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The Role Of Medical Secretary In Medical Records And Reports: A Comprehensive Review

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Abstract

Background

Medical secretaries' roles and responsibilities have been impacted dramatically by the integration of Electronic Health Records (EHRs) into healthcare settings. This study, carried out at Regional Hospital in Denmark, uses qualitative and quantitative studies in both the endocrinology and emergency departments to investigate how the installation of EHRs has affected medical secretarial work. The findings point to possible advantages like reduced administrative procedures and better data quality, which would raise total healthcare delivery efficiency. But there are drawbacks as well, such the requirement for thorough training and process modification. To overcome these obstacles and maximize the utilization of EHR systems, cooperation between IT specialists, administrators, and healthcare practitioners is essential. The results highlight the significance of taking departmental contexts into account and offering medical secretaries sufficient support throughout the EHR transition, with the ultimate goal being to optimize the advantages and get beyond any potential roadblocks related to EHR integration in healthcare settings.

Keywords: Medical Records, Electronic Records, Medical Secretary, Health reports.

INTRODUCTION

The vital function that medical secretaries play in hospital settings is examined in this paper, with particular attention paid to their duties in scheduling patients, transcribing doctor notes, and making sure that all records are complete. The study explores the

effects of deploying electronic health record (EHR) systems, specifically in a regional hospital in Denmark. It reveals difficulties in medical secretaries' transcription, which impacts doctors' and nurses' workflow. To successfully handle these difficulties, changes were made to the implementation plan. The Danish backdrop of EHR adoption is consistent with global initiatives to improve healthcare via technology, as seen by national IT plans across the globe. Nations that have made large investments in EHRs and health information systems include the USA, Canada, Australia, and several European countries. By emphasizing the practical consequences of EHR adoption and the significance of taking frontline personnel like medical secretaries into account in system design and deployment, this study adds to the continuing conversation on healthcare IT [1].

This essay argues for giving medical secretaries more weight when developing and implementing healthcare IT systems, highlighting their important role in hospital settings. The collaborative work of doctors and nurses has been the primary focus of previous research on computer-supported cooperative work (CSCW). However, this study highlights the significance of involving non-clinical professionals, such medical secretaries, in the development and implementation of health IT solutions. This research highlights the importance of medical secretaries to hospital work arrangements and identifies changes in responsibilities amongst professions through a case study of medical secretaries' activities before and after the installation of an Electronic Health Record (EHR) system. In addition, the notion of "boundary-object trimming" is presented to emphasize the critical function that medical secretaries play in preserving and enhancing the EHR's performance as a boundary object in the hospital setting. The report also emphasizes the significance of researchers being conscious of their perspective and position when conducting studies and highlights the relative obscurity of medical secretaries within CSCW and medical informatics research. Overall, this study emphasizes how important it is to give medical secretaries more credit for their work and how they were incorporated into the creation and execution of healthcare IT systems [2].

Given their important and symbolic responsibilities in the healthcare arena, it is sense to prioritize doctors and nurses in the

design and integration of Electronic Health Record (EHR) studies. Leading publications by the Institute of Medicine and the healthcare literature, such as those written by Anselm Strauss (Strauss et al., 1985) and Marc Berg (1997), which are often cited in Computer-Supported Cooperative Work (CSCW), support the development of information technology (IT) as a way to address issues with healthcare efficiency and quality. Scholarly databases clearly show how underrepresented medical secretaries are: a search for publications with "medical secretaries" in the title returns 41 hits, whereas searches for physicians and nurses return 35,900 and 54,600 results, respectively [3-4].

Only three papers concentrating on medical secretaries have been found by searching academic archives including the ACM library site and two medical informatics magazines (International Journal of Medical Informatics; Journal of the American Medical Informatics Association). Spence and Reddy (2007), for example, outline the critical function unit secretaries play in information-seeking activities conducted by multidisciplinary emergency department teams. Medical secretaries have a crucial role in hospital scheduling and interdepartmental coordination, as explained by Møller and Dourish (2010). Additionally, Møller and Bjørn (2011) clarify the sorting procedures pertaining to radiologists, doctors, and medical secretaries. Another study (Lium et al., 2006) looks at the effects of EHR deployment in a Norwegian hospital with medical secretaries in addition to doctors and nurses. In collaborative information-seeking, medical secretaries are mentioned in passing [5-8].

