25 × 5 Symposium to Reduce Documentation Burden: Report-out and Call for Action

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Appl Clin Inform 2022;13:439–446.

Abstract

Background The widespread adoption of electronic health records and a simultaneous increase in regulatory demands have led to an acceleration of documentation requirements among clinicians. The corresponding burden from documentation requirements is a central contributor to clinician burnout and can lead to an increased risk of suboptimal patient care.

Objective To address the problem of documentation burden, *the 25 by 5: Symposium to Reduce Documentation Burden on United States Clinicians by 75% by 2025* (Symposium) was organized to provide a forum for experts to discuss the current state of documentation burden and to identify specific actions aimed at dramatically reducing documentation burden for clinicians.

Methods The Symposium consisted of six weekly sessions with 33 presentations. The first four sessions included panel presentations discussing the challenges related to documentation burden. The final two sessions consisted of breakout groups aimed at engaging attendees in establishing interventions for reducing clinical documentation burden. Steering Committee members analyzed notes from each breakout group to develop a list of action items.

Results The Steering Committee synthesized and prioritized 82 action items into *Calls to Action* among three stakeholder groups: Providers and Health Systems, Vendors, and Policy and Advocacy Groups. Action items were then categorized into short-, medium-,

Keywords
- electronic health records
- documentation burden
- Symposium
- nurses
- physicians

received
December 15, 2021
accepted after revision
February 28, 2022

DOI https://doi.org/10.1055/s-0042-1746169.
ISSN 1869-0327.

or long-term goals. Themes that emerged from the breakout groups' notes include the following: accountability, evidence is critical, education and training, innovation of technology, and other miscellaneous goals (e.g., vendors will improve shared knowledge databases).

Conclusion The Symposium successfully generated a list of interventions for short-, medium-, and long-term timeframes as a launching point to address documentation burden in explicit action-oriented ways. Addressing interventions to reduce undue documentation burden placed on clinicians will necessitate collaboration among all stakeholders.

Background and Significance

The widespread adoption of electronic health records (EHRs) and a simultaneous increase in regulatory demands have led to a national epidemic of documentation burden among clinicians (e.g., physicians, nurses, physician assistants, nurse practitioners, and other health professionals). Documentation burden is the stress imposed by the excessive work required to generate clinical records of health care-related interactions and results from an imbalance between the usability and satisfaction of documentation systems alongside the clinical and regulatory demands of entering and consuming health record data.[1] Documentation burden manifests as increased documentation times and documentation-related stress associated with clinician burnout,[2,3] increased medical errors,[4] and decreased professional satisfaction.[5] A rise in clinician burnout, both among nurses and physicians, is significantly associated with negative effects on patient care.[6–10] Perceptions of burden can arise when clinicians perceive required documentation as being burdensome rather than meaningful to clinical care.[11]

Research has demonstrated that outpatient physicians spend an average of 16 minutes and 14 seconds interacting with the EHR per patient encounter, with 11% of this time spent after hours.[12,13] Likewise, nurses spend between 19 and 35% of their shift time documenting in the EHR, up from 9% when previously documenting on paper.[14–16] Hospital nurses document one data point every 0.82 to 1.14 minutes on average.[17] A study in the United States (U.S.) revealed clinicians spend 75% more time on EHR documentation than clinicians in other economically developed nations which—in some instances—were independent of EHR vendor.[18] These observations illustrate the large amount of clinical time given to documentation which has direct impact on workflow.[19,20]

Many strategies that have been proposed for reducing documentation burden have their limitations in scope and potential impact. For example, solutions that delegate documentation tasks from clinicians to other entities such as, scribes or voice recognition software have developed into workarounds rather than lasting solutions.[21,22] Further, these strategies do not address the existing burden across clinicians in the interdisciplinary team or tackle the source of the problem—increased documentation demands and inadequate EHR usability.[23] To combat this, both the Office of the National Coordinator for Health Information Technology and the National Academy of Medicine have made reducing documentation burden and its associated burnout among clinicians a top priority.[1,24] In 2020, this was actualized (in part) through the National Library of Medicine (NLM) and American Medical Informatics Association (AMIA) funding of the *25 by 5: Symposium to Reduce Documentation Burden on U.S. Clinicians by 75% by 2025* (Symposium).[25] The goal of the Symposium was to establish strategies and specific actions that could reduce clinician documentation burden on U.S. clinicians to 25% of present levels by 2025.

