early adding machine, AO, R.G.10 20-H, The Bursar's Office, Asylum for the Insane, Brockville, Ontario, c. 1906. Also see AO, R.G.66/CGH/39 1948.02.10, concerning the ordering of accounting machines.
- 31 For examples, see RMH/MCM/1906.04.03, pp. 253 attachments; SPH/GCM/1912.01.12, pp. 209-210; BGH/MSR/1936-1948; LH/A/5/47 1898.12.01, p. 271 attachments; QEH/A/1 1903.04.15. For the

- purchasing of typewriters, see SPH/GCM/1912.02.03, pp. 209-210; RMH/HCM/1923.03.28, p. 355; KGH/B102/1912; AO, R.G.66/CGH/37 1928.01.03; AO, R.G.66/CGH/38 1936.11.10; AO, R.G.66/CGH/39 1947.10.14, and 1950.07.11. The typewriter was marketed in 1874 by the Remington Sewing Machine Company as “. . . a machine to supercede the Pen,” see Peter A. Hill, “Work Study and the Clinical Record,” *TMR*, (1966), p. 278.
- 32 In the absence of significant series of main office correspondence, the emergence of typescripts and of typescript copies in the minute books was evidence of the transition from hand to machine production. The eclipse of manuscript blotter copies by typescript duplicates is very clear in the office files of the Inspector of Prisons and Public Charities, AO, R.G.63 A-1.
- 33 The problem of authenticating typescript copies is discussed in SPH/GCM/1927.07.07, p. 54.
- 34 RMH/MCM/1923.02.13, p. 10, concerning the typing and stenographic skills needed by the new clerk.
- 35 File cabinets were first purchased at the Royal Marsden Hospital in 1897, RMH/HCM/1897.10.13, p. 301. Also see SPH/GCM/1928.02.23; KGH/B601/1921, p. 20; KGH/B102/1929.05.17, p. 112; LH/A/5/49, p. 298. Advertisements for filing equipment and services appeared here and there throughout the journals on hospital management. For example, see “Wanted: A System for Filing,” *TH*, I(1910), p. 497, and “Security for Hospital Records . . . The Office Specialty Manufacturing Company,” *TCH*, (August 1927), p. 8. By 1926, file cabinets appeared as a separate item in the index to the *Revised Uniform System of Accounts* and the King’s Fund, GLRO, A/KE/301. For a discussion of cabinets and shelving, see “National Institute of Industrial Psychology Report on Casualty and Out-Patient Records,” GLRO A/KE/150, p. 10; Joseph E. Stone, *Hospital Organization and Management* (London, 1939), pp. 316-318. On the origin of the vertical file, see H.R. Datz, “Equipment Then and Now,” *Library Journal*, 15 March 1951, pp. 476-481.
- 36 For example, see LH/A/5/40 1881.06.22 for references to the difficulties in indexing the minute books.
- 37 For examples of filing systems, see “The Syntax System of Filing,” *TH*, I(1910), p. 28. A new office system for the preparation and filing of records was introduced in Ontario’s psychiatric hospitals between 1907 and 1911. For an explanation of the system and for samples of the forms which were introduced, see AO, R.G.8 I-I-A-1, Box 48, file “Filing Systems 1905 — 1908,” and file “S.A. Armstrong” 1907-1915.
- 38 Indexes were discontinued after 1930, particularly in Ontario, no doubt partly because of the time needed for their preparation.
- 39 RMH/HCM/1923.11.09, p. 252; SPH/GCM/1894.11.17, p. 151; SPH/GCM/1899.06.10, pp. 68-69; SPH/GCM/1900.05.26, p. 190; SPH/GCM/1912/03/22, p. 35; KGH/B102/1924.09.12, p. 560, and BGH/MSR/1921.10.19.
