



Electronic Documentation in Pediatrics: The Rationale and Functionality Requirements

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Clinical documentation is a fundamental component of the practice of medicine. It has significantly evolved over the past decade, largely because of the growth of health information technology and electronic health records. Although government agencies and other professional organizations have published position statements on the structure and use of electronic documentation, few have specifically addressed the documentation needs for the care of children. A policy statement on electronic documentation of clinical care by general pediatric and subspecialist providers by the American Academy of Pediatrics is needed. This statement provides insight on the unmet needs of key stakeholders to direct future research and development of the electronic media necessary to enhance the wellness of children and improve health care delivery. It also addresses the challenges and opportunities for efficient and effective clinical documentation in pediatrics.

BACKGROUND INFORMATION

The move from paper charting to electronic documentation has created a need for guidance to facilitate pediatricians' ability to effectively communicate the clinical picture while accurately reflecting the extent and quality of care provided. The American College of Physicians and the American Medical Informatics Association have published guiding principles regarding clinical documentation, focusing on the primary role of documentation for patient-centered clinical care and improving outcomes.¹⁻³ In addition to advancing these principles, more methods to reduce documentation burden and manage information overload are warranted. Furthermore, there are unique requirements for pediatric documentation that should be clarified for pediatric generalists and subspecialists, such as means to record adolescent information confidentially and to communicate medical history with schools.

abstract

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The Agency for Healthcare Research and Quality technical brief on core functionality in pediatric electronic health records (EHRs), the Health Level Seven International Child Health Functional Profile for EHR Systems, and a few American Academy of Pediatrics (AAP) policy statements comprehensively delineate specific EHR functionality needs of pediatricians.⁴⁻⁸ However, specific guidelines on documentation content and workflow in existing and future systems are imperative to align documentation tasks with the core tenets of pediatric care.

This policy statement addresses the common barriers that pediatric practitioners face in dealing with clinical documentation. A clear policy will serve as a guiding force in prioritizing the key elements of a patient note, navigating the complex world of electronic documentation implementation and enhancement, and focusing research efforts on ideas that show promise in decreasing clinical burden and improving care. The accompanying technical report provides a background for the recommendations in this statement.⁹

STATEMENT OF PROBLEM

Electronic clinical documentation is a requirement for the Centers for Medicare & Medicaid Services' Meaningful Use program (renamed Promoting Interoperability)¹⁰ and has been adopted by the majority of hospitals and clinics in the United States,^{11,12} but current certification and implementation standards for EHRs provide few specific guidelines on documentation content and workflows. In addition, the documentation needs of child health providers are often different from those of providers caring for adults. Yet, there has not been a unique focus on defining the best practices for electronic clinical documentation in pediatric populations.

The change from paper-based to electronic documentation has had many benefits but has introduced additional regulatory requirements, presented new threats to the utility of patient notes, and galvanized both the desire and opportunity to use clinical documentation for additional purposes. Multiple stakeholders with differing priorities (clinical, regulatory, research, quality, and economic) and varying abilities of some providers to interact efficiently with electronic systems have contributed to increased documentation burden and physician burnout.¹³⁻¹⁶ Considering these issues, clear guidance on clinical documentation is needed.

SUMMARY AND CONCLUSIONS

Clinical communication and, hence, documentation are at the heart of the practice of medicine. Electronic documentation, now broadly adopted, has been accepted as the standard medium. A great deal has been learned during the transition to electronic documentation, including the opportunity to discover the unintended consequences of various tools and workflows. Importantly, we have recognized that paper notes of the past cannot be directly translated into an EHR format. Although it has offered many advantages, the transition to electronic notes has changed the very nature of the structure, workflow, and use of documentation.¹⁷ The roles and use of documentation have expanded, but its primary role to support clinical reasoning and communication should always be paramount. Building on this knowledge, this is an opportune time for the AAP to implement guidance to direct care and clinical documentation in the 21st century to best serve the needs of pediatric providers, patients, and families.

Multiple barriers must be overcome to implement these

recommendations. In local and vendor EHR development, there will always be competing priorities to this primary function of supporting clinical reasoning and communication, including regulatory obligations¹⁸ and requirements tied to fiscal reimbursement.¹⁰ In addition, there may be difficulty engaging vendors in pediatric-specific projects because children represent a smaller percentage of overall health care usage and burden. Gaining a consensus among child health care providers on needs and priorities and advocacy from pediatric organizations could be helpful in this regard. As part of the implementation of the 21st Century Cures Act, the Office of the National Coordinator for Health Information Technology has proposed new criteria to support voluntary certification of health information technology for use by pediatric clinicians; this may advance the recognition and prioritization of pediatric needs by EHR vendors.¹⁹

One of the key recommendations is ensuring representation from all stakeholders when considering electronic documentation implementation, changes, and enhancements. However, convening a large group of stakeholders and gaining consensus can be time consuming and laborious. In addition, clinical providers often do not have dedicated time or a percentage of full-time equivalents allotted for this work. Yet, the early and complete engagement of clinical providers and/or end users is critical to the successful development and implementation of electronic documentation.

