Physician Documentation Impacts Hospital Mortality Rates for Acute Myocardial Infarctions

Glenn Krauss, RHIA, CCDS, and Jeffrey E. Epstein, MD, FACPA

Introduction

Several recent studies have shown that better physician documentation, in the medical record, leads to lower mortality rates and improved clinical outcomes. One study showed a 30% reduction in the “in-hospital” mortality rate in patients admitted with myocardial infarctions (1) and another study showed a reduction in the 30-day mortality rate in patients with severe acute kidney injury (2). A third study showed a reduction in unplanned intensive care unit admissions (3) and a fourth study discussed how convenient access to a patient’s medical record can help produce more accurate diagnoses, which, in turn, can lead to better outcomes (4). These four articles, taken together, strongly suggest that better physician documentation is an essential component in achieving optimal clinical outcomes. In this article, we will review these studies and then discuss the mechanisms that can explain why better documentation will lead to better outcomes.

Medical Records and Quality of Care in Acute Coronary Syndromes

In their 2008 article, Medical Records and Quality of Care in Acute Coronary Syndromes, a team of researchers from Duke University Medical Center and the University of Cincinnati School of Medicine evaluated the quality of the admission history and physical in over 600 patients randomly selected from patients admitted to 219 US hospitals participating in the CRUSADE National Quality Improvement Initiative (1). They designed a standardized data collection instrument that was used by their physician reviewers to assess the quality of the admission history and physical report. Their medical record quality score was based on the inclusion, and level of detail, of key elements in the history and physical. These elements included the history of present illness (8 points) and the medical decision-making (4 points). The scoring for the medical decision-making was based on the documentation of a problem list, differential diagnosis, discussion of co-morbid conditions and the use of evidence based medicine in their treatment plan.

The results of this study were striking, showing a 30% reduction in the “In-Hospital” mortality rate of patients with a non-ST elevation myocardial infarction (NSTEMI) when the medical quality score was high (16-20 points) rather than low (0-10 points). This is noteworthy because it suggests that three (3) deaths per 200 patients admitted to the hospital (1.5%) can be prevented if the initial documentation is
complete and thorough. It suggests that physicians can save lives by improving their documentation in the medical record.

The Impact of Documentation of Severe Kidney Injury on Mortality

In their December 2013 study entitled The impact of documentation of severe kidney injury on mortality, a team of researchers from the University of Pennsylvania Medical School found that after adjustment for severity of illness, formal acute kidney injury (AKI) documentation was associated with reduced 30-day mortality – OR 0.81 (0.68 – 0.96, p = 0.02) (2). In addition, patients with formal documentation of AKI were more likely to receive a nephrology consultation (31% vs. 6%), fluid boluses (64% vs. 45%) and had a more rapid discontinuation of ACE inhibitors (HR 2.04, CI 1.69 – 2.46, p < 0.001).

They concluded that formal documentation of acute kidney injury was associated with improved survival after adjustment for illness severity among patients with creatinine defined acute kidney injury (AKI).

Prevention of Unplanned Intensive Care Unit Admissions and Hospital Mortality by Early Warning Systems.

Additional evidence comes in the form of a study from the University of North Carolina School of Nursing, which was published in November 2013. In this study, entitled, Prevention of Unplanned Intensive Care Unit Admissions and Hospital Mortality by Early Warning Systems, researchers found that patients exhibit physiological changes up to 8 hours prior to an arrest event (3). Some deaths, in this study, were attributed to a lack of documentation, inability of caregiver to recognize early signs of deterioration and lack of communication between healthcare providers. They concluded that early warning systems that are supplemented with decision aids and clinical support systems, produce an effective screening system that decreases unplanned intensive care unit admissions, and also reduces hospital mortality.

This study highlights the importance of fully informed care, being alert for possible complications and having robust communication among providers. Good physician documentation is an essential component of this type of care as this can lead to more alert care and more fully informed care.

The Principle Diagnosis, the Differential and Thoughtful Assessments

The final article is entitled Can Electronic Clinical Documentation Help Prevent Diagnostic Errors (4). This was published in March 2010 in the NEJM and it explores the importance of making an accurate diagnosis and then clearly communicating what is going on with the patient in the medical record. It discusses the quality of the electric note and wonders if it will be better than paper notes, observing that the paper note was mostly free-text narrative while many computer notes are made up of check boxes and prefabricated templates.

The article argues that the quality of the note is very important and suggests that we must continue to use free-text in certain parts of our clinical notes, even when the
note is electronic, “free-text narrative will often be superior to point-and-click boilerplate in accurately capturing a patient’s history and making assessments” (4).

The article also suggests that the act of composing a good note, can help the physician come to a more precise and accurate diagnosis and it produce a more thoughtful and complete differential which, in turn, can lead to a better plan of care. “The second way in which EHR’s can foster thoughtful assessment is by serving as a place where clinicians document succinct evaluations, craft thoughtful differential diagnoses, and note unanswered questions” (4).

This article is pointing out the fact that disciplined documentation can help clinicians clarify and organize their thinking as they compose their notes, write orders and formulate plans of care. Disciplined documentation can lead to better care and better outcomes.

The article concludes with the following idea about the medical record and physician documentation, “clinicians need to take back ownership of the medical record as a tool for improving patient care. Physicians should be engaged in reengineering documentation, with the goal of building a more distributed, reliable, content-rich, succinct and efficient system. Diagnosing illness is one of our most important professional responsibilities and patients justifiably expect us to perform this difficult task well. Documentation represents a pivotal tool that can help us fulfill this responsibility” (4).

The article correctly points out that the medical record is a powerful tool that physicians can use to clarify their thinking, develop good plans of care and then communicate their thought process to the healthcare team.

Having convenient access to this record, helps all members of the provider team provide more fully informed and coordinated care for the patient. Physicians must take back control of this important tool and make sure it is accurate, complete and content-rich.

Better Documentation Leads to Better Care which Leads to Better Clinical Outcomes

In summary, several recent studies have shown that better documentation in the medical record will lead to better clinical outcomes. The act of documenting helps physicians clarify their thinking and then it helps the physician communicate his or her thought process to the team of healthcare professionals taking care of the patient. An excellent note, done in the SOAP format of Lawrence I Weed, MD (5) produces a command and control type of communication, so that all members of the team can understand the probable causes of the symptoms and the physician's plan for treatment and further work up.

When clinicians clarify and organize their thinking and then use their documentation to communicate their thoughts to the healthcare team, clinical outcomes are dramatically improved and mortality rates are significantly lowered because the care is better designed, more fully informed, coordinated and all members of the team are alert to possible complications and challenges with each individual patient.

It is time that physicians take responsibility for excellent documentation in the medical record as part of their duty to help their patients achieve optimal health and best outcomes. This is a very positive and engaging message for physicians, because we can now improve the quality of care
we provide and produce better outcomes for our patients by merely documenting better in the medical record. Taking back control of the medical record and populating it with excellent physician notes can have important implications for the quality of the clinical outcomes, and it can have important implications for the rest of our healthcare system since so many aspects of care depends on high quality physician documentation.

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Dr. Epstein is the Chief Medical Officer of Casa Healthcare. Casa handles MACRA-MIPS for Primary Care doctors. It is a “Turn-key Solution” and FREE. Medicare pays 100%. jeff@casahc.com. www.casahc.com.

Glenn Krauss is Director of Clinical Documentation Improvement and continues his national influence through thought provoking posts, articles and presentations. Glenn is currently starting the Medical College of Physician Documentation. www.physicianandocumentation.org.