Additionally, they are included in a study on patient transfers with unidentified non-clinical staff (Abraham and Reddy, 2008). Limited results are obtained from a wider investigation involving medical secretaries and EHRs. Medical secretaries, according to Møller and Vikkelsø (2012), operate at the intersection of the clinical and administrative domains. In advance of the adoption of EHRs, Bertelsen and Nøhr (2005) elaborate on the responsibilities of medical secretaries with regard to paper-based patient data. Furthermore, three studies (Laerum et al., 2004) include medical secretaries in addition to nurses and physicians in quantitative surveys measuring staff satisfaction with installed EHRs. Three studies that were classified as relevant to secretarial staff were

found by Häyrinen et al. (2008) in a survey that covered EHR literature from 1982 to 2002. The papers primarily addressed transcribing errors rather than providing information about the duties of the secretarial staff [9-13].

Medical secretaries, along with other non-clinical workers in hospital settings, seem to be mostly ignored; this is a tendency that they share with assistants and secretaries in more general settings (Karlsson, 2011). According to Erickson et al. (2008), there is a dearth of explicit attention to administrative assistant responsibilities in the literature on computer-supported cooperative work (CSCW) and human-computer interaction (HCI). They outline the knowledge and abilities needed for administrative assistant positions and suggest calling them "articulation workers" to emphasize their importance. A possible reason for the lack of awareness around secretaries and administrative assistants is the belief that their jobs—which are similar to those of technicians—are monotonous, unskilled, or do not qualify as "knowledge work" (Barley, 1996). However, a number of studies in the CSCW field examine "routine work" and technician positions, including phone operators' and photocopier technicians' duties, demonstrating the need for proficiency and competence in their work, which is essential to the operation of organizations (Orr, 1996). The seeming opacity surrounding clerical roles offers a confusing occurrence, given the focus placed within CSCW (Star and Strauss, 1999) on rendering work visible, and the evolutionary linkages of CSCW to Office Automation [14-18].

This study's conclusion emphasizes the vital role medical secretaries play in hospital settings, especially when it comes to the use of electronic health records (EHRs). The importance of incorporating frontline staff members like medical secretaries into healthcare IT development and deployment strategies is highlighted by this research, which looks at their duties, such as scheduling patients and managing records, and evaluates how EHR systems affect their workflow. This study shows that, in spite of the historical focus on doctors and nurses in healthcare IT research, it is important to recognize the non-clinical professionals' contributions to improving healthcare delivery, including medical secretaries.

The study's conclusions support the need for medical secretaries

to be given more credit for their vital role in hospital operations, which adds to the current conversation about healthcare IT. This research highlights the necessity for inclusive approaches to system design that consider the varied spectrum of healthcare professionals participating in patient care by providing actual evidence of their involvement and obstacles faced in the adoption of EHRs.

In addition, this research highlights the wider importance of making invisible labor visible in the context of CSCW. This study calls for a more nuanced understanding of the contributions made by roles that are often seen as routine or unskilled, like administrative assistants and medical secretaries, by highlighting the expertise and skill required for these positions. This paper, in its whole, argues for a paradigm shift in healthcare IT research, one that is more inclusive and honors the various ways that medical secretaries, among other healthcare workers, have contributed to defining the future of healthcare delivery. This research attempts to promote a more comprehensive and successful approach to healthcare IT innovation by elevating the voices of frontline staff and arguing for their involvement in system design and deployment procedures.