The specific goals of the Symposium were to: (1) organize a meeting to engage a diverse group of key stakeholders and leaders focused on reducing documentation burden; (2) assess the potential for burden reduction within categories of clinical documentation burden; (3) establish ready for action short-term (<3 months) and medium-term (6 months) reduction interventions in clinical documentation burden; and (4) generate approaches for long-term (10 years) elimination of clinical documentation burden. The meeting considered solutions while respecting the following ground rules for any recommendation: (1) no shifting of work to others (e.g., from one clinician to another, etc.); (2) no erosion of care standards (i.e., quality, safety, value, efficiency, access, etc.); (3) leverage technology and existing data inputs where appropriate (e.g., reduce re-documentation of items already captured during other intake processes); and (4) maximize clarity of proposed rule changes to minimize misinterpretation by health systems and providers.

Objective

The goals of the Symposium were to provide a forum for nationally and internationally renowned experts to discuss the reality of documentation burden and to propose interventions in the form of an action list aimed at substantially reducing documentation burden on clinicians.

Methods

Provider and Health System Survey

Prior to the Symposium, the team conducted a nationwide survey to evaluate clinicians' perceptions of the influence of

the coronavirus disease 2019 (COVID-19) on documentation policy changes, including practice recommendations that were first proposed by Sinsky and Linzer.[26] Among the 193 participants who completed the survey, most of the clinicians experienced telehealth expansion (80.3%) and preferred that it remain permanent. The findings also indicated that the increased adoption of telehealth helped reduce documentation burden for clinicians (e.g., changes to required evaluation and management coding in support of billing). The majority of participants supported documentation reduction strategies associated with improving EHR usability (e.g., eliminating alerts) and redundant and/or excessive data entry requirements (e.g., device integration). However, there was variability in the perception of *charting by exception* and documentation templates, which were described as both contributing to and reducing burden. Further details of this study can be found in the published manuscript.[20]

Symposium Structure and Participants

A Steering Committee was assembled to organize the Symposium. Members originated from Columbia University, Vanderbilt University, the American College of Medical Informatics, and AMIA. As the COVID-19 pandemic evolved through 2020, the Committee chose to pivot from holding a one-day in-person meeting to a multiday virtual meeting. Following this change, the Steering Committee constructed a modular approach with weekly 2-hour virtual sessions over 6 weeks. The Symposium included 33 presentations by stakeholders representing health systems, academia, industry, governments, payers, professional societies, and the international medical informatics community. Symposium attendees also included representatives from academia, clinical settings, government, industry (EHR vendors and start-up companies), patients, payers, and professional organizations. Over 300 participants from approximately 140 organizations attended the Symposium from January 15th through February 19th, 2021. Further details on best practices used to organize the Symposium can be found at the Symposium's website.[25]

Symposium Events

The Symposium consisted of six weekly sessions as outlined in ►Table 1. The first four sessions included keynote speakers, exemplar panels, industry panels, and moderated panel discussions. The final two sessions allowed participants to select domain-focused breakout groups (using a survey for ranking the top three topics of interest) to establish approaches for reducing clinical documentation burden.

Specifically, the first session, entitled "Introduction & Current Challenges Related to What We Document" included presentations related to the content and workflow of clinician documentation. Panel topics included issues related to policy and reimbursement, and clinical practice and documentation. The primary challenges identified were a lack of standardized terminologies and datasets. This lack of standardization reinforces documentation in silos and division among stakeholder groups on the key elements of documentation. Additionally, the Symposium identified a need for parity among clinicians to avoid shifting of documentation requirements to other clinicians, and the ability to leverage existing technologies to reduce manual documentation.

The second session, "Current challenges Related to How We Document" discussed the various levels of bias evident in the EHR from design to policy. The panels focused on data entry challenges and alternative approaches for data entry (e.g., innovative ways to engage patients and conceptualize patient-entered data); discussion of diversity, equity, and inclusion in documentation focused on the impact of stigmatizing language, power dynamics, health equity, and public health concerns. This session highlighted the unconscious filtering process to which clinical documentation is subject—from social, political, and institutional systems that drive health care delivery and access, to biases in data collection and its secondary use. Further efforts are required to ensure that bias captured in the data collection phase is not perpetuated and reinforced through its (i.e., documentation) re-use as evidence driving policy and research.