Ideally, clinical informaticists should facilitate clinical documentation improvement. They can bridge the gap of understanding between frontline clinicians and health information technology professionals and vendors. Clinical informaticists

can also provide expertise on the best practices on clinical documentation improvement. When having a trained clinical informaticist is not feasible, such as in smaller health care settings, the role of EHR vendor user groups and professional clinical informatics organizations, such as the AAP Council on Clinical Information Technology and the American Medical Informatics Association, becomes vital.

This policy statement stresses the importance of research of documentation structure, content workflows, and functionalities to determine best practices. However, such evaluations may be arduous because of the difficulty in assessing documentation quality and its ability to effectively communicate information to stakeholders. Although standard measures of documentation quality are being developed,²⁰ they often require manual review of notes. Automated methods to continuously monitor documentation quality would be more efficient.

RECOMMENDATIONS

1. EHR documentation functionalities, including documentation templates, data entry, and display, need to support the pediatric care core values of age-based, longitudinal, and family-centered care. To address this, professional pediatric-focused organizations and health care institutions should conduct the following:
 - a. work with stakeholders to build consensus on documents that should be standardized, such as school forms, for integration into all EHRs;
 - b. continue to advocate for pediatric-specific documentation needs to EHR vendors and developers;
 - c. support the creation and dissemination of models and best practice guidelines for pediatric electronic documentation; and
- d. promote the development of policies and methods to facilitate the seamless sharing of electronic documentation tools (eg, templates and workflows) and data across child health providers nationally.
2. Models of shared documentation among health care providers and with patients, caregivers, and other key stakeholders (eg, adolescents, schools, and immunization registries) should continue to be explored as a means to improve clinical communication among care teams, facilitate health outcomes tracking, and potentially reduce documentation burden for providers. Effective models could be incorporated in developing health information exchanges.
3. Tools and strategies aimed at relieving documentation burden should be developed and researched to understand their impact on documentation time and clinical care as well as on satisfying evaluation and management codes and other regulatory requirements. Examples of potential tools and strategies include the following:
 - a. automated data entry (eg, device integration and barcoding);
 - b. documentation task distribution (eg, integration of patient-generated health data);
 - c. elimination of redundancy that is consistent with family-centered care (eg, linkages for family and social history); and
 - d. alternative documentation methods (eg, speech recognition and scribes).
4. Mechanisms to mitigate information overload, such as enhanced data displays, search tools, and streamlined and standardized note structures, need to be developed and studied.
5. Professional organizations and health care institutions should refine pediatric data definitions and partner with EHR vendors to integrate these standards into electronic systems.
6. The reuse of clinical documentation to support regulatory requirements, evaluation and management codes, research, and quality improvement efforts should be supported. However, there must also be clear understanding and mitigation of any negative impacts on the clinical narrative, usefulness as a clinical communication tool, and documentation burden.
 - a. Guidelines for the appropriate attainment of data from clinical documentation should continue to be developed and propagated. For example, the completion of a task within the EHR should be captured as its own documentation. Additional documentation that the task was completed should not be required.
 - b. Although complete discrete data are often most useful for reuse, the documentation of incomplete discrete data should be enabled if clinically relevant, for example, the ability to record that a patient received a vaccine even if the exact preparation or month and day of receipt are unknown.
 - c. National research organizations and the health information technology industry should support research in alternative models and technology to facilitate the reuse of clinical data (eg, natural language understanding).
7. All documentation implementation and improvement initiatives should include representation from medical providers including trainees and attending physicians as well as, if possible, patient and family representatives and specialists in health information management, quality

improvement, reporting, research, billing, and clinical informatics.

8. Medical schools, residency programs, and physician licensing boards should integrate continuing electronic documentation training into their curricula using Accreditation Council for Graduate Medical Education program requirements as a guide. Attending physicians should provide timely and frequent feedback to trainees regarding documentation quality. In addition, EHRs should support clear delineation of trainee documentation and attending attestation.

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ABBREVIATIONS

AAP: American Academy of Pediatrics
EHR: electronic health record

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