Medical Secretary Occupations, cooperative work, and tasks:

Within the hospital's organizational dynamics, medical secretaries are viewed as essential elements of the continual exchanges and technology infrastructures supporting intricate cooperative efforts. Basing itself on Strauss's theoretical framework—which highlights the visibility of actors' efforts in shaping organizational orders—cooperative action in healthcare settings is conceptualized as the result of coordinating work trajectories in response to group endeavor requirements, articulating tasks, and matching individual actions with those of fellow actors. The routinization of contacts and the creation of standard operating procedures (SOPs) and standard operating configurations (SOCs) are common steps taken in the effort to streamline cooperation. SOPs outline recommended actions and interactions, whereas SOCs enable spatial configurations meant to maximize resource use and minimize mobility-related duties. Whether codified in written agreements or integrated into technology frameworks,

these arrangements function as coordination tools that promote cooperation amongst many stakeholders, enable communication, and give real-time updates on the status of work. Furthermore, larger ordering systems that include related activities and artifacts incorporate these coordination mechanisms. Ordering systems facilitate the development of cooperative interactions with increased complexity and scope by coordinating different mechanisms. Thus, actors, technologies, and established practices interact to form the organizational landscape of hospitals in a way that promotes teamwork and helps them accomplish shared goals [19].

Collaborating groups of people have different viewpoints and positions, and they are frequently less aware of the objectives and breadth of the activities of other players than is required for productive cooperation. Thus, the idea of border objects—introduced by Star and Griesemer in 1989—belongs in the conceptualization of phenomena that promote coordination and communication among disparate social settings. These boundary objects, which are usually artifacts, have a malleability that permits customization to specific requirements and limitations while preserving a common identity in a variety of contexts. As border objects, coordination mechanisms are essential for encouraging and maintaining cooperation amongst actors nested inside various social domains. These border objects may be used and interpreted differently by different actors or groups, but their importance as work objects might vary. Pregnant patients who undergo fetal surgery take on dual responsibilities as work objects as an instructive illustration. Surgeons regard the unborn child as their main target and the mother as a secondary target, something that is seen as both a practical and legal barrier. As opposed to this, nurses focus on the mother as their main job object and provide her survival and well-being with their whole attention (Casper, 1998) [20].

Hospitals are portrayed as temporarily stable systems made up of different characters and technologies from this perspective. In this paradigm, organizational structures and coordination mechanisms support and enable the collaborative establishment of roles, groups, and labor divisions. Medical professionals, including nurses and doctors, as well as workers in medical laboratories,

hospitals, and as medical secretaries, coordinate and work together using standard operating procedures (SOPs), standard operating conditions (SOCs), and protocols that are written on paper documents, whiteboards, and electronic health records (EHRs). Acting as border objects, these, for example, serve as 'clinical channels' that promote collaboration between various departments and professional domains [21].

Organizational structures, whether in the public or commercial sector, typically reinforce themselves along gender and racial lines, despite being seen as neutral. Men and women typically hold distinct positions within organizational hierarchies as a result of the allotment of work roles, tasks, and responsibilities. There are gender disparities in several occupations; supervisory, managerial, or authoritative roles are usually held by males. Gendered hierarchies frequently result from these dynamics, even if the systems driving them may be complex. Gender dynamics and professional standards have a significant impact on how job tasks and duties are assigned in the healthcare sector. While gender parity in the medical field is evident in several nations, differences still exist within particular disciplines, such as pediatrics where women predominate and surgery where men predominate. Some professions, including nursing and midwifery, nevertheless draw a large number of female practitioners. Moreover, the use of novel technology always affects work configurations, possibly redefining roles, job allocation, and accountabilities. The result of these kinds of adjustments depends on a number of variables, such as the power relationships and influence between various stakeholders, including management [22].

The introduction of technology innovations like typewriters, dictaphones, photocopiers, and computers has been seen by administrative staff members like clerks and secretaries as both a chance to improve their skills and a risk of job deskilling or redundancy. Results so far have tended to stay the same, with some people potentially deskilling while others have experienced upskilling. Similarly, because voice recognition and electronic health records (EHRs) may automate transcription and data entry, these developments could threaten the conventional jobs of medical secretaries [23].