The third session entitled, "Exemplars and Key Successes" identified eight exemplars which exhibited tangible results. Panelists discussed lack of sharing and dissemination of knowledge discoveries across providers and health systems as barriers for learning opportunities and the spread of best practices. During the third session, international panelists from Hong Kong and the United Kingdom were invited to speak. It was found that other countries experience documentation burden and are focusing on decreasing the "size" of EHR content and notes despite not having the same reimbursement and regulatory constraints as providers in the U.S. The fourth session was titled "Emerging and Future

Table 1 Symposium session topic by week

Session week	Session topic
Session 1	Introduction and current challenges related to what we document
Session 2	Current challenges related to how we document
Session 3	Exemplars and key successes
Session 4	Emerging and future innovations and solutions
Session 5	Reactor and prioritization session for actions
Session 6	Plenary panel on insights for actions

Innovations as Solutions." The panels in this session focused on the job of documentation in the future, a discussion by industry members on the solutions coming out of industry, and the review of the COVID-19 survey.[20]

With the goal of eliciting collective stakeholder participation in developing consensus-based action items rather than differences in opinions, the final two sessions of the Symposium were organized as breakout groups. Over 100 participants selected breakout group topics organized according to the 2020 American Nursing Informatics Association (ANIA) Burden of EHR documentation conceptual framework. This framework was developed in 2020 to help conceptualize "burden" as it relates to documentation.[27] It was adapted for the Symposium to discuss the multifaceted domains that contribute to documentation burden and consists of the following: Reimbursement, Regulatory, Quality, Usability, Interoperability, and Self-imposed.[27] Each domain breakout group included 5 to 10 participants and was led by a domain expert. Participants selected their breakout groups of interest using Qualtrics. Steering Committee members made a concerted effort to achieve balanced representation (e.g., provider type, work setting, etc.) among participants in each breakout group. Discussion points were captured as free-text using the online collaborative tool, Mural (an electronic whiteboard system).[28] Mural was used to organize the content and interests of the participants from each breakout group. Conversations were focused on the current problem related to the domain, ideas for optimization, and action items for the assigned domain.

Generation of Action Items

Three Steering Committee Members (M.H., R.L., J.W.) reviewed the content generated during the Symposium breakout sessions which were recorded on Mural pages. The Mural outputs were organized based on ANIA's six domains of burden, which underpinned the Symposium's work. As described previously, these six domains are Reimbursement, Regulatory, Quality, Usability, Interoperability, and Self-imposed.[27] The three reviewers ensured that the Mural content was action-oriented and categorized the action items as either short- (<3 months), medium- (6 months), or long-term (10 years). Using an iterative approach, the three reviewers (M.H., R.L., J.W.) conducted thematic analysis on each of the action items. Any discrepancies were discussed among the three reviewers until consensus was reached. The final results yielded five themes: accountability, evidence is critical, education and training, innovation of technology, and other.

Among each theme, action items were further synthesized and prioritized into *Calls to Action*—each of which were assigned with a responsible stakeholder group: Providers and Health Systems, Vendors, and Policy and Advocacy Groups. Member checking was performed among the Steering Committee who served as facilitators during the Symposium's breakout sessions to ascertain if the themes elicited were reflective of their experience. The Steering Committee was consulted via weekly online meetings at each of the four phases of analysis.

Results

Overall, we identified 82 action items, which were synthesized and prioritized into *Calls to Action* among the three stakeholder groups: Providers and Health Systems, Vendors, and Policy and Advocacy Groups. These *Calls to Action* were then categorized as either short-, medium-, or long-term goals. Examples of specific *Calls to Action* are described in ►Table 2. Five themes emerged through group consensus: accountability, evidence is critical, education and training, innovation of technology, and other miscellaneous goals (e.g., vendors will improve shared knowledge databases). The subsequent codes grounding each theme are listed in ►Table 3. In collaboration, the Symposium's participants generated the following recommendations:

Recommendation 1: *Policy and advocacy groups should establish federal common ground and incentives aimed at documentation burden reduction.* While there is existing innovative work focused on the reduction of clinician documentation burden—to date, these efforts seem to be siloed in the domain in which they were developed. The most significant standardized national advances were the result of the paring back of documentation requirements during the COVID-19 pandemic. However, these related changes were implemented only during the emergency phase and these efforts are no longer being maintained despite ongoing constraints.

Recommendation 2: *Providers and health systems should train on documentation brevity in addition to completeness in documentation.* It is essential that documentation requirements strike a balance between maintaining quality and completeness that captures the patient's story while optimizing usability and workflow for the clinicians entering the data. In particular, copy and paste can be timesaving and ensure content is carried forward from a prior clinician input. However, it can also lead to note bloat and inaccurate information being carried forward. This dilemma highlights the need to identify generalizable and clear standardized approaches.

