AN ANALYSIS OF THE MEDICAL CHART: COMMUNICATION IN THE CLINICAL SETTING

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Abstract:
Medical charts serve as one of the primary means of patient information documentation across different fields of medicine. In the clinical setting, physicians typically write medical charts after conducting in-person, verbal interviews with patients. Medical charts organize information from patient interviews in a structured, standardized format. However, the roles of medical charts expand beyond documentation of the patient interview. Health care practitioners must recognize the various roles of medical charts and examine the nuances of medical discourse in order to deliver effective patient care.

Keywords:
Medical charts | Communication | Clinical | SOAP notes | Continuity of Care | Medical discourse | Patients | Physicians | Medical students

Introduction

Medical charts have been widely acknowledged as the primary medium for physicians to document the status of patients’ health (Mann & Williams, 2003). Medical charts maintain a record of patient care including examinations conducted, tests ordered, working diagnoses, and treatment plans. The medical chart also monitors long-term health through documentation of a patient’s medical history, which can include risk assessments and a family history of diseases. However, the purpose of the medical chart expands beyond health documentation to include a legal component. During the litigation process, medical charts function as written evidence to hold health care practitioners accountable for medical malpractice (Griffith, 2015). Medical charts are also protected under the Health Insurance Portability and Accountability Act (HIPAA), which the US government implemented in 1996; this policy establishes privacy standards for patients' protected health information and limits access to medical charts to the patients themselves and to the health care practitioners directly involved in patient care (Nass, Levit, & Gostin, 2009). By serving as a means of communication between different health care practitioners, medical charts facilitate the seamless integration of patient care between different health care providers, also known as “continuity of care” (Gulliford, Naithani, & Morgan, 2006). This study evaluates the various roles of medical charts, the implications of a standardized medical chart format, the characteristics of effective medical charts, and the nuances of medical discourse in order to identify writing strategies that healthcare practitioners must adopt to effectively communicate the needs of patients.
in the clinical setting.

**Methods**

In order to minimize the confounding effects of variations in medical chart templates, three interview subjects were selected from a single UC Davis student-run clinic, Paul Hom Asian Clinic. All three health practitioners have written medical charts using the same medical chart template.

An in-person interview was conducted with Dr. Dennis Pocekay, M.D., M.P.H., a retired physician with a background in Occupational Health. Dr. Pocekay serves as a preceptor at Paul Hom Asian Clinic, where he supervises and mentors first-year medical students. An in-person interview was also conducted with Betty Hom, a first-year medical student at the UC Davis School of Medicine, who worked as a medical scribe before entering medical school. The interview with Jeffrey Duong, Ph.D., M.P.H., another first-year medical student at the UC Davis School of Medicine, was held over FaceTime. Jeffrey Duong possesses ample experience writing in academia, having written several publications on mental health as a graduate student at Johns Hopkins Bloomberg School of Public Health. See Appendix A for the interview protocol.

Despite exhibiting varying backgrounds and levels of experience in the medical field, the interview subjects share a common role at Paul Hom Asian Clinic: health care practitioners providing free primary care services to the underserved Asian population in Yolo County.

**Results**

**Context: The Roles of Medical Charts**

Medical charts serve as comprehensive representations of patients’ health. First-year medical students Jeffrey Duong and Betty Hom highlighted the breadth of medical charts, comparing the medical chart to a “diary” and “story,” respectively. “Medical charts paint a picture of the patient” and are “specific to the problems of the individual patient” (B. Hom, personal communication, February 29, 2016). Furthermore, “treatments are so nuanced” that documentation of a patient’s entire health history plays a crucial role in physicians’ decisions for moving forward with patient care (J. Duong, personal communication, March 4, 2016). Physicians tailor treatments to individual patients based on their interpretation of the information available to them through medical charts. By documenting the health progress of patients, medical charts allow physicians to examine patterns of health in order to formulate new treatment plans and alter any ineffective treatment plans accordingly.

Medical charts also play an integral role in the continuity of care. Due to limited resources, primary care physicians (PCPs) are often required to refer patients requiring additional medical services to other health care practitioners. The medical chart provides a broad overview of a patient’s health in an organized manner for specialists, medical students, nurses, counselors, and other health care practitioners directly involved in a treatment plan. Health care practitioners utilize medical charts to communicate their assessments of a patient’s health status and suggest appropriate treatment plans. As the primary medium through which multiple health care practitioners communicate patient information, the medical chart thus plays a crucial role in determining the outcome of patient care (J. Duong, personal communication, March 4, 2016).