- 40 By 1893, the Secretary at the Royal Marsden Hospital had two clerks, and by 1935 his staff had grown to five clerks and a telephonist. Between 1800 and 1940, the main office staff at the London Hospital grew from four to ten, LH/A/5/49 1905.03.27, pp. 450-452. Stenographers and clerks were also hired at the Kingston General Hospital to relieve the Medical Superintendent of clerical duties, KGH/B601/1899.08; KGH/B102/1931.01.21, p. 288. Between 1899 and 1949, the main office staff at the Kingston General Hospital grew from two to twenty-two, KGH/B103/AR 1949. Between 1874 and 1949, the office staff at The Queen Elizabeth Hospital increased from one to eight full-time employees, AO, R.G.10-154, reel 241 “Ontario Health Survey Committee” return of the QEH. Also see QEH/C/11 1949. At the Cornwall General Hospital, the part-time clerk was joined by four full-time employees between 1897 and 1949, R.G.66/CGH/39 1946.03.22. Also see “The Hospital Pay of the Shorthand Typist,” *TH*, I(1912), p. 466.
- 41 There were numerous references to the introduction and use of telephones in the minute books. For examples, see RMH/MCM/1908.03, p. 32; RMH/MCM/1905.04.12, p. 395; SPH/GCM/1890.07.05 and KGH/B102/1885.06.01, p. 4; AO, R.G.63 A-1 193/#6164 1882.03.16; BGH/MAB/1902, pp. 715-716, and BGH/MAB/1925, p. 155. By 1940, dictating equipment and electric message boards had been installed in some hospitals. Also see “Telephone Neurosis,” *TH*, II(1910), p. 189; “Telephones for Hospital Use,” *TH*, II(1913), pp. 73-74; “Automatic Telephones for Institutions,” *TH*, I(1914), p. 601, and “The Teleautograph Helps Solve Traffic Problem,” *TCH*, (May 1936), p. 48. The stenographer also had duties as the operator of the switchboard at the Asylum for the Insane, Brockville, Ontario; see Figure 3, AO, R.G.10 20-H, c. 1906.
- 42 For the addition of female clerical help, see SPH/GCM/1910.10.24, p. 44; SPH/GCM/1917-1919; AO, R.G.63 A-1, 187/no.6102, 190/no.6115; AO, R.G.66/CGH/37 1930.04.08; BGH/MSR/1914.11.24; 1920.03.31, and LH/A/5/49 1905.03.27, pp. 450-451.
- 43 “The Hospital Secretary,” *TH*, I(1909), pp. 415-416. A.C. Bachmeyer, “Training of Hospital Executives,” *TMH*, I(1910), pp. 225-226.
- 44 For example, see the appointment of an accountant at the Royal Marsden Hospital, RMH/HCM/1944.03.08. The duties and training of hospital officers are discussed in Conrad W. Thies, “Requests for

- Information," *TH*, II(1907), p. 669; "The Making of the Modern Hospital: IV — The Departments of the Modern Hospital," *TH*, II(1911), pp. 105-106; Herbert J. Dafforne, "Hospital Clerks; Their duties and Responsibilities," *TH*, I(1912), p. 369; Joseph E. Stone, *Hospital Organization and Management*, (London, 1939), pp. 288-290, and the series on hospital officers in the *Institutional Worker* (Supplement to *TH*); "The Hospital Secretary," 6 and 13 March 1915; "The Assistant Secretary," 20 and 27 March 1915; "The Steward," 3 and 10 April 1915; "The Chief Clerk," 8 May 1915; "The Out-Patient Clerk," 15 May 1915, and "The Junior Clerk," 27 May 1915. W.L. Babcock *et al*, "Proposed Methods of Training Hospital Administrators," *TMH*, I(1913), p. 170.
- 45 For example, see RMH/HCM/1923.03.23, p. 355. Margaret T. Doran, "The Need for Research in Medical Recording Methods," in *Proceedings of the First International Congress on Medical Records*, (London, 1952), p. 130. The staff complement of the medical record office in the selected hospitals grew significantly between 1900 and 1950. For example, by 1950 there were 5 clerks employed in medical records work at the Kingston General Hospital, KGH/B103/AR 1949.
  - 46 SPH/AR/1879; LH/A/1/16 Standing Orders 1870; LH/A/5/50 1906.05.07, p. 151; LH/A/5/51 1908.04.06, pp. 400 attachments; AO, R.G.63 A-1 229/no.6588, 236/no.6717; KGH/M202/1919.04.02, 1921.05.15.
