Imprinting Care and the Loss of Patient Narrative: Creation and Standardization of Medical Records

Kacper Niburski, MA

ABSTRACT

Background: Medical records manufacture a representational model of a person. Yet, little has been done to analyze the historical construction of patient charts, the deliberations in the process of their creation, and how early patient charts displaced patients’ narratives.

Objectives: To retrospectively study the structure and production of old patient charts.

Methods: Anchored by the Archives of Ontario’s medical records from three 19th century psychiatric asylums—Hamilton, London, and Kingston, Canada—the paper tools are reproduced on the basis of their original manufacturing processes using cast-iron presses and relevant typesetting. This includes mirroring the process of assembly, recontextualizing the form’s limitations as a function of its construction, making historical the diagnostic considerations relevant at the time, and noting the continuum of practical and operational choices that have stretched into current records.

Results: An explication of the advance of physicians’ objective records and the decline of the subjective patient view is given from index-card inception through design, accreditation, standardization, forms, and quantity, to analysis replacing narration.

Conclusion: Through this artistic work, medical paradigms become realized through paper borders. With ink, lead, and historical manufacturing, a world view is re-created. Such a marriage of medicine and art challenges the static interpretations of paper records and the decline of the subjective patient view is given from index-card inception through design, accreditation, standardization, forms, and quantity, to analysis replacing narration.

INTRODUCTION

If one is to understand the history of medicine, one must look backward through the medicine of history—how time has shaped the use of medical instruments, how examinations have become formalized institutionally, and how failures in organizational practices have originated and continue to perpetuate throughout health care practices.

This retrospective analysis is especially relevant for patient charts. Formally known as “paper tools,” the medical record rewrites the body into spatial and temporal zones where lifelong sicknesses are summed in seconds. Medical records carve out an anatomical ideal form, and they categorize deviations into tables that give a condition ostensible meaning to a select few. By the medical record shaping illness into the bounds of recordable temporality, by systemizing what is normal, and by categorizing messy deviations into neat tables, the patient becomes an artifact to be mapped on, real only when a history is taken and charted.

Through such isolated representation, the body undergoes a performance. It moves, is moved, and experiences movement in chronicled parts meant to signify the end of a healthy whole.

Yet, in this article, I will contend that far from being a modern development, such a formulaic construction of the body into a paper geography, along with its sociological implications, originated in the 19th century, particularly with the advent of index cards determining output of care. I will argue that the reductionism and paternalism built into these 19th century forms resulted in the similarly stringent biomedicine in the early and middle parts of the 20th century, while also providing a means to solidify standard hospital practices that reinforced these norms.

Casebook files from three 19th century psychiatric asylums in Ontario, Canada—in Hamilton, London, and Kingston—will demonstrate a sporadic evolution of medical records that resulted in one of the first index cards being used at the Toronto-based Queen Street Mental Health Centre (Figure 1). Re-creation of this original card with nearly identical printing, typesetting, and design processes will showcase the health care culture of the turn of the century, the way in which such paratextuality gives rise to hospital logistical planning, and the loss of narrative that results when providing general records for unique conditions. Moreover, such a historical reproduction will demonstrate how these issues culminated into modern hospital documentation, illuminating vestigial problems and consistent errors noted by the Medical Records Committees in Toronto hospitals such as Toronto General Hospital (TGH), St Michael’s Hospital (SMH), and Women’s

Author Affiliations

1 McGill University, Montreal, Ontario, Canada
2 McGill Faculty of Medicine, Montreal, Ontario, Canada

Corresponding Author

Kacper Niburski, MA (kacpernburski@gmail.com)

Keywords: creative arts, medical history, patient records, print history, psychosis
College Hospital (WCH) during the mid-20th century. These problems, I suggest, remain in today’s electronic documentation processes, such as OpenNotes (Boston, MA).

OPERATIONALIZED MEDICAL RECORD: WHAT GETS WRITTEN DOWN

Medical records facilitate the creation and operation of hospitals. Like Ursula Klein’s “paper tools” in chemistry, medical charts are retrofitted to serve a hospital ward’s needs, a health provider’s wants, or a legislative body’s minimum requirements. Not only do these charts provide a language on which specialists and caregivers can visually and quantitatively argue, but their diagrammatic approach also magnifies techniques and analyses that guide medical practice. Medical charts accumulate the history of an illness, develop a manner of study that is problem centered, ensure consistency in data assembly by eliminating variety and redundancies in queries, and control the direction of care by structuring it around the information printed on the chart.