**Format: SOAP Notes**

When writing medical charts, first-year medical students Jeffrey Duong and Betty Hom follow a standardized format taught
among all medical schools in the US, commonly known as SOAP notes (Crausman, 1998). The acronym, “SOAP,” represents four components: “subjective,” “objective,” “assessment,” and “plan.” The “subjective” component of the medical chart describes patients’ narratives and lists the symptoms reported by the patients themselves. The “objective” component details the physician’s observations and includes the results of physical examinations and laboratory tests. In the “assessment” portion, physicians incorporate both the “subjective” and “objective” findings to explain a differential diagnosis. Physicians conclude a medical chart with the “plan,” in which they formulate a treatment plan for the patient. This may include additional laboratory tests, referrals to specialty services, and any further steps for patient care (B. Hom, personal communication, February 29, 2016). However, the SOAP notes components serve as broad categories for more detailed information. Thus, medical students are also trained to utilize subsections; the “subjective” component, for example, includes subsections such as history of present illness, past medical history, social history, family history, and review of systems (D. Pocekay, personal communication, April 1, 2016).

The SOAP notes format has proven to be an effective tool for organizing patient information. With the SOAP notes format, health practitioners “know where to go when searching for relevant information in medical charts” (B. Hom, personal communication, February 29, 2016). According to first-year medical student Betty Hom, organization of patient information under the SOAP notes format can facilitate an understanding of physicians’ thought processes, including how they “develop a diagnosis, list their reasons for ruling out other diagnoses, and explain how they came up with a treatment plan” (B. Hom, personal communication, February 29, 2016). Similarly, Jeffrey Duong explained that “the medical chart complements the patient interview”: physicians compile raw data drawn from the verbal patient interview and reorganize the information in a medical chart using the SOAP notes format (J. Duong, personal communication, March 4, 2016).

However, stringent compliance to the standardized SOAP note format can potentially limit the effectiveness of medical charts. According to Dr. Pocekay, strict categorization of patient information may potentially disrupt the cohesion. He explains that “it is more important for the writing in medical charts to flow than to be in a particular place” (D. Pocekay, personal communication, March 3, 2016). As a preceptor at a student-run clinic, Dr. Pocekay thus encourages medical students to “avoid being too dogmatic about where they place information within the subjective section.” Dr. Pocekay explained this in the context of a clinical example, in which a patient who smokes experiences a heart attack one year after bypass surgery. Under the “subjective” component of SOAP notes, “a medical student may write ‘History of present illness: 63 year-old Asian male admitted with severe chest pain (feels like an elephant on his chest), Past medical history: Had coronary bypass surgery 1 year ago, Social history: Has smoked 2 PPD for 50 years, and continues to smoke at this time’” (D. Pocekay, personal communication, April 1, 2016). Meanwhile, “a physician would be more likely to write ‘History of present illness: 63 year-old Asian male smoker admitted with severe chest pain just one year after bypass surgery’” (D. Pocekay, personal communication, April 1, 2016). Experienced health care practitioners exhibit a greater tendency to “move up” any highly relevant information in order to highlight patient information requiring immediate attention. This facilitates continuity of care by enhancing the ease at which other health care practitioners may detect patient information crucial to formulating a treatment plan (D. Pocekay, personal communication, April 1, 2016). Thus, the accessibility of important patient information in the medical
charts that students write can be used to gauge their development from trainees to experienced health care practitioners.

Characteristics of Effective Medical charts

Brevity serves as one of the primary characteristics of an effective medical chart. As a preceptor, Dr. Pocekay has noticed that first-year medical students write significantly longer medical charts relative to more experienced physicians. He explained that first-year medical students often use language that is “too flowery, with double adjectives to describe every noun” (D. Pocekay, personal communication, March 3, 2016). He also attributed their excessive writing to their inexperience: “they don’t know what is important to bring up, making it unwieldy to get through the patient history” (D. Pocekay, personal communication, March 3, 2016). First-year medical students Jeffrey Duong and Betty Hom acknowledged this, citing their unfamiliarity with medical terminology and the SOAP notes format as the basis for their tendencies to write excessively. However, after several months volunteering at Paul Hom Asian Clinic, where medical students have the opportunity to practice writing medical charts in the SOAP notes format, receive feedback from preceptors, and learn precise, standardized medical terminology, both Jeffrey Duong and Betty Hom acknowledge that they have significantly condensed their writing. This improvement in brevity, a feature of effectively written medical charts, thus exhibits a positive correlation with clinical experience among medical trainees.

Still, health care practitioners must regulate the brevity of medical charts to avoid omitting important medical information. Jeffrey Duong and Betty Hom identified content as the most crucial determinant of the quality and effectiveness of a medical chart; incompleteness resonated with both Jeffrey Duong and Betty Hom as the most critical problem they have encountered in medical charts. According to Jeffrey Duong, “medical charts are incomplete when physicians do not clearly lay out the logic of how they came about a diagnosis or have an outline of potential less likely differential diagnoses” (J. Duong, personal communication, March 4, 2016). Jeffrey Duong further explained that “careful documentation of a physician’s individual encounter with a patient is important from a patient’s perspective. If a doctor fails this, the patient suffers because they would have to re-explain themselves.” Dr. Pocekay thus suggests first assessing what must be documented, then writing “the minimum that needs to be said” (D. Pocekay, personal communication, March 3, 2016). However, Dr. Pocekay also emphasizes that in early stages of medical training, “it is important for medical students to be complete and write too much, until they know what might be omitted” (D. Pocekay, personal communication, April 1, 2016). The ability of health care practitioners to avoid omitting vital patient information while maintaining brevity in medical charts must be learned by experience.