Recommendation 3: *Vendors should package the best EHR functions into tool kits (i.e., collection of packages to inform and facilitate implementation*[29]*) to facilitate deployment and EHR optimizations.* For example, EHRs should facilitate improved access to clinical data and reduce duplication of effort across team members. Vendors can partner with clinical subject matter experts to build personalized decision support for interdisciplinary team members using artificial intelligence to drive user-specific workflows and recommendations. Involving clinicians early on with the integration of technology into EHRs can help tailor innovations to the clinician workflow. While there are financial implications, a recent report, published by McKinsey & Company suggests that EHR optimizations when approached thoughtfully can lead to positive return on investments.[30]

Recommendation 4: Providers and health systems should establish and adopt guiding principles for documentation requirements and collaborate with clinical experts. Changes to practices should be evidence-based and nonessential elements should be removed. Education and training for

Table 2 Calls to actions by stakeholder

Calls to action for providers and health systems
Increase support of functions like real-time information retrieval, documentation, and ordering in the EHR (short-term).
Establish guiding principles for adding documentation to EHRs and generating evidence for reduced documentation (medium-term).
Develop a national roadshow and educate clinicians and clinicians in training on balancing brevity and completeness in documentation (long-term).
Implement interdisciplinary notes to decrease redundant documentation (long-term).
Calls to action for health IT vendors
Create simplistic EHR views to see that new clinical data has been reviewed, then bookmark for the user and document as r eviewed by that user in the EHR (short-term).
Promote an ecosystem of interoperable systems to allow for complementary technology (medium-term).
Package best training practices into toolkits to promote best practice EHR use and plan recognition programs to publicize exemplars (medium-term).
Develop measurement tools to categorize documentation practices (long-term).
Implement user-personalized clinical decision support to drive specific workflows (long-term).
Calls to action for policy and advocacy groups
Urge agencies to fund innovative research that captures all billing code information without taking up clinicians' time (short-term).
Select the best of breed approaches to documentation and implement throughout the health care system (medium-term).
Develop technology to reliably and accurately create reimbursement/payment data for all care settings (long-term).

Abbreviations: EHR, electronic health record; IT, information technology.

providers and health systems should target report-out efforts at regional and national meetings on the importance of documentation burden reduction and aim for interventions and presentations at all levels of trainees. Training initiatives should optimize brevity while maintaining completeness from the earliest stage of clinician training. Innovations in the provider and health system context should optimize real-time information retrieval, ordering, and documentation. To achieve this goal, it is important that dialogue with researchers in medical education is championed to integrate guiding principles into practice.

Table 3 Thematic analysis breakout groups notes

Theme 1: Accountability
Implementing mechanisms to assure collaboration between systems and structures
Ensure roles are clear
Facilitate cohesive understanding of requirements among agencies and stakeholders
Theme 2: Evidence is critical
Evidence-based practice should inform changes
Generation of evidence and approaches that decrease burden
Clinician input matters most
Theme 3: Education and training
Develop and disseminate optimal documentation requirements that meet the standards
Train on brevity and clarity for new clinicians
Prioritize quality over quantity
Incentivize training
Theme 4: Innovation of technology
Integrate advanced technological features
Increase interoperability
Theme 5: Other

Recommendation 5: *Policy and advocacy groups (e.g., National Institute of Health, Agency for Healthcare Research and Quality, etc.) should urge organizations to coordinate and fund research that automates coding information from the EHR.* This is a central recommendation to reduce clinician effort and time spent supporting these codes. Payors should clarify and standardize rules to reduce duplication of effort in meeting requirements and assume responsibility for coding validation. The prior authorization process was identified as a recommended focus of optimization, including call centers that can centralize and streamline these activities.

Recommendation 6: Vendors should play an integral role in promoting an ecosystem of interoperable systems to ensure complementary technology across EHR products. Vendors can offer metrics to review and assess a clinician end-user's documentation in terms of length, efficiency, and redundancy to enable real-time feedback and peer benchmarking. Further recognition of clinician champions in programs that publicize exemplars and incentivize the sharing of best practices can enhance the adoption of documentation burden reduction strategies. Vendors could create simple visualizations in their display of new clinical data to ease review and knowledge integration for decision-making. This central recommendation would be enhanced by personalized

clinical decision support approaches to enhance user-specific workflows and care recommendations.

These stakeholder-specific recommendations build upon existing research in the area of documentation burden reduction through assessment and interventions. While these action items and recommendations were developed with a focus on the U.S. health care system and its specific challenges, other countries aiming to reduce documentation can use these recommendations as a blueprint.[31] These action items can be implemented and divided into short-, medium-, and long-term goals that will make a meaningful impact on decreasing documentation burden and improving clinician workplace wellness.