These general functions see themselves institutionalized differently. At SMH, medical records were considered “at the same time a collection, an arrangement, and conservation of all written data which pertain to the patient … [with] administrative and professional sections.” At WCH, medical records were determined to be “channels of communication between patient, hospital, and physician.” Health care providers at TGH understood them as a tool to be “viewed from an epidemiologist’s point of view … so as to record diagnoses.”

These individualized couched statements reflect similar health goals based in their unique “epistemic communities.” There are resemblances in what is expected, similarities in the way in which information will be gleaned, but at the same time, there are divergent means of accessing and segmenting that information relevant to the hospital itself. Michael Weed claims that these locally convergent factors are important in medical charts, for they note the social determinants of a given region and the order of priority in determining the cause of a disease. He suggests, however, that this locality is secondary to the shared functioning of all medical records regardless of where they originate; that is, they serve to showcase the social settings surrounding clinical decisions, develop medical-administrative coordination, and foster an interconnectivity between health care services and the quality of care a patient receives. Such similar operationalization of the medical record therefore serves not only individual patients in a single geographical area but also the larger universal idea of their interrelated existence. The record communicates sickness in a relatable, understandable way to each practitioner wherever s/he may be.

AGE OF ACCREDITATION: AS GOOD AS THE RECORD

This universality found in relating disease specifics to a comparable end across hospitals catalyzed an increasing sense of paternalism and disenfranchisement in the mid-20th century. Physicians were considered no more than “collectors and analyzers of technical information.” Patients were rarely told of their conditions and often were objectified under the medical “gaze.” Only the physician could decipher the body, giving value and coherence to a condition. The records themselves precipitated this lopsidedness, becoming not simply the tools of such neutering language but the vehicle that ensured its survival. The medical record necessitated a physician-patient imbalance of power. If something was wrong, the chart would hold the answer, rather than the patient. More than just an extension of a condition, the chart was the illness materialized, made real. Patients became separate from themselves and their experience, with no means to interact with their own collected measurements. Such dry, observational science became so isolating and 1-sided in its comprehension that 1 TGH physician wondered whether “the Medical Staff as a whole are at fault or whether it is the system itself.”

Both were at fault. Legislative policies followed by both individual physicians and all Ontario hospitals were developed to focus this culture of care. Of particular importance is the Health Disciplines Act of 1974 and the Public Hospital Act of 1956. Each Act legally required records to maintain basic identification, history of present and previous illness, family history, provisional diagnosis, orders for treatment, progress notes, consent forms, and results of laboratory/pathological/physical examinations. The Public Hospital Act especially emphasized the medical record, noting colloquially that a hospital is only “as good as the record.”

This minimum expectation was bolstered by the process of accreditation. To receive public funds from the government, associations such as the Canadian Council on Hospital Accreditation, founded in 1959, mandated that hospitals follow strict guidelines in record management. A bulletin of The Joint Commission (formerly Joint Commission on Accreditation of Hospitals) bears this out: “Medical records … serve as a basis for planning patient care … and the quality of medical records are an important indication of the quality of medical care given in a hospital.” Other health care-oriented service organizations agreed, such as the Royal College of Physicians and Surgeons of Canada or the Ontario Hospital Association, which stated that membership to a larger body hinges on accreditation, which itself hinges on robust charts. These collective forces resulted

Figure 2. Toronto General Hospital Medical Record Committee’s review sheets for medical records.
in a system as an outcome of, rather than an input to, a chart. All subsequent effects of the record, from a medicine cold in its calculation and alienating in its solutions, to a shared necessity of medical methods, came from this single standardized form. Without it, no hospital could exist in Ontario.

MEDICAL COMMITTEES AS REVIEWERS

Because of legal importance and necessity, numerous hospitals formed committees to ensure compliance with regulatory boards. In 1952, TGH tasked a Medical Record Committee to develop the highest quality medical record that fulfilled all local needs and national guidelines. They coordinated and developed quality reviews (Figure 2). They checked for face sheets, final notes, and physicians’ orders being dated and signed, and—appropriate for a committee tasked with the quality of paper forms—they produced 2 different ideal versions and deliberated both against one another.

Reviewers’ Inquiries

In their inquiries of current use of medical documentation, however, the Medical Record Committee found categorical missteps, general oversights, and some systematic flaws that affected the whole of health care delivery. Numerous meeting minutes note the resistance by physicians to seemingly clerical work, a failure to complete charts, design concerns regarding the spacing of forms, time lapses that break maximum delays allowed by law, and questions whether the inadequacies were because of too general records or because of too specific wards. Some departments also voiced concerns over the state of records to the committee, such as the Psychiatry Department being “dissatisfied with the documentation of patients as they are referred to us from the Emergency Department.”