Research Data about Medical Secretary:

Two departments—the endocrinology and emergency departments—of the Regional Hospital located in the Central Region, one of Denmark's five administrative divisions, provide the basis for the qualitative and quantitative research that explores the work of medical secretaries and its restructuring after the implementation of an Electronic Health Record (EHR) system. About 2,000 people work at the Regional Hospital. Among them are 300 doctors, 970 nurses, 130 medical secretaries, and 80 physiotherapists. Appraised as one of the country's most effective hospitals, it has 360 beds and sees about 30,000 admissions annually, of which 85% are acute cases. Each year, 110,000 patients are served by the hospital's outpatient clinics. Operating out of 167 beds, the hospital's endocrinology department sees about 12,500 admissions a year, 90% of which are classed as acute cases. There are thirty medical secretaries, eight physiotherapists, 169 nurses, and 65 doctors on staff. Eight wards, each with a focus on stroke services, dialysis, cardiology, rheumatology, gastroenterology, diabetes, outpatient cardiac care, and respiratory medicine, make up the department. It also has an outpatient clinic that sees about 15,000 people annually. Another important section of the hospital is the emergency department, which handles 32,000 acute cases a year and has 40 nurses, 12 healthcare workers, and 5 medical secretaries on staff [24].

This paper's data on medical secretaries was released as a component of a broader investigation into the adoption of a "comprehensive" EHR. The EHR includes booking, prescription administration, test requisitions and results, patient administration, and clinical documentation modules. Regional Hospital had previously begun using the Medication, Requisition/Results, and Booking modules a few years prior. A new module that we will refer to as "PAS" will take the place of the GREEN SYSTEM, the previous patient administrative system (PAS). The complete new CLINICAL PROCESS module was used to document clinical activity, replacing all paper-based records maintained by doctors, nurses, physiotherapists, midwives, and other healthcare professionals. This was the first time an EHR with such a wide variety of integrated features was introduced in the Central Region. The microbiological system and the photo archiving and communication systems were not integrated into the EHR. As a result, rather than calling it "complete," the region

called it "comprehensive." [25].

The PAS is particularly interesting to this study because patient administration is a primary responsibility of medical secretaries. Patient information (name, civil registration number, address, family members, etc.) is entered into the PAS together with information about admissions to, discharges from, and transfers to and from departments of Regional Hospital. The CLINICAL PROCESS, which required physicians to use a variety of menus and fields designed by Regional Hospital employees to document treatment and care in an organized manner, is also noteworthy. Codes for recording care and treatment are connected to the text fields and menus when applicable. For instance, the National Board of Health receives automatic data from the new EHR regarding codes for Diagnosis Related Groups (DRG), which are used to compensate the hospital for its services. One of the key responsibilities of medical secretaries was and still is the registration and reporting of DRG codes [26].

In three stages, the EHR was put into use in the spring of 2010. This research focuses on the first phase, which involved the endocrinology and emergency departments, which employed nearly half of the hospital workers. Because doctors worked in both departments and patients were frequently transferred between them, both departments were included in the initial phase. The study sought to both discover disparities between the two departments and produce results that were consistent between them. Physiotherapists and doctors, however, collaborate across departments, and neither the questionnaire nor the interviews revealed any appreciable variations. Observations and interviews with medical secretaries revealed that their daily responsibilities and routines were quite comparable between the two departments. [27]

Medical Records and Medical Secretary:

Medical secretaries take part in the teamwork related to patient care. Despite their occasional interactions with patients, they support the upkeep of patient records and do so in a manner compliant with departmental work schedules. Before the data are archived, medical secretaries "tidy" the files pertaining to patients who have been discharged. "Tidying" encompasses a variety of tasks: Medical secretaries make sure that the record folder

contains all of the transcribed doctor's notes and test results. Based on the discharge summaries, they record the doctors' final diagnoses as DRG codes into the GREEN SYSTEM. Entering the codes in the GREEN SYSTEM is one of the medical secretaries' most important responsibilities from the perspective of the hospital administration, as the system gathers codes and reports them to the National Board of Health on a monthly basis, which utilizes them to reimburse the hospital. Entering a patient's status in the GREEN SYSTEM and a table at the front of a paper-based record is another aspect of organizing records. In order to enable a quality-control procedure between junior and senior physicians, records are additionally categorized into two stacks: The former writes discharge summaries, which the latter reads and assesses. For one week after discharge, all records are retained at Ruth's office in case test results come in and need to be added to the file. Ruth and her colleagues are also in charge of requesting and returning records on behalf of nurses and doctors, as well as facilitating contact between her department and the archive [28].

