The Six Domains of Burden: A Conceptual Framework to Address the Burden of Documentation in the Electronic Health Record

Position Paper of the American Nursing Informatics Association Board of Directors

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Approved: June 23, 2020

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As the nation works to address the issues surrounding the burden of clinical documentation in the electronic health record (EHR), a framework to conceptualize "burden" in its many forms is needed. When referring to burden as a single entity, we lose the fact that problems with the EHR stem from multiple causes that need attention from varied groups of stakeholders. A framework can provide structure for improvement efforts as work is conducted, evaluated, categorized and reported. This framework has been developed with input from stakeholders across the nation who serve in leadership roles in the development, design and use of clinical systems. It is a working model that will evolve over time as new issues arise or previously unidentified areas of burden are added. This framework offers six domains of burden, each with varying levels of overlap with the other domains and transcends all care settings. Each domain represents an area in need of further evaluation, research and innovative approaches to assist in the transition from the current state of EHR documentation to one where it is perceived as a valued partner in care delivery and a true patient centered system. The six domains of burden are:

1. **Reimbursement** – Documentation, coding and other administrative data entry tasks required for payment
2. **Regulatory** – Accreditation agency documentation requirements
3. **Quality** – Documentation required to demonstrate that quality patient care has been provided. This includes documentation requirements by the healthcare organization itself, as well as by governmental and regulatory agencies
4. **Usability** – Limited and insufficient use of human factors engineering and human-computer interface principles resulting in extra time spent entering data, scrolling, clicking and searching for pertinent information in the record
5. **Interoperability/Standards** – Insufficient configuration standards resulting in duplication and re-entry of data even though it resides elsewhere, either internal to the organization or in an external system.
6. **Self-Imposed** - (by the healthcare organization) aka - "We've Done it To Ourselves" - Organizational culture's influence on what should be documented can exceed what is needed for patient care, including fear of litigation, "we've always done it this way", inadequate education, and misinterpretation of regulatory standards.

Each of these domains of burden are provided in Table 1 with illustrative examples to highlight the issue. Included at the bottom of the table are the stakeholders who own the issues and have the primary responsibility to address the burden. Most of the six domains of burden will require multiple stakeholders working in partnership with one another to ensure a collective and comprehensive strategy to drive burden reduction.

Domain Relationships

The relationship between each of the domains includes some overlap. Note that all domains rest within the domain of usability. The concept of usability based on the principles of human factors engineering is essential to all aspects of configuration in the EHR. Each of the remaining five domains must have improvements in how they are presented to the clinician (or patient) and be intuitive, support workflow and reduce cognitive workload. Ideally, coding for the purposes of billing should occur behind the scenes without providers needing to choose from long drop-down lists, duplicate notes or unnecessarily co-sign documents. Until EHRs become sophisticated enough to do this, any documentation required for billing should be evaluated to ensure its ease of use. Additionally, improvements to interoperability of patient data across care settings will continue to be burdensome if not accessible in an easy to access and use format. Bringing external data into an EHR from another provider is optimal, but if it increases foraging time because it's on a separate tab in a non-integratable format, it may never be reviewed. This universal thread of usability will be the key element to realizing an EHR that is a value-added tool.

Overlapping can also be seen between the domains of Self-Imposed, Regulatory, and Quality – with Self-Imposed residing in the center. Healthcare organizations are full of well-intended professionals who request added documentation components that are either duplicative, needed for reasons other than patient care, or result in no meaningful value. Clinical professionals are passionate about the work they do and often insist on documenting detailed information that may not be needed or helpful in the overall care of the patient. An organization's culture can contribute to the self-imposed burden by supporting and allowing additions to the documentation. The absence of a strong informatics governance with processes to critically appraise the value of potential additions can contribute to more time at the computer. Organizations need to increase their tolerance and ability to say "no" to documentation additions.

To add to the burden, many organizations continue to support the adage, "if it's not documented it's not done". This mindset sustains our litigious society where there is fear that if an action is not represented in the chart, there could be legal consequences. More research is needed on important and key aspects of documentation from a legal perspective. In the mean time we often have over-zealous risk managers continuing to add more fields to be filled out, more checkboxes to complete, more alerts that fire, and less time to care for our patients. A similar situation can occur with the regulatory and quality domains. The Centers for Medicare and Medicaid Services (CMS) and The Joint Commission (TJC) have multiple regulations that require documentation, but organizations can misinterpret them thinking that every standard requires a note or documentation element. While work is underway within both CMS and TJC to reduce the burden, organizations need to understand what truly needs to be captured in the EHR and what does not. Healthcare organizations should review their own policies and procedures to see where they state documentation is required and evaluate closely the need to

continue. Simplifying and paring down what is truly needed to provide quality care will be a challenge.