The problems remained throughout the years, although to a decreasing frequency. The total occurrence of major failures, such as no validation of histories or examinations, decreased in all wards from 1974 to 1981. Moreover, the rate of minor errors, such as forms that have not been summarized or signed off on, had decreased as well.

Important Facts and Necessary Figures

Starting in 1957, WCH instituted a similar Medical Record Committee. That committee’s members also noted negligence in patient charts. Consequently, they attempted to reorganize the records themselves. They built relevancy and easy accessibility into the forms, constantly evolving and updating them. A prominent example is the Emergency Department record of 1979 (Figure 3), which the minutes note makes “the sequence of entries more logical than the present form and the laboratory entries more appropriate.” Noticeably, there is an entire restructuring of biologically applicable data, a redevelopment of important facts and necessary figures, and movement beyond the minimum accreditation standard enshrined in the Public Hospitals Act.

These legislative requirements, however, were not forgotten. Compliance took central importance for WCH, especially as the laws and medicine themselves changed. The minutes detail the revising of records to “couple with the accreditation Commission,” to follow regulations that “clearly stipulate that the patient’s register number appear on each
page of the patient’s chart,” and to clarify whether “a new form be designed for use ... because of recent changes in the Public Hospitals Act.”

Two opposing records show similar negotiations of the construction of a chart (Figure 4). They both outline comparable information of prenatal forms; however, one is more tabular and diagrammatic with a figure of a gestating child, whereas the other lends itself to comments and free-form narrative. It was the less descriptive, less susceptible to interpretation form that lasted. Still, policy intruded. The form required “approval by the Ontario Medical Association and the Ministry” and a “trial basis of 6 months.”

**Only with a Filled Form is Care Possible**

Although the sample of incomplete forms was proportionally smaller than the whole filled out during the same period, their presence serves as further evidence to the chart as both a dehumanizing object of patient experience and to its quintessential role in hospital construction. In addition to the administrative shuffling some physicians felt, TGH reported that some physicians who did not fill out the forms were worried that the record “was not the best means of care.” Such a revelation is vital not in its opposition to the standard at the time, but rather to the way in which TGH did not elaborate further on the dissent. Instead, the minutes continue, discussing how best to decrease the number of unfinished accounts so as to make the hospital, and the medical forms at the center of it, more efficient. Only when the form is filled, however faulty and frayed, is care possible.

**STANDARDIZATION BEFORE ACCREDITATION: THE FLEXNER REPORT**

This insistence on legal accreditation as a means to hospital organization, the coupled belief that such marriage provided a means to the most optimal care, and the failures in chart completion that precipitated when there was a disagreement in the best possible form are a trend rooted in a much earlier period. The start of the 20th century saw the professionalization of medicine in the 1910 report titled the “Medical Education in the United States and Canada” also called the Flexner Report, named after Abraham Flexner. It mandated reforms in private medical schools, emphasized clinical skills and biomedicine, and reorganized institutions on a much more proficient and business-like basis.

Previously, proprietary schools were the majority. They were self-regulated and wildly differed in their educational requirements and firmness on case files. The Flexner Report saw the merger or closure of most of these less-funded, equipment-deficient, scientifically ambiguous schools. Furthermore, its momentum catalyzed the formation of the American College of Surgeons in 1913, the formation of the Hospital Standardization Program in 1918, and the American Medical Record Association in 1928 (whose membership contained many Canadians, who themselves formed the Canadian Association of Medical Record Librarians in 1942). All mandated solid, accurate records to guarantee membership.

In 1919 a management issue by the Hospital Standardization Program stressed the concern. “Not to maintain case records properly,” the publication noted, “is like running a factory without record of the product.” And although there are possible shimmers of the objectification and lack of compassion so true to medicine in the mid-20th century in this manufactured metaphor, it is important to recognize that the program’s minimum requirements of “accurate and complete case records” saw that only 90 of all 5323 hospitals in the US joined the American Medical Association in its first year.

**CONSEQUENCES OF REPEATABILITY: FROM SIMPLE REGISTERS TO MEDICAL RECORDS**

Canadian hospitals internalized both the regimentation of the Flexner Report and the focus of standardized forms engrained within it. St Michael's Hospital notes 2 periods of medical record service: Period 1 between 1892 and 1919, and Period 2 from 1920 onward. Notably, the dates coincide both with the release of the Flexner Report and the Standardization Program. Period 1 saw the first patients enter the hospital, encountering little documentation of cases, very simple registers, and fragmentation in what was recorded. Written in ink and bound in stiff covers with 18 × 20-inch leaves, the registers were mere notes on sociological data, whether the patient was in a private or public ward, and scant understandings of a diagnosis, operation, and result. These scarce entries were later tied to a patient’s index card that served both to show proof of admission and to offer a means of alphabetically cataloging a patient. The second period saw “patients’ records emerge as medical records similar to those kept today.”

