

Integrating Documentation Throughout the Curriculum: Strategies for Programmatic Quality Improvement

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Context: Athletic training programs must teach students how to document patient care, including using electronic records to manage patient records. However, athletic trainers and educators have described challenges and infrequent engagement in clinical documentation practices during didactic and clinical education.

Objective: Conduct a programmatic quality improvement (QI) initiative to improve the instruction of documentation practices throughout a professional athletic training program.

Background: Like published research findings, our program faculty experienced challenges with students' understanding and application of clinical documentation. Therefore, I led our faculty through a QI activity to strategically improve how and when clinical documentation was taught and applied throughout our curriculum.

Description: I began by collecting baseline information about when and how documentation was taught in the program, including leading faculty through a strengths, weaknesses, opportunities, threats analysis; inventory of current assignments and activities; and discussion of student performance and feedback data. We identified strategies for teaching different types of documentation, engaging students more in electronic documentation, and translating documentation to clinical education experiences. We implemented these changes throughout 1 academic year and reassessed our performance. Overall, we were satisfied with the improvements made to our students' documentation, and we plan to continue using the educational resources and strategies we implemented.

Educational Advantage(s): We used several cost-free resources, including an online clinical documentation continuing education course and an academic electronic medical record, to improve our students' engagement with documentation throughout the curriculum. Using the principles of continuous QI, we connected these programmatic changes to assessment outcomes to improve our students' clinical documentation performance.

Conclusions: As athletic training programs strive to meet accreditation standards specific to documentation practices and continuous QI, faculty may consider using some of the strategies outlined in this educational technique paper to improve students' engagement in documentation practices throughout the curriculum.

Key Words: Health information technology, academic electronic medical records, curricular design

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KEY POINTS

- Athletic training educators and clinicians experience challenges learning and applying documentation practices during didactic and clinical education experiences, including the use of electronic medical records.
- The process of continuous quality improvement can be used to examine and improve upon curricular design, including the delivery and application of documentation practices throughout the curriculum.
- We used several cost-free resources to improve our students' engagement with clinical documentation, particularly electronic medical records.

BACKGROUND

Athletic training education programs must prepare students to effectively document patient care. Specifically, the 2020 Commission on Accreditation of Athletic Training Education (CAATE) standards include use of an electronic health record (EHR) and a comprehensive patient-file management system to document patient care in the curricular content standards.¹ Despite the necessity of preparing athletic training students to perform this essential clinical skill, educators describe challenges implementing documentation into the curriculum.² Educators and students describe inconsistently performing documentation during clinical education experiences.² Students may also have inadequate opportunities to learn and practice effective documentation strategies during their professional education, including point-of-care documentation and electronic medical record (EMR) use.^{2,3} These findings align with other studies in which documentation practices in professional practice and education were examined. Welch Bacon et al found that students are inconsistently using EMRs or EHRs during clinical education experiences, particularly in secondary school settings.⁴ Lam et al also discussed the need for advanced training in the use of electronic records and suggested the use of academic EHRs to help meet this objective.⁵ Additionally, when reflecting on their professional preparation, practicing clinicians have described their foundational training on documentation to be inadequate, resulting in uncertainty about what and how to thoroughly and efficiently document patient care.⁶ These findings suggest a need for improving the instruction of clinical documentation and EMR use during professional education.^{5,6}

As an athletic training educator, I have experienced some of these challenges within my own program. While our faculty had several documentation assignments and class activities included throughout the curriculum, we identified gaps in our students' abilities to effectively document patient care. Specifically, students completed the Clinical Documentation Personalized Learning Pathway during the first semester of the program as a course assignment; every term included assignments that applied students' documentation to various aspects of patient care, including initial examinations, therapeutic interventions, and general medical cases; and students

were required to document patient care each semester as a component of clinical education objectives.^{7,8} Despite our efforts, during our program's final semester patient care capstone project, we identified gaps in our students' ability to document. For example, students were unsure of what content should be included in progress and discharge notes, and we recognized that daily treatment records were often incomplete. My informal reflection on our program's successes and challenges motivated me to perform a focused exploration and improvement of documentation within our curriculum.

Quality improvement (QI) is a process of improving systems, including clinical practice and education, by using data to identify and fill quality gaps.⁹ Current CAATE standards require professional programs to complete continuous QI to address program deficiencies and improve programmatic delivery.¹ While several models for QI exist, the general process includes assessing gaps in clinical or educational practice, identifying goals and strategies for improvement, and using data to monitor improvement.⁹ Working in teams and involving stakeholders are also notable components of QI that contribute to implementation success.⁹ After identifying a need to improve our students' understanding and performance of clinical documentation, I decided to use the QI process to lead our program faculty through a QI project to improve our teaching and learning of documentation across the curriculum. The process is detailed in the following paragraphs and summarized in the Figure.