Ruth uses a number of ordering techniques to get her work done. One holds paper records and is made up of A4-sized folders, drawers, binders, and trolleys. Another is made up of computerized systems like the GREEN SYSTEM, a database that records admissions, diagnosis codes, and personal information about patients. The GREEN SYSTEM is generally used by medical secretaries to document patient admissions, discharges, and bookings as well as to preserve transcribed physician notes. In contrast, clinicians primarily use paper-based records for treating and caring for patients. When the medical secretaries are busy, nurses may also use it.

Ruth jokingly refers to the archives' staff as "archive girls," and "the bag" is a record's folder within them. Her message is meant to serve as a reminder to the archive personnel to note on the folder the record's intended destination. Sending the record straight to the other department saves time and effort; the archive does, however, require knowledge of the record's position in case it is needed by another party. Finding medical documents might be difficult at times. Patients may be admitted more than once, travel between departments, and 'the bag' may not necessarily indicate where the information is kept. Ruth states that there are often two

methods to find a record whose location is unknown: either get in touch with the department where the patient was last admitted or search the GREEN SYSTEM to check whether the patient has admissions or bookings at other departments [28].

Writing down doctor's notes is one of the main responsibilities of medical secretaries. Three digital systems are switched between to accomplish this. The SPEECH DICTATE SYSTEM uses recorders housed in the nurses' office, where patient records are maintained and rounds are scheduled and completed, to save sound recordings of doctors' dictations. The sound files are centrally kept in a shared database, arranged by department and priority. As a result, medical secretaries not only have time to aid colleagues in other departments when they fall behind, but they can also handle the dictation for their own department. Hence, medical secretaries from several departments share transcription duties. Physicians must enter number codes on the recorder to indicate the type of note they have made. These are '11' for new or acute patients, '12' for forward round dictation, '22' for outpatients, and '14' for discharge summaries, in priority order. Medical secretaries are able to prioritize transcribing with the use of codes that appear in the SPEECH DICTATE SYSTEM, while also considering the workload on their own ward [28].

When medical secretaries transcribe, circumstances like these frequently arise. They must refer to medical dictionaries to verify terminology or seek advice from peers who possess greater knowledge in a certain medical field. Precision is essential because minute variations might totally change a diagnosis. As an illustration, a doctor clarified that while "encephalitis" refers to brain inflammation, "(hepatic) encephalopathy" is caused by liver malfunction, and the two diagnoses require completely distinct courses of therapy. It might be challenging to distinguish between terms; a trained ear is needed. Note transcription, like typing in general (Goodman and Perby 1985), requires competence. Secretaries navigate between digital platforms, listen, type, and use the pedal all at once, all the while distinguishing between synonymous and occasionally nonsensical medical terminology [28].

One of Ruth's responsibilities as a ward employee in an outpatient clinic is scheduling exams. Following the appointment, she prints a

patient notification letter and mails it via regular mail together with folders containing information on the examination, dietary restrictions, and fasting guidelines. Patients can call at a later time to ask about exams, rescheduling, or cancellations. Medical secretaries answer a variety of questions from physicians, other department employees, family members, and other parties not affiliated with the hospital. They are contacted concerning issues pertaining to bookings, non-clinical data (addresses, DRG codes, etc.), patient record locations, or, more broadly, putting questions in touch with answerers. Therefore, one of their main responsibilities is to act as information gatekeepers (Spence and Reddy 2007). It is possible to say that medical secretaries manage the non-clinical facets of patient treatment plans and medical records. They register and submit DRG codes to the National Board of Health, keep track of and organize admissions, bookings, and discharges, identify records, request and collect records from the archives, and transfer records to other staff members. In addition to performing a variety of other duties, they are transcribing medical notes and serving as a go-between for patients, relatives, and staff (See also Bertelsen and Nøhr 2005). Their labor is not just repetitive; rather, it calls for expertise and practical knowledge. They are both articulation workers and gatekeepers of information (Spence and Reddy 2007; Erickson et al. 2008) [28]