Like the WCH paper forms of the mid-20th century, there was the stratification of the charts into specific wards and inquiries, the size of the papers decreased dramatically to a more handheld, manageable 12 x 9 inches, and an emphasis on quantitative, physical information such as blood pressure and temperature took hold.

A chart from TGH shows this organization based on the principles of efficiency and scientifically sound quality of care (Figure 5A, 5B, 5C, and 5D). Note that it includes the formal elements enshrined in the Public Hospital Act, although not yet extant; it segments different qualitative and quantitative characteristics; it prescribes boundaries of the page; it showcases a problem-oriented examination and follow-up; and it suggests requirements of information by having slots physically located on the chart. There is form that necessitates function, a suggestion of what can be done is tied to what must be done, for it is on the page. The language, too, is succinct and tightly bound. Like the records of the mid-20th century at WCH, there is little emphasis on narrative description. Only the direct management of disease is present. The illness must be uncovered through both accounting and measurement, all of which is in the document itself. Its production necessitates a process.

This reinforcement of a descriptive functionality by a form, although a response to increasingly complex medical therapeutics in the early 20th century, also had its effect on the culture of medicine as it was being founded. The body could be understood and delimited in parts if and only if a protocol was followed accurately. Stanley Reiser’s Medicine and the Reign of Technology maintained that by differentiating the patient’s body, it became
abducted, operationalized, and technically centered. Physiology was translated into “the language of machines” and the physician became an “operator.” Although this shift away from holism to a specific, observable locus of disease vastly increased the capabilities of combating illness, medicine and the language it represented separated body from person. In its intermediary was the chart itself. The document, once functionalized and developed, was the embodiment of the belief that one can elucidate specific symptoms on the basis of “the use of statistical assumptions” and paradigmatic thinking. Humans became unrelated to their surroundings, as an instrument to be operated by instruments. The language of biomedicine became neutralizing in its vocabulary, explanatory in its use, and distancing in its conception of humanity as a result of the formal organization of its medium, an effect that was shown above to have remained in the records of the mid-20th century.

Owing to this shrinkage of descriptive analysis and fragmentation, medical modernism, particularly in Canada, lauded science’s reductionism, the objectivity underpinning it, and the removal of the human element. William Osler saw this evolution as a consequence of the medical chart as backward, noting that “the extraordinary development of modern science may be her undoing … in a way that makes the outlook hazardous.”

**HISTORICAL TEMPERAMENT**

“Iciness” to Patients

This compartmentalization of care in the TGH and WCH early charts mirrors the efforts of the Medical Record Committees of the mid-20th century and, more importantly, resembles the look and purpose of the Queen Street Mental Health Centre’s index card (Figure 1). The stock card represented a manufacturing shift to automaticity and organization, the first direct example of proficiency being lauded in Canadian medicine. Indexes provided a means of separating disparate data, allowing patients via their symptoms and medical history to be physically typed into a form, which was often fitted to a typewriter. This documentation provided a condensed synopsis of conditions and revolutionized departments with coding systems, such as the Lambert Method in SMH, that associated related patients’ diagnoses together.

These cards were the first step in the association between patient and general pattern of illness, between hospital and any service provided. They were also the first step in what Osler called an “iciness” to patients that resulted out of the sterilized analysis engrained in the paper sheets.