STRATEGIES AND TIMELINE

May 2024: Strengths, Weaknesses, Opportunities, Threats; Inventory; and Planning

Program faculty informally noticed weaknesses in our students' documentation during the spring 2024 semester as we were grading our students' clinical capstone project that included several documentation work samples. Students expressed uncertainty about what information should go in different types of notes, and documentation was often incomplete. Since our annual program evaluation process was already planned for April–May, I integrated a more formal approach to examining documentation throughout this process. I began by outlining a stepwise process to involve program stakeholders, including faculty, students, and preceptors. I created an inventory and planning document—a table that included a cell for each program in the semester, along with other strategies (Figure). I also created a basic strengths, weaknesses, opportunities, threats (SWOT) analysis template. I asked the program core faculty ($n = 4$, including me) to complete these documents independently before a faculty meeting. Concurrently, our graduating students completed their student exit surveys and interviews with the Program Director and Coordinator of Clinical Education. In the survey, students were specifically asked to rate how effectively clinical documentation skills were taught throughout the program and how often they practiced clinical documentation during clinical education. Students were invited

Figure. Abbreviated version of the inventory and planning document.

Page 1: Documentation across the curriculum

Inventory of current instruction, assignments, etc

Summer 1	Fall 1	Spring 1
Summer 2	Fall 2	Spring 2

Page 2: Documentation across the curriculum

Planned instruction, assignments, etc, starting _____

Summer 1	Fall 1	Spring 1
Summer 2	Fall 2	Spring 2

Page 3: Other strategies (faculty, preceptors, clinical education, etc)

Faculty	Preceptors/clinical education	Other

to provide open-ended comments to elaborate on their ratings, and we asked clarifying questions about their responses in the interviews.

In May, we met as a faculty to discuss our individual brainstorming and the students' feedback. We used this information to guide our SWOT analysis, identifying SWOTs to our intentions to teach documentation across the curriculum. Completion of the inventory document was particularly helpful, as it helped us identify where and how students were learning documentation. For example, we identified a strength of guiding students on how to document initial subjective, objective, assessment, plan (SOAP) notes, but we had fewer activities for students to learn and practice the documentation of follow-up and discharge notes. Additionally, we identified that students rarely used EMRs or EHRs during clinical education experiences due to various reasons, including inaccessibility and lack of EMRs at several clinical sites. We also realized that, while students obtained a good foundation of documentation instruction during the first semester, they had inadequate opportunities for practice and reinforcement in both didactic and clinical education. After discussing our existing strategies, we collaboratively completed the planning document, where we outlined several changes to the program to improve our students' documentation.

July 2024–May 2025: Strategies and Implementation

Since our program begins each year in July, we identified several strategies to implement starting that summer. Overall, we sought to provide clearer instructions for what and how to document, provide more opportunities for practice and evaluation of documentation skills, increase electronic documentation usage, and facilitate more patient care documentation during clinical education experiences. Specific to coursework, we integrated several assignments to instruct and practice documentation of daily treatment notes, progress notes, and discharge notes. For example, we added assignments specific

to instructing and evaluating progress and discharge notes earlier in the curriculum, before the capstone project. While we previously included documentation in many practical examinations and simulations, we increased the number of times students documented during these experiences. Because we learned that students were rarely engaging in EMR or EHR use during clinical education, we included the use of the CORE-LT Academic EMR in several course assignments and simulations.¹⁰ For example, students were previously exposed to the CORE-LT in the fall of the second year in a class assignment and simulation. We added 2 assignments to the spring of the first year to facilitate earlier interaction with the CORE-LT, which improved students' comfort level with the platform and helped them document more efficiently in later simulations that included the CORE-LT. An overview of the activities is listed in Table 1, specific examples of assignments are provided in Table 2, and external resources we have used to teach documentation are displayed in Table 3.