Discussion

This report summarizes the *25 by 5: Symposium to Reduce Documentation Burden on U.S. Clinicians by 75% by 2025*, a 6-week virtual meeting held in early 2021 with the goal of establishing an action plan for reducing clinical documentation burden to 25% of its current level within 5 years. The Symposium globally engaged over 300 participants through a plethora of thematically driven conversations. During the Symposium, attendees and meeting facilitators collectively brainstormed solutions to reduce clinical documentation burden which promoted the development of technological advances, such as artificial intelligence designed notes, that could be created in collaboration with clinicians and patients. Other documentation-reduction suggestions included improving the standardization of data elements which may promote multidisciplinary records where data are shared rather than re-entered. This is consistent with recent efforts to standardized quality measure data in post-acute care settings motivated by the IMPACT Act.[32] Additional exemplars describing future innovations that can be used to reduce documentation burden can be found in the Symposium's Summary Report.[33]

A core theme that emerged across all Symposium sessions and its 82 action items was that patient care delivery and clinician–patient communication should be the essential goal of documentation. However, patient care can be obscured by reimbursement documentation and regulatory rules as well as by usability and design issues.[19] The results of this Symposium support previous literature connecting increased documentation requirements to burden being placed on clinicians.[2,34] Our actions items aim to provide tangible steps to refine documentations requirements and have the potential to reduce burden on clinicians related to documentation workload.

The 82 Symposium action items are not exhaustive and were not designed or anticipated to reduce each specific data entry by 75%; each action item is aimed at reducing the aggregate amount of documentation burden for clinicians. As action items are implemented, it is possible to envision some notes becoming longer compared with current documentation outputs while other notes becoming completely automated or eliminated altogether. The purpose of reducing clinical documentation burden is to achieve the maximal clinical effectiveness of notes across the interdisciplinary team.

The Symposium and subsequent analyses mark an important step toward action. Our list of recommendations is not conceived to be exhaustive nor was that our intention. The consensus is to proceed with unified strategies to promptly make a significant impact targeting feasible short-term goals, while continuing longer-term strategies that build on existing innovations and emerging technologies. The Symposium developed interventions in the form of a list of actionable, feasible, and broadly acceptable action items. Continued success in this effort requires ongoing dissemination and engagement to join the *Call to Action* to reduce documentation burden for clinicians.

Conclusion

The *25 by 5: Symposium to Reduce Documentation Burden on U.S. Clinicians by 75% by 2025* and dissemination activities will be a success if they result in changes that improve the national trend of worsening clinician burnout that is, in part, related to EHR documentation burden. The Symposium generated a list of interventions with action-oriented items as a launching point for addressing documentation burden. However, the continued success of these efforts is now dependent on stakeholders' response to the outlined *Calls to Action*. Stakeholders are urged to consider how they can take an active role in addressing the interventions to reduce the documentation burden placed on clinicians, which has the potential to improve patient safety and care delivery.

Clinical Relevance Statement

Clinicians are faced with increasing documentation demands contributing to clinician burnout which may lead to suboptimal patient care. The Symposium produced a list of actionable interventions that can be adopted by stakeholders to reduce documentation burden imposed on clinicians. It is imperative that documentation reduction strategies like those proposed in the action list be implemented to help address the increasing number of clinicians experiencing burnout, with direct implications for improving patient care.

Multiple Choice Questions

1. A way that documentation burden influences patient care is it:
   a. Decreases the need for collaboration.
   b. Increases the time spent at the bedside.
   c. Increases medical errors.
   d. Promotes patient satisfaction.

   Correct Answer: Option c is the correct answer because it was found that increased documentation burden on clinicians increases clinician burnout and decreases the time they can spend at the bedside that can ultimately result in medication errors.

2. The Symposium's Calls to Actions to reduce documentation burden were aimed at…
   a. Developing an exhaustive list of interventions to eliminate documentation for clinicians.
   b. Holding a Symposium to decrease documentation for clinicians by 5% in 25 years.
   c. Implementing interventions to reduce documentation burden for clinicians.
   d. Providing a forum for experts to discuss documentation burden and propose interventions.

Correct Answer: Option d is the correct choice because the goal of the Symposium was not to develop an exhaustive list of interventions that would eliminate documentation but rather provide a comprehensive list of interventions to serve as a launching point to decrease documentation burden on clinicians by 75% by 2025.

Protection of Human and Animal Subjects

This work was reviewed by the Institutional Review Board and concluded it was not human subjects' research.

Funding

The Symposium was supported through the 1R13LM013581 grant funded by the NLM and co-sponsored by AMIA. The co-authors are also supported through training grants from the NLM (5T15LM007079) and the National Institute of Nursing Research (5T32NR007969).

Conflict of Interest

None declared.

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