**Less for Accountability, More for Accounting**

Although unique in their use as a standard means to segment patient data in some cohesive, universally understandable way, the index card’s design was a product of earlier history. Evident in the casebooks of the Cornwall Hospital in Cornwall, Ontario, and in the London, Hamilton, and Kingston Psychiatric Asylums, one can see the gradual attrition of free-form medical documentation. Before the flexnerian Hospital Standardization Program mandated indexing, the hospitals and psychiatric wards maintained large ledgers in which patients were registered, where their cases were recorded, and where deaths and discharges were noted. An example is the Cornwall Hospital minutes and casebook file. Noticeably, the earliest records share the stiff boards of SMH’s registers in Period 1 of its history. Like them, Cornwall’s were bound and purchased from stationers, who specialized in such accounting material. Especially relevant were the ledger lines, which were most likely executed with string ruling machines similar to those providing accounting ledgers. Thomas McCauley was one such prominent stationery, ruler, and board maker, from which Cornwall Hospital repeatedly made purchases. These books provided an eerie similarity between patients and the finances themselves, where both demonstrate a custodial nature to recording. As Walter Benjamin suggested in *The Work of Art in the Age of Mechanical Reproduction*, there is a bridge to economics once reproducibility becomes the main function of an act. Worked into the ledgers is this belief—idolized in the 1950s and first stated in the 1920s—that the experiences of patients were less for accountability and more for accounting. They became objects through other objects, inanimate by their very animation being chronicled.
It is in the casebooks of the 3 asylums where these claims and their evolving standardization in Canada first advanced. Reflecting the medical culture of humoral temperaments and more morally related etiology of disease, the starting cases from the London Asylum showcase idiosyncrasy, lack of prognosis, and a reflection of the broader displacement and disenfranchisement of those supposedly mentally ill in the Victorian era. A case in 1871 mentions little positive development, even less treatment. It is deficient of much of formal recognition and formulation, showcasing only a single voice—most likely the case clerk in charge of the ledger. Health is indicated on appearance alone and is generally descriptive. Curiosity is not present. Even in death there is only a single line, and no mention of cause.

Slowly, however, this descriptive leniency eroded to expectations and outlines. Seven years later, a second case shows the category of history at the top, dates noting changes or consistency in condition, and on the side, the full range of the page is being used to report injuries or illness. Despite the obvious flourish in aesthetic handwriting in the title, the entries are shorter, more to the point. This is despite the fact they are written with the same hand. They do not catalog the state of the patient at length, nor do they insist on investigating the medical causes of issues. There is no documentation of clinical reasoning—just what is and what isn't.

**Not a Sole Decision but a Total Team**

This reductionism in the name of medical progressive quantification is also observed in the Hamilton Asylum psychiatry casebooks. Two forms—one from 1877, the other from 1901—show gradual changes in the way patient information is detailed. The 1901 chart contains the category of heredity, the notice of hospitalization, the outlining of illnesses (typhoid fever), and the recording of temperature, which was a novel event after the 1886 introduction and dissemination of the clinical thermometer. These developments illustrate a medical approach that is slowly solidifying in a broader culture that is expanding its diagnostic possibilities. Note, too, the certification statements where the physician ties his/her claims to other physicians and professionals. No longer is it a single decision belonging to a sole practitioner but a total team coming together to dictate the outcome of care. There is an interrelation between individuals as was attempted to be developed in the Hospital Standardization Program of 1918 and the medical record committees in the 1950s and beyond. Like TGH, which complained of the lack of effective consultations from the Emergency Department as a result of ineffective charts, which further hindered the hospital function, the Hamilton psychiatry casebooks showcase the intermingled evolution of medicine because of, rather than simply a part of, the forms.

**KINGSTON ASYLUM**

**Forms and Quantity**

Perhaps the most compelling display of this expansion into prefigured forms and quantity-focused medicalization are the casebooks from the Kingston Asylum.
charting of the body into pieces, into moments that allow a fuller, yet at the same time fragmented, picture. Moreover, it displays that the forms themselves were not good enough; instead, additional papers must be added to denote progress.

To negate this possibility of self-oriented additions, the charts had to be redeveloped with a partitioned investigative style formalized. A chart from 1889 (Figure 7) concretizes how to conduct a case. In neat lines and bold text at the top of the page very similar to the Queen Street index card in Figure 1, the generality and characteristic physician voice of previous years is lost. There are categories to be filled out, such as causes of excitement, urinary descriptions, and previous hereditary dispositions. There is a life to note, as in habits of life, and medical certificates to ensure, thereby connecting the single case to a larger network of practitioners. Like the medical records of the 20th century, historical data are repeated, each case takes on a similar beginning tone, and despite the variety of conditions, there is a justifiable conclusion that can be determined if and only if methodology is imprinted carefully into the cases. It is necessarily a formula to be followed, an equation to memorize and regurgitate.

Physicians Signing on and off the Chart

This in-depth repetition resulting from normalization is observed again and again. With it, figures are necessarily included within allotted space of the form, as can be seen in the pulse rate, respiration rate, and temperature graph from 1895 (Figure 8), and diagrams are added, such as the image of the lacerated womb from 1899 (Figure 9). Both these later cases suggest that the body can be probed and understood integrally. Moreover, treatments become more possible as medicine better understands conditions and states of mind. Figure 10 details physicians signing on and off the chart, particularly where sickness occurs. The patient has diarrhea and phthisis (tuberculosis), and although not conventionally considered a cure, “electricity” is prescribed as treatment. After the condition worsens and the patient dies of tuberculosis, an insert from the newspaper (apparently the patient’s obituary) is added to the case file. It, like the medical diagrams and graphs, outlines a culture that is beholden to its paper organization and methods. Medicine in the 19th century, compartmentalized yet perceptive, detailed yet disjointed, attempts to discover and cure. But to do so, a standard form is needed.
Lost in the Page: Analysis Replaces Narration

This trend toward standardization can be tied to the eventual precipitation of the 20th century Hospital Standardization Program, the advent of medical record organizing boards in the 1950s, and the often cold, analytical medicine that replaced narrative description as a consequence of the chart and the structure for taking a clinical account it provided. Of course, it is important to note that history is necessarily unstable. What one looks for may be noncongruent with its actual purpose. And this difference, it is believed, is not wayward or inappropriate, but instead, personally important. So much is abstracted away when one just considers the product, in this case the medical record, by itself. It is not isolated—there is history surrounding its makeup—but it appears to be alone. It is present and it needs to be filled. There is not an active and critical engagement as to why. There is no discourse on what is lost when “shoveling” a human being into an allotted text box. And there is no understanding that in drafting a patient into constraints, in relating a possible lifelong sickness to mere sentences, in distancing the person from the artifact, there will be translatability, misinterpretation, and a totality of experience recorded that is hardly total.

Without the Patient’s Personal Experience

The intersecting assumptions of biological specificity and paper forms as applied experiments have excluded investigations on how these normalized processes have lopsided care and determined outcomes of patients’ illnesses. By developing concrete documents with relegated pages, specific prompts, and a mode of reasoning devoid largely of a patient’s personal experience, medicine has largely codified the patient as a passive object. The patients respond when prodded, filling in blank spaces almost mechanically. Although there is no doubt of the improved quality of care and its development shaped forces that were seen to repeat themselves again and again in the 20th century: Frigidness, lack of empathy, and a preoccupation with forms that consistently failed the broader holism of a patient.

A PERSONAL JOURNEY: MAKING THE RECORD MAKES SENSE OF IT

This loss of understanding and human centrality as a result of paper organization and mechanization can only be recaptured by re-creating it, by trying to immerse oneself in the production of the medical record itself. Reproduction illuminates. It enables deeper considerations on why a form was developed in a particular capacity, provides context on the limitations of machinery, and allows for alternatives to be suggested in the act of creation. There is no submission to the original; it must be retrospectively measured and reworked as an art of traditions. Although the form itself is reproducible, which Benjamin\textsuperscript{12} denotes as a loss of “authenticity,” the act of replicating it is not. Pairing the form to its previous synthesis in the modern era allows for reflections on the phenomenon itself. By re-creating, one is re-created.

From Freeform Narrative to the Index Card

As evident in this article via both the 20th century Medical Record Committees’ constant deliberations and the various asylums’ progress toward a similarly functioning medical document, one can forecast the past onto the present to understand the effect of circular problems and the machines that mediate them. Thus, the Queen Street index card was reproduced as a facsimile (Figure 11) using 19th century printing processes. The reason for this particular card is twofold: Its concentration of medical culture and its point in print history. The Queen Street index card back catalogs a patient in 1899 who had visited in 1852. What it highlights is the climax of the transition from the free-form narrative prevalent in the earliest case files from the Kingston Asylum in its founding years to a focused form built by the medical method: The index card. With it, necessary medical history is derived from basic personal characteristics. Similar to the addition of diagnostic metrics as a means to understand the body, the patient is observed as a reservoir of impartial information. Unlike the narrative caring seen in earlier documentation, the patient’s previous experiences are not accounted for—only if s/he is “improved” or “unimproved.” Such a limited linear path is necessitated by the card; an entire organizational system hinges on its use, resulting in the aforementioned changes in medical reasoning and emotionality through neutral measurements and logical clinical investigations.

The print history mirrors this industriousness. As discussed previously, the initial case reports were those found in stiff ledgers books. Such length allowed for longer descriptions to be submitted to the page. Requests were personally preferred; medical meaning was a matter of idiosyncrasy. Description prevailed in a culture that could solely provide this holism. However, as the chart became formalized in the asylums, the accounts were truncated to forms resembling the Queen Street index card. Such minimization is vital in print technologies; it allows the mass assembly of an individual thing so as to become greater than said thing. That is, the index card could formulate the clinical journey of not only one patient, but them all. Only when the print equipment could rapidly produce these cards through the advent of technology discussed in the following section would such a concord between print and medicine become possible.