The GREEN SYSTEM, SPEECH DICTATE SYSTEM, and NOTE EDITOR attest to the computerization of medical secretaries' labor that began in the 1980s. These systems are a part of the department ordering system, even though they are not integrated with the patient records. The department and its doctors and nurses, with whom they coordinate and align their work, are the main cooperative work arrangement for medical secretaries. However, they also collaborate with other medical secretaries in their work arrangement, providing support for record handling and transcription. Although medical secretaries, nurses, and doctors all use patient data as a shared ordering system, their opinions on the matter vary. The patient is the doctor's or nurse's principal work item, with the patient record coming in second: Their major focus is the patient, but it also records and documents patient care. Embedded guidelines and care pathways may also inform and steer their work. Medical secretaries are primarily concerned with the completeness, integrity, and formal features of the records and

related information channels. Medical secretaries are record keepers, whereas clinicians are caregivers for patients [28].

The replacement of the old GREEN SYSTEM with the new PAS that was incorporated into the EHR was the most noticeable and immediate shift for the medical secretaries. Since the late 1980s, the majority of Danish hospitals, including Regional Hospital, have been using the GREEN SYSTEM. Medical secretaries could therefore move around in it with maximum efficiency and were highly skilled at using it. Consequently, the medical secretaries themselves and the implementation group believed that the EHR's deployment would be frustrating because it would take some time for them to regain their prior level of skill. The plan for implementation called for little training in the new system before it was put into use and a lot of local support during the first 14 days of operation. Despite this, since their learning curve was anticipated to be higher than anyone else's, medical secretaries received more training than any other group. That forecast proved to be accurate, and the secretaries were the most important group in the poll, along with the doctors. Their problems affected the other groups as well, causing some to be eliminated, others to transition between jobs, and changes in duties and responsibilities [28].

Conclusion:

In summary, there are potential, and challenges associated with integrating Electronic Health Record (EHR) systems into healthcare settings, especially when it comes to medical secretarial work. It is clear from the qualitative and quantitative research done at the Regional Hospital in Denmark that the use of EHRs has a big impact on medical secretaries' duties and obligations. One way or another, the adoption of EHRs presents opportunities to improve data quality, streamline administrative procedures, and boost overall healthcare delivery efficiency. Medical secretaries may find that they have access to cutting-edge instruments and technologies, like computerized transcribing and expedited documentation procedures, that help them carry out their duties more successfully. Medical secretaries may benefit from increased productivity and job satisfaction as a result of being able to concentrate on higher-value tasks that improve patient care. For medical secretaries, the switch to EHRs presents additional

difficulties, such as the requirement for thorough training and workflow adjustment. The study emphasizes how crucial it is to provide medical secretaries with sufficient training and assistance during this transitional period in order to minimize any possible disruptions to their workflow and guarantee the smooth integration of EHR systems into regular practice. The results also highlight how crucial it is to take into account the particular needs and circumstances of various healthcare departments, since the effects of implementing an EHR can change based on the type of specialization and patient base that is served. Healthcare practitioners, administrators, and IT specialists must work together to overcome these obstacles and maximize the usage of EHR systems in order to promote effective and efficient delivery of healthcare. In summary, medical secretaries face a variety of obstacles and opportunities as a result of the integration of EHRs, but in the end, this technology has the power to completely transform administrative procedures and improve patient care in healthcare settings. More investigation into the effects of EHR implementation on medical secretarial work is required, as is cooperation in order to develop ways for optimizing its advantages while resolving possible drawbacks.

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