  - 47 For references to incomplete notes and to the difficulties in securing the compliance of staff with rules for record-keeping, see RMH/MCM/1930, p. 8; RMH/HCM/1905.01.31, p. 172; RMH/MCM/1909.05.06, p. 168; PRO MH 51/238, #356; SPH/AR/1857, 1892 and 1911; LH/A/1/29 Standing Orders 1920; LH/A/1/39 Standing Orders 1933; LH/A/5/41 1883.04.13 and 1883.04/17, p. 124. Also see KGH/M202/1916.12.05, 1923.02.20, and later for another hospital, "Jury Criticizes Hospital for Laxity in Keeping Records," *TCH*, (Sept. 1942), p. 36.
  - 48 For example, see RMH/MCM/1922.10.24, p. 448; RMH/MCM/1923.02.13, p. 10; RMH/MCM/1939.02.15, p. 63 no. 10, and RMH/1939.10.18; LH/A/5/44 1893.10.16, p. 308; AO, R.G.8 I-1-A-1, Box 39, file "C.K. Clarke" letter, Clarke to Hanna, 3 Sept. 1908; PRO MH 51/238 no. 356, 1 July 1908.
  - 49 See, for example, AO, R.G.10 20-F-2 Vol. 3 no. 2337, Vol. 8 no. 2284, and SPH/CB/Male Vol. 1.
  - 50 For a very clear statement of the significant change in procedures and outlook generated by loose files, see SPH/CLR/1920.10.15.
  - 51 See AO, R.G.8 I-1-A-1, Box 48, file "Filing Systems" for the regulations concerning the new case file system introduced 15 May 1907. Also see AO, R.G.10 20-F-2 for the series of case files begun in 1907. KGH/B103/1922-23 (typescript series).
  - 52 Loose files were introduced: at the London Hospital at least by 1893, LH/MCR and SCR/ 1893 -; at the Royal Marsden Hospital, consistently, by 1890, RMH/CB/; and at the Springfield hospital after 1920 SPH/CLR/1920.10.15.
  - 53 For a general discussion of the changes, see M. Perfect, "Hospital Records and Record Storing," *TH*, (April 1941), pp. 87-89. Also see H. Auchinloss, "Unit History System," *MSRPHNY*, 10(1918), pp. 30-72; Adrian S. Lambert, "The Record System at the Presbyterian Hospital in New York," *TMH*, 12(1919), pp. 12-16; and "The Record Room," *MSRPHNY*, 10(1918), pp. 23-29.
  - 54 For example, see RMH/MCM/1907.06.11, p. 379.
  - 55 See RMH/MCM/1907.06.11, p. 374. Also see RMH/CB/Mr. Jessett 1886 for the variety of sizes in forms used at the Marsden.
  - 56 See RMH/MCM/1907.07.09, p. 380. Large folio sheets for case records were replaced by standard 11 x 14 folder size documents at the Springfield hospital in 1948. Also see RMH/CB/Mr. Swann 1909, and AO, R.G.10 20-F-2 no. 34, for examples of standard sized forms.
  - 57 RMH/MCM/1908, p. 4 for references to the record-taking duties of nurses.
  - 58 For example, see "The General Infirmary of Leeds," *TMR*, (May 1951), pp. 122-127 and H. Cotton, "Microphotography and Hospital Records," *TH*, 43(1947), pp. 183-184; David W. Ogilvie, "Microfilming in Canadian Hospitals," *TCH*, (March 1947), pp. 48-49; D.G. Davies, "Storing of Medical Records: A New Photographic Method," *TH*, 46(1950), pp. 527-530.
  - 59 For the coordination of the files and indexing with research and statistics, see RMH/MCM/1925.06.09, p. 88; RMH/MCM/1928-1929, p. 69; RMH/MCM/1910/03.01, p. 284; SPH/AR/1867, p. 23, 1889, p. 22, and 1908, p. 13.
  - 60 For an early general discussion of numeric filing methods, see "The Filing of Out-patient Case Papers," *The Institutional Worker* (Supplement to *TH*), 28 March 1914, p. 1, and 4 April 1914, p. 1.