Figure 11. Facsimile of Queen Street Mental Health Centre index card. Handprinted at Massey College.
THE REDESIGN PROCESS: A BODY WITH AN ANATOMY AND A STORY

To embody both these historicities, an honest account of the index card must be considered in all its steps. First, a design of the medical form must be broadly undertaken. Such considerations mirror WCH’s reshuffling of prenatal forms (Figure 4). What is important? Why is it important? Given the outcome of the document, one must determine the priorities of information, how to display this hierarchy on the page, and whether it reflects current medical understanding and philosophy. This does not mean just copying, but instead, reinvestigating each individual component’s importance to the whole of the index card, as was observed in the chronicling of its history and consequences in the 20th century.

The mechanics of the redesign were then under way. Both the original form and the previously noted case files were almost certainly typeset manually and imprinted on a hand press, most likely cast iron, given the dates of admissions before the linotype press and automatic setting machines. Popularized in the 1890s because of the blunting of type edges, the Washington press was most likely the printing press used.

A form, which is a locked frame before impressing the paper, must then be created by selecting type and setting it by hand.53 A matching sans serif (Futura, 1927) and a Renaissance typeface called Bodoni Bold (1789) were used for the main text and headings, respectively. Then, lines were set one at a time by pulling letters from California Job Cases (compartmentalized wooden boxes used to store movable type), with the letters coming out backward and inverted into the metal chase (the heavy steel frame used to hold type in a letterpress). Lead rules were used instead of string for a ruling machine so as to avoid the possibility of damaging the press. Proofs were consequently made to ensure complete register between form and press. Ink was subsequently used to hold type in a letterpress). A Vandercook SP15 press from the 1940s was used because of time constraints and limitations of working machinery at Massey College in Toronto, where the printing took place. Assuming full alignment and attempting to avoid the relief impression (the indent of font on a page), the author produced and dried the final product (Figure 11).

Despite the completed product, it also was more than just an end, a finished re-creation. Given the physical nature of the task, the form was physically composed: Hands work, set, and design. Each act is deliberate and conscious. The abstract philosophies and understandings of medicine of the 19th century subliminate into the real form and construction. Like the patient, the paper form therefore takes on a physical embodiment surrounded by a social context. Not only is the patient rewritten into new spaces and temporal zones onto the form, but so too is the form onto an entire medical culture. These beliefs contrast current conceptions and cause immediate self-reflection. One notices that the index card, like the patient, is a body with an anatomy and a story. It is a history meant to denote a history, a chart that is meant to chart the patient’s progress. Such reproduction decontextualizes these surrounding environments by necessarily questioning their inclusion. For example, the words habits, causes, and urine have to be written and printed. Why? What do they represent? What would have been better given the knowledge of the 19th century and the restrictions of a page?

FUTURE OF REEMBODYING THE PATIENT

Reviewing records is an act of inherent self-reflection and criticism. History is repeated by the simulated processes of reanalysis, but it is also renewed. Rather than make the artifact useless, remanufacturing engages in a new sense of Benjamin’s “authenticity”40; that is, the form is related to other chart constructions throughout the history of medicine, it is refuged with personal meaning, and it engages in newfound empathy. For although the Hospital Standardization Program and medical committees inadvertently prompted a lack of total consideration of and compassion toward a patient for a more nuanced, segmented approach, building the forms from the bottom up allows renegotiations on what is valuable. How is one represented? How is the body composed and distilled? This inclusion of the self against the hypothetical other necessarily allows engagement in how medical records rewrite the patient, reflect the physician, and are a process of production that embodies so much more than just a form. Both deconstruction and construction occur simultaneously; the medical record is reoriented by understanding elementally.

Such reorientation is particularly relevant to modern chart development. OpenNotes, a project in which patients are given direct access to view their medical records, has “evolved the form and function of the note.”54 Little doctoring of the notes was observed, whereas beneficial effects of considering the patient at the core of the record—and imagining the patient taking part in the record by reading it—were manifold. In particular, medical adherence increased 78% in a population size of 11,155, patients believed they were 87% more in control of their care, and total time spent with the patient did not increase per visit.56 Just as was done in the re-creation of the Queen Street Mental Health Centre index card, restructuring the patient as a subject, not an object, of focus improved care. In fact, at the end of the project’s trial period, 99% of the participating patients wished for the program to continue, and no physician opted out of the service.

CONCLUSION

The results of this historical exploration are an explication of the advance of physicians’ objective records and the decline of the subjective patient view, from the index-card inception through design, accreditation, standardization, forms, and quantity to analysis replacing narration. This history can be reread by redeveloping the original index card, understanding its historical background, and understanding its frayed future in the mid-20th century through consistently observed problems of the medical record committees.