Moving Forward

Many initiatives are underway to improve the clinician experience with the EHR, some at the level of the healthcare organization and some at the national level. Each report that they are addressing "the burden" yet they typically are addressing only a portion of the burden when viewed holistically. CMS, for example, has dedicated resources to the Patients Over Paperwork initiative as part of the 21st Century Cures Act (CMS, 2018; 21st Century Cures Act, 2015). This work primarily addresses the reimbursement aspects of burden and has already resulted in simplification of provider documentation requirements for a number of previously burdensome rules. The healthcare accrediting body, The Joint Commission (2018) has eliminated over 300 of their elements of performance in their Project Refresh initiative addressing the Regulatory domain. The American Nurses Association in partnership with the Office of the National Coordinator for Health IT (ONC) began an effort last year to reduce documentation from a nursing perspective to address some of the self-imposed areas of EHR burden (Cochran et al, 2018). The national standard setting organization, Health Level 7 (HL7), convened a work group called the "Reducing Clinician Burden" Project Team and has been conducting an environmental scan to better understand and address the burden by sharing successes across the nation (HL7 Electronic Health Record Work Group Burden Workgroup, 2020). And lastly, the Office of the National Coordinator (2020) published their final report on the "Strategy on Reducing Regulatory and Administrative Burden Relating to the Use of Health IT and EHRs". As our federal government, payors, vendors, health IT standard setting bodies, professional organizations and healthcare organizations address this work, it would be helpful, going forward, if they recognized which aspect or domain of burden they are working to improve.

Healthcare is complex as will be efforts in improving the use of the EHR for clinicians and patients. Improving clinical systems to help reduce errors, and reduce the time spent entering and foraging for data will be key to achieving the outcomes we all hoped to gain in an electronic world. Horvath et al. (2018) in The National Academy of Medicine's publication presents a vision for this future EHR using technologies available today. This vision includes a system that would not only provide an intuitive and easy to use interface, but would help to address clinician stress and burnout associated with EHR use.

Ensuring clinicians maximize their time with the patient and not with the computer is a goal worthy of achieving as we work toward burden reduction. There currently does not appear to be a holistic or comprehensive approach to this national effort that includes a common framework including all aspects of burden from which to work. As an initial step, the use of a burden framework such as this gives entities a common language and an understanding that there are multiple components to the burden problem.

Table 1: The Six Domains of Burden

Reimbursement	Regulatory	Quality	Usability	Interoperability	Self-Imposed: "We've done it to ourselves"
Definitions					
Documentation, coding and administrative charting required for reimbursement. by payors including: • CMS • Blue Cross / Blue Shield • United Healthcare • Aetna • Anthem • Cigna • Humana • Others…	Accreditation agency documentation requirements, including: • TJC • Healthcare Facilities Accreditation Program • Det Norske Healthcare, Inc • State Regulatory Agencies	Documentation required to demonstrate that quality patient care has been provided. This includes documentation requirements by the healthcare organization itself, as well as by governmental and regulatory agencies.	Insufficient use of human factors engineering and human-computer interface principles. EHRs are not following evidence-based usability/human factors design principles.	Insufficient standards requiring duplication and re-entry of data even though it resides elsewhere, either internal to the organization or in an external system.	Organizational culture's influence on what should be documented can exceed what is needed for patient care, including fear of litigation, "we've always done it this way", and misinterpretation of regulatory standards. This domain also includes insufficient education on system use.
Examples of Documentation Burden					
Evaluation and Management (E & M) Documentation required for CMS	Standards that require written documentation are numerous to the point that there is confusion as to what does **not** need to be documented. Organizations err on the conservative side and add additional documentation.	• The Hospital Inpatient Quality Reporting (IQR) Program, • The Hospital Outpatient Quality Reporting (OQR) Program, • The Physician Quality Reporting System (PQRS) • National Database of Nursing Quality Indicators (NDNQI)	EHR design based on historical paper records with formatting that does not take advantage of electronic efficiencies	Duplication of documentation that's already in an organization's electronic system – somewhere	"Squeaky wheel" or powerful special interest groups want added documentation by clinicians to meet their needs.
Documentation required for Prior Authorization	Documentation required by regulatory agencies	Quality documentation requirements for Merit-	Documentation tools and templates that are	Duplication of documentation due to	Excessive documentation on

	may not be value added – need more evidence that documentation results in improved outcomes	based Incentive Payment System (MIPS) and Advanced Alternative Payment Models (APMs)	"one size fits all" and do not support unique work flow of clinicians	inability to integrate external patient data into workflow of clinician	admission to the hospital or an initial visit to a clinic
Recovery Audit Contractor (RAC Audits) Medicare Fee for Service (FFS) Recovery Audit Program documentation	Sentinel events reported to TJC often lead to increased documentation without comprehensive analysis of root cause (that may not involve technology or documentation)	Quality documentation required for Accountable Care Organizations (ACOs) that are participating in the Medicare Shared Savings Program (Shared Savings Program)	Workarounds requiring navigation through multiple screens	Excessive time spent searching for information imported into an EHR from an external source	Fear of litigation Extra "CYA" charting.
Stakeholders to Address the Burden Problem					
CMS and other healthcare insurers that have established documentation requirements for payment	Regulatory agencies whose standards require documentation in order for healthcare organizations to be accredited (and therefore reimbursed for service by CMS and other payors)	• CMS and other healthcare insurers • Regulatory agencies who require quality data documented and reported • Healthcare organization's Quality departments	• EHR Vendors • Organizational Health IT departments • Clinicians and other system users	• EHR Vendors • Interoperability standards setting agencies • Healthcare organizations including clinicians • CMS and other healthcare insurers • Other agencies responsible for barriers to sharing essential patient data in a usable and standard format	• Healthcare organizations including clinicians • EHR Vendors

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