  - 61 Joseph E. Stone, *Hospital Organization*, p. 204. Also see H. Auchinloss "Unit History System," *MSRPHNY*, x(1918), pp. 30-72; Adrian S. Lambert, "The Record System at the Presbyterian Hospital in New York," *TMH*, 12(1919), pp. 12-16.
  - 62 Kitty I. Bailey, "The Royal Free Hospital: A Survey of Current Procedures," *TMR*, (Nov. 1949), pp. 8-15; "The General Infirmary at Leeds," *TMR*, (May 1951), pp. 122-127; *Some Observation on Hospital*



*Admissions and Records*, (London, 1948), GLRO A/KE/633. For a discussion of the systems in use in London in 1937, see GLRO A/KE/154. Also see John H. Stokes, Richard A. Kern, and L.K. Ferguson, "What Sixty Hospitals Think of the Unit Record System," *TMH*, xl(1933), pp. 87-91.

- 63 Without significant examples from the Kingston General and the Queen Elizabeth hospitals, it is impossible to trace the changes in their filing systems. At the Kingston General, there is a small series of patient cases on cards, 1905-1914, which indicates that the staff kept records for their own patients. There is also a sample set of blank clinical record forms, undated but c. 1925 (these were probably kept by the Superintendent for reference when reordering from the printer) which indicates that a numeric system was in place by this date, KGH/R700.
- 64 See RMH/HCM/1938.06.23, p. 317, and 1938.11.23, p. 37; "The Keeping of Medical and Surgical Records," *The Institutional Worker* (Supplement to *TH*), 9 Sept. 1916, pp. 1-2.
- 65 Card indexes were established at all the selected hospitals between 1920 and 1948. Those in London's hospitals and in the Kingston General, The Queen Elizabeth, and the Cornwall General hospitals are still in active use and were not included in the survey. For the London Hospital, see LH/A/5/51 1908.02.08, p. 238. Indexes for cases in Ontario's psychiatric hospitals have been transferred to the Archives of Ontario. The card index system for controlling file room operations is discussed in AO, R.G.8 I-1-A-1, Box 48, file "Filing Systems" 1905-1916. Also see "Wanted: A System for Filing," *TH*, I(1910), p. 497.
- 66 Although none of the early index books have survived at the Royal Marsden Hospital, there are references to them in the Minute Books, for example see RMH/MCM/1910.03.01. Complex alpha/numeric codes were assigned to all cases after 1886 and the Post Mortem Registers were cross referenced to the Museum Catalogue. For example, see RMH/PMR/1903-1905, case of E.M.(female) #204, pp. 100-101. "The London Hospital," *TH*, I(1893), p. 174, concerning the system of indexing.
- 67 See particularly RMH/MCM/1939.02.15; and RMH/MCM/1944.09.27.
- For general discussions of classifications and their use in hospitals, see "Registration of Disease," *BMJ*, II(1880), p. 629; "Hospital Administration: The Registration of Disease in Hospitals," *The Lancet*, I(1883), pp. 1141-1143; T. Gilbert-Smith, *op. cit.*, p. 421; "Hospital Statistics: Some Criticisms and Suggestions," *TH*, II(1913), pp. 63-64; "Hospital Statistics," *TH*, II(1913), pp. 104, 111-112; "Case Records in Teaching Hospitals," *TH*, II(1918), p. 534; H. Cotton, "Medical Records in the N.H.S.," *TH*, 45(April 1949), pp. 195-199; C.F. Naylor, "Medical Records. The International Statistical Classification," *TH*, (Sept. 1949), pp. 535-538; Percy Stocks, "Records and Research," *TMR*, (May 1949), pp. 18-20; B. Benjamin "The General Register Office and Medical Records," *TMR*, (1959), pp. 261-268; Percy Stocks "The International Aspect of Medical Records," in *The Proceedings*, pp. 29-33; Helen B. Lincoln, "Disease Classification for Diagnostic Indexing," in *The Proceedings*, pp. 53-57; R.J. Brown, discussion of the preceding paper in *The Proceedings*, pp. 60-66. Also see *Some Observations . . . Records*, GLRO A/KE/633, for a discussion of the nomenclatures used in selected London hospitals.