It is believed that errors in the form and the lackluster empathy noted in the various medical record committees’ minutes are a result of subtracting away this patient-centered production, of negating the sociological artifact’s own importance in reconfiguring a body. It is both an end and a means, an accumulating history of medicine, print, and hospitalization that not only affects how care is given, but affects care itself. The numerous charts throughout
the 19th and 20th centuries reflect a 1-dimensional understanding. Only by renewing the forms and experiencing their physical narrative, as is done in the OpenNotes project, can medicine be fully, deeply, and intimately made better.

Disclosure Statement
The author(s) have no conflicts of interest to disclose.

Acknowledgments
Kathleen Louden, ELS, of Louden Health Communications performed a primary copy edit.

How to Cite this Article

References
9. Medical Records Department archival records. 1892-1950;Box 130, File Q1165.
10. Located at: Margaret Robins Archives, Women's College Hospital, Toronto, Canada.
11. Subseries 4.2 Medical Record Miscellaneous. 1973;Box TG 54, File 4. 2. 16. Located at: Miss Margaret Robins Archives, Women's College Hospital, Toronto, Canada.
14. Subseries 4.2 Medical Record Miscellaneous. 1973;Box TG 54, File 4. 2. 16. Located at: Toronto General Hospital foundations, University Health Network Archives, Toronto, Canada.
15. Roy H. Medical register and notes. 1897-1902;F1396, no. 31. Cornwall General Hospital Fonds, Archives of Ontario, Toronto, Canada.
16. Located at: Archives of Ontario, Toronto, Canada.
17. Subseries 4.8 Medical Record Committee records. 1982 Dec 9;Box TG 63, File 4. 8. 1. Located at: Toronto General Hospital foundations, University Health Network Archives, Toronto, Canada.
18. Medical Records Committee minutes. 1958 Apr 20;Box 5, File 37. Located at: Miss Margaret Robins Archives, Women's College Hospital, Toronto, Canada.
20. Located at: Margaret Robins Archives, Women's College Hospital, Toronto, Canada.
23. Subseries 4.8 Medical Record Committee records. 1973;Box TG 63, File 4. 8. 9. Located at: Toronto General Hospital foundations, University Health Network Archives, Toronto, Canada.
24. Medical Records Committee minutes. 1964 May;Box 5, File 38. Located at: Miss Margaret Robins Archives, Women's College Hospital, Toronto, Canada.
25. Medical Records Committee minutes. 1969 Sep;Box 5, File 38. Located at: Miss Margaret Robins Archives, Women's College Hospital, Toronto, Canada.
26. Medical Records Committee minutes. 1969 Oct;Box 5, File 38. Located at: Miss Margaret Robins Archives, Women's College Hospital, Toronto, Canada.
27. Medical Records Committee minutes. 1973 Mar;Box 5, File 4. 8. 10. Located at: Miss Margaret Robins Archives, Women's College Hospital, Toronto, Canada.
32. Salvatore M. Medical record service—A study of growth and development at St Michael's Hospital. Year not given. Box 130, File Q1. Located at: St Michael's Hospital Archives, St Michael's Hospital, Toronto, Canada.
33. Subseries 15 Medical Records Department records. 1981 and 1974;Box TG 80, File 15. 2. 3 and File 4. 8. 9. Located at: Toronto General Hospital foundations, University Health Network Archives, Toronto, Canada.
34. Located at: St Michael's Hospital Archives, St Michael's Hospital, Toronto, Canada.
40. Patient register and notes. 1897-1902;F1396, no. 31. Cornwall General Hospital Fonds, Archives of Ontario, Toronto, Canada.
41. Located at: St Michael's Hospital Archives, St Michael's Hospital, Toronto, Canada.
42. London Psychiatric Hospital patients' clinical casebooks. RG 10-279, MS 856, Reel 7. Located at: Archives of Ontario, Toronto, Canada.
43. Located at: Archives of Ontario, Toronto, Canada.
44. Kingston Psychiatric Hospital patients' clinical case files. RG 10-285, MS 641, Reel 5. Located at: Archives of Ontario, Toronto, Canada.
45. Located at: Archives of Ontario, Toronto, Canada.
46. London Psychiatric Hospital patients' clinical case files. RG 10-279, MS 856, Reel 5. Located at: Archives of Ontario, Toronto, Canada.
47. Located at: Archives of Ontario, Toronto, Canada.
49. Located at: Archives of Ontario, Toronto, Canada.
50. Located at: Archives of Ontario, Toronto, Canada.
51. Located at: Archives of Ontario, Toronto, Canada.
53. GIF (graphics interchange format) file of the typesetting [Internet, cited 2018 Nov 5].