Language in Medical Charts

Similarly, the language that health care practitioners use to craft medical charts must also be carefully regulated. Dr. Pocekay emphasized the need for health care practitioners to “make [their] writing only as certain as [they] have the right to be” (D. Pocekay, personal communication, March 3, 2016). According to Dr. Pocekay, the manner in which one frames a diagnosis can indicate whether or not a diagnosis has been developed. For example, pending diagnoses must be labeled using vocabulary such as “possible” in order to indicate that the working diagnosis has not yet been finalized. Jeffrey Duong further explained that because diagnoses are rarely “black and white,” health care practitioners must avoid using phrases with strong, definite distinctions such as “rule out” (J. Duong, personal communication, March 4, 2016). Rather, an assessment of a differential diagnosis should be phrased in terms of
likelihood, using alternative phrases such as “very unlikely” or “less likely.”

Seemingly minor nuances in diction can also reflect the lack of inclusivity in patient care. Dr. Pocekay alluded to the phrase “rate your pain from 1-10” as an example of a poorly-worded question still commonly asked by health care practitioners; this phrase, however, can elicit very different responses among individuals of different ethnicities, and can be difficult to translate into another language (D. Pocekay, personal communication, March 3, 2016). Likewise, Jeffrey Duong acknowledged that “medicine has been slow to change when it comes to being more inclusive” (J. Duong, personal communication, March 4, 2016). Jeffrey Duong further explained that “the medical field is very behind on gender pronouns” (J. Duong, personal communication, March 4, 2016). Gender pronouns used in medical charts have been limited to binary pronouns such as “he” or “she,” excluding individuals who do not strictly identify with either gender (J. Duong, personal communication, March 4, 2016). The medical field has only very recently begun to address the gender spectrum, and continues to use archaic gender pronouns (Deutsch et al., 2013). Use of such non-inclusive language in the clinical setting can distort a patient’s narrative and limit the capacity of medical charts to effectively and accurately communicate the needs of patients.

Discussion

Medical charts are utilized extensively throughout the medical field. Physicians formulate treatment plans and make decisions for patient care based on the health information available to them, as documented in medical charts. Physicians also rely on medical charts to communicate with other health care practitioners involved in the continuity of patient care. Standardization of the medical chart through SOAP notes has proven to facilitate continuity of care; effective and thus adaptable use of the SOAP notes format allows for health care practitioners across all specialties to more easily navigate the medical chart. The quality and effectiveness of medical charts can also be determined by their length and content; effective medical charts contain sufficient health information while maintaining brevity. While structural components of medical charts can be addressed and improved with experience in the clinical setting, rhetorical components of medical charts, such as nuances in language, are often undermined. However, nuances in language can alter the assessment of a patient’s health status and thus the outcome of patient care. Moreover, nuances in language, such as the vocabulary commonly used in medical charts, have revealed that the medical field has been slow to adapt to the diversity of the patient population. Improving the patient experience thus requires that health care practitioners recognize and adopt inclusive language in the clinical setting. Health care practitioners must be especially conscientious about setting aside their biases in writing medical charts, since the diction used in crafting the narrative of their patients can color the view of other health care practitioners involved in the patients’ continuity of care. Ultimately, health care practitioners must demonstrate greater sensitivity in how they communicate the needs of patients, especially in medical charts.
References


APPENDIX

Appendix A: Interview Protocol

Background Information:
• Do you have any experience with writing outside the medical field? If so, how does that differ from writing in the medical field?

Medical charts as a Genre:
• Who reads medical charts?
• What is the purpose of medical charts?
• How are medical charts important for patient care?

The Role of Medical charts in Making a Diagnosis:
• Has writing a medical chart ever helped you with a diagnosis?
• Does writing information down help you organize your thoughts?
• Has writing patient information ever changed your thought processes or diagnosis?
• Can changes in wording/vocabulary alter a working diagnosis?

Effective Writing in Medical charts:
• Can you give an example of good writing in medical charts? What about the writing made it effective?
• Have you ever encountered any poorly written medical charts? If so, what made the writing ineffective?

Evolution of Writing in the Medical Field:
• How and where did you learn to write medical charts?
• Has working as a medical student/physician changed your writing style? How has your writing of medical charts evolved since you first began as a medical student?