- For contributions to the literature on classification in North America, see "A Simple and Easily Operated Cross Index to Case Records," *TCH*, (July 1927), pp. 27-29; Joseph C. Doane, "Accurate Diagnoses and Exact Terms Make a Useful Record System," *TMH*, (August 1933), pp. 83-86; Edna K. Huffman, *Medical Record Management*, (Chicago, 1941), Chapter viii, "Nomenclatures"; H.B. Logie, "Making and Using Diagnostic Records — A New Method," *TMH*, lxii(April 1924), pp. 49-54; A.H. Sellers, "The Significance of the New International Statistical Classification of Diseases, Injuries and Causes of Death," *TCH*, (January 1950), pp. 29-30; "Standard Nomenclature Approved for Hospital Use," *TCH*, (July 1941), pp. 20-21.
- 68 RMH/MCM/1923.02.13, p. 10; RMH/MCM/1928.06.06, p. 18; RMH/MCM/1937.10.20, p. 72 #9; RMH/AR/1923, p. 5; RMH/HCM/1939.02.01, pp. 14-15; RMH/HCM/1944.02.23; RMH/HCM/1946/03/26; RMH/HCM/1947.09.24, p. 287; SPH/GCM/1919.05.24, p. 256; LH/A/5/61 1932.05.09, pp. 461-462; also see Elsie Royle, "Medical Records Departments: Principles of Organization Pt II," *TH*, (May 1948), pp. 189-194; *Ibid.*, "The Other Point of View," *TMR*, (May 1949), p. 28.
- In North America, see KGH/B102/1931.01.21, p. 288; KGH/B102/1942.04.13; R.G.66/CGH/39 1942.07.14 and 1950.06.27. There is a discussion of the division of labour introduced with the new filing system into Ontario's psychiatric hospitals in AO, R.G.8 I-1-A-1, Box 27, file "S.A. Armstrong." Also see T.R. Ponton, "Record System of the Vancouver General Hospital: Case Histories in Charge of Special Department with Staff Co-ordinating to Supply Information," *TMH*, viii(1919), pp. 34-35; Joseph C. Doane, "Well Kept Records Reveal Errors and Obviate Their Recurrence," *TMH*, (September 1933), pp. 90-93.
- 69 KGH/B601/1942.02.17, p. 240; H. Cotton, "Medical Records in American Hospitals," *TH*, 46(March 1950), pp. 185-188.
- 70 "Aims and Objectives," *TMR*, (May 1949), pp. 9-10; "Full Time Training," *TMR*, (May 1949), p. 11; *Some Observations . . . Records*, *op. cit.*

- 71 LH/A/1/43 Standing Orders 1949; *The Proceedings*, p. 47. See Figure 4, The Medical Records Department at the London Hospital, February 1950, LH/P/2/41 1950.
- 72 Elsie Royle, "Medical Records Departments: Principles of Organization," *TH*, (April and May 1948), pp. 155-158, 189-194; H. Cotton, "Medical Records in the N.H.S.," *TH*, 45(April 1949), pp. 195-199. Also see AO, R.G.66/CGH/39 1942.07.14, and KGH/B102/1942.02.17.
- 73 For examples, see RMH/MCM/1911-1923; R.G.10-154, reel 240 "Ontario Health Survey Committee," return of the Cornwall General Hospital 1949; AO, R.G.10 20-A-1 "Minutes of the Meeting of the Superintendents of Ontario Hospitals," 1931.09.29, concerning the record-keeping duties of staff, and 1942.06.27, concerning the hiring of specially trained personnel for medical records work. See AO, R.G.66/CGH/42.5 1935.05.20, concerning the appointment of a medical records committee. R.J. Brown "Simple Job Analysis at a Hospital Records Department," *TMR*, (1954), pp. 350-358, 364.
- 74 Graham S. Lowe, "The Enormous File: The Evolution of the Modern Office in Early Twentieth Century Canada," *Archivaria* 19 (Winter 1984/5), pp. 137-151. F.B. Gilbreth, "Scientific Management in the Hospital," *THMNW*, 7(1915), pp. 81-90. Also see Margery Davis, "Women's Place is at the Typewriter: The Feminization of the Clerical Labor Force," *Radical America* 8 (July/August 1974), pp. 1-28.