Beyond coursework, we also identified other strategies for improving documentation instruction throughout the curriculum. Faculty engaged in self-reflection and accessed resources to improve their instruction of documentation, including the Clinical Documentation Personalized Learning Pathway, the Clinical Documentation Audit Tool, and group discussions in which we brainstormed assignment ideas. We also set aside time during our annual preceptor workshop in July to discuss documentation with preceptors. Specifically, we shared our observations and challenges related to students' documentation and asked preceptors to share their challenges. We encouraged preceptors to more purposefully engage students in clinical documentation, emphasized that they should hold students accountable for documentation as a component of clinical education patient encounter assessments, and we included assignments that facilitated actual patient care documentation and discussions with preceptors. Our conversation with preceptors unexpectedly focused on general challenges

Table 1. Overview of Documentation-Related Activities by Semester

Program Semester	Assignment or Activity
Summer 1	Complete Clinical Documentation Personalized Learning Pathway as course assignment Introduction of Program-Specific Clinical Documentation Resource Guide, including composition of different note type course activity
Fall 1	Documenting initial evaluations instruction and course assignments (n = 3) Documenting daily treatments in-class activity (n = 1)
Spring 1	Documentation of progress and discharge notes course assignments (n = 2) Documenting with the CORE-LT AEMR course assignments (n = 2)
Summer 2	Documenting general medical conditions assignments (n = 2)
Fall 2	Documenting medications course assignment (n = 2) Documenting for reimbursement course assignments (n = 2)
Spring 2	Extensive patient-based capstone project requiring documentation of several aspects of patient care
Throughout program	Documentation during and after practical examinations (approximately 6–8 per semester) Documentation during and after simulations, including AEMR use and point-of-care documentation (approximately 2 per semester) Documentation during clinical education experiences facilitated by prompts in preceptor evaluations of specific student patient encounters (varies by clinical experience and patient volume)

Abbreviation: AEMR, academic electronic medical record.

with EMR access and clinical documentation, rather than documentation specific to student learning. After reflecting on this conversation, the Coordinator of Clinical Education and I decided to lead a follow-up discussion and activity in July 2025 to focus more on strategies for integrating students into patient care documentation during clinical education. During the July 2025 session, we focused on providing more specific resources and strategies. We shared the resources we provided to students and included case study discussions of how to engage students in more clinical documentation.

During the implementation process, I reminded faculty at the beginning and end of each semester to revisit the planning document and ensure we were following through with our plans. Additionally, I noticed midyear that students were still inconsistently documenting different types of notes and not using the resources available to them (eg, Clinical Documentation Audit Tool). Therefore, in January 2025, I created a 7-page, program-specific Clinical Documentation Resource Guide to provide more specific guidance on the components of a SOAP note and guidelines for different types of notes (Table 4). Individual faculty contributed to the guidelines, which helped us better understand the instruction students receive and strengthen connections between coursework. This document is housed on our athletic training program Canvas Learning Management System site, accessible by students and faculty, along with CORE-LT login instructions and the Clinical Documentation Audit Tool. Currently, students are reminded to reference this centralized resource for any documentation assignment or activity, and this document was e-mailed to preceptors so they also had the information.

May 2025: Reflection and Wrap-Up

At the conclusion of the academic year, graduating students completed the exit survey and interviews again with the same questions as the prior year. Soon after, I led a faculty discussion reflecting on our experiences implementing this process. We discussed student performance on assignments, examinations, and simulations; exit interview and survey assessment findings; and our personal successes and challenges throughout the year. Based

on our discussion, we were satisfied with our curricular changes. We observed that students were more comfortable with EMR use, more consistent with documentation content, and felt more confident in their documentation abilities. For example, we observed that students became more efficient with documenting patient encounters during simulations, experienced fewer technical difficulties, and had fewer questions about what and how various types of clinical notes should be documented. We needed to provide less corrective feedback on course assignments and evaluations (eg, practical examinations and simulations), students did not ask what needed to be in discharge or progress notes, and students needed fewer reminders of where to access resources about documentation. One graduating student described that the Clinical Documentation Audit Tool was a useful resource that they consulted frequently during their capstone course. Additionally, preceptors exhibited more confidence and engagement during the second preceptor workshop on this topic. In July 2024, many preceptors focused on barriers and challenges to their documentation, which negatively affected their ability to engage students in documentation. In July 2025, they actively engaged and shared ideas for integrating students in clinical documentation, and many shared excitement for adopting a new EMR system that would help improve their documentation. We noticed a positive shift in the conversation and likelihood of increasing student documentation of patient care during clinical education.

Based on our discussions, we concluded that we were moving in a positive direction regarding implementation of clinical documentation across our curriculum, will continue implementing the assignments and activities in the future, and will reference the inventory and planning documents as a reminder of what activities and assignments students will complete each semester. Moving forward, we will continue to include the documentation questions on the program exit interview and survey. During the 2025–2026 academic year, faculty will have a discussion once per semester about our observations and reflections on clinical documentation within the program and reassess our need for continued focus on this area of the curriculum.

Table 2. Specific Assignment Examples

Assignment	Description
Documentation auditing	<p>Conduct a documentation scavenger hunt at your clinical site: Locate a(n) (1) initial injury evaluation note, (2) daily treatment note, and (3) discharge note. Ideally, you should have recorded this documentation. If not, work with your preceptor to find a recent example of each.</p> <p>Once you have found these notes, use the Athletic Training Clinical Documentation Audit Tool to assess each note. Discuss the findings with your preceptor. Be prepared to share your discussion and the results of your audit in class.</p> <p>What you will turn in:</p> <ul style="list-style-type: none"> • Your completed documentation audit tool. Do not turn in the actual documentation notes. You will be graded on the completion of the audit tool, not the quality of the note (6 points). • A 1-page reflection of your discussion with your preceptor and questions or thoughts you have regarding high-quality clinical documentation (4 points). <p>The assignment is followed by an in-class discussion of their experiences. These discussions often include clarification of note types, clarification on use of the audit tool—particularly when to use the NA column, the importance of comprehensive documentation, and strategies for documentation auditing in assignments and clinical practice.</p>
Spinal rehabilitation and CORE-LT AEMR use	<p>Using the attached case study, assess the patient and develop a treatment plan for the next 2 weeks. Your treatment plan should include specific exercises or activities and volume. Specify in-person and take-home instructions, if applicable. This information will be submitted into the AEMR, and the reflection questions below should be submitted via Canvas.</p> <p>Steps to complete the assignment:</p> <ol style="list-style-type: none"> (1) Read the case study and start to develop your treatment plan. (2) Log in to the AEMR. <ol style="list-style-type: none"> (a) Register this new patient using the information provided. If anything is not specified, enter an educated guess. (b) Add a new injury for this patient using the information from the case study and your treatment plan. This step can be completed in multiple sittings. (3) Respond to the reflection questions below and submit on Canvas. <p>Reflection questions</p> <ol style="list-style-type: none"> (1) Identify 1 general and 1 region-specific PROM that would be appropriate for measuring this patient's condition. If available in the AEMR, select those measures. Provide a brief rationale for your selections. (2) If this were a real patient interaction, what other information would you have obtained from him? (3) What did you set as his participation status and why? (4) Reflect upon your general experience entering information into the AEMR. What information did it ask for that you generally do not include? Was there anything you wanted to enter but were not sure where to put it? <p>Grading</p> <ul style="list-style-type: none"> • AEMR entry = 6 points • Reflection questions = 4 points
Evaluation and rehabilitation simulation with CORE-LT AEMR use (completed over a 2-week period)	<ol style="list-style-type: none"> (1) Prebrief: Students are instructed to bring a laptop and be prepared to document the patient encounter in the AEMR. Students are given no other specifics about the patient case. (2) Simulation part 1: Students evaluate a patient and are required to establish the patient in the AEMR and document an initial encounter within 30 minutes of the simulation completion. (3) Simulation part 2 prebrief: Students are instructed that they will see the same patient the following week, and they need to prepare a treatment plan for the patient. They are instructed to bring a laptop and are encouraged to prechart and perform point-of-care documentation.

Table 2. Continued

Assignment	Description
	(4) Simulation part 2: Students complete the second encounter that has ideally been precharted. Upon conclusion, they have 10 minutes to submit a complete record of the encounter via the AEMR. The shorter documentation window facilitates point-of-care documentation.

Abbreviations: AEMR, academic electronic medical record; NA, not available; PROM, patient-reported outcome measure.

Lastly, we are exploring different options for clinical education data collection and analysis that will better inform future strategies for monitoring and improving students’ documentation of patient care during clinical education experiences.

EDUCATIONAL ADVANTAGES

Athletic training programs must prepare students to successfully engage in the totality of clinical practice, which includes clinical documentation.¹ Educators experience challenges engaging students in documentation during didactic and clinical education, particularly with electronic records use.^{2,4} We identified many of these same challenges within our program and observed that our reflection and implementation process improved our students’ application of clinical documentation throughout the curriculum. Other educators who are experiencing similar challenges may consider implementing a similar purposeful process of reflection and curricular revisions to better integrate documentation throughout the curriculum.

The CAATE standards also require athletic training programs to engage in continuous QI.¹ Although we did not follow a specific model for QI, we did implement several components of the QI process in our project, including identifying gaps in our educational practice, developing an aim for improvement, using strategies to facilitate success, and measuring outcomes. As soon as our initial year of the documentation project concluded, we initiated a similar process examining another component of our program framework. Educators may consider using the process, content I have shared, or both to guide their programmatic QI initiatives.

To facilitate the implementation of more documentation across the curriculum, we used several resources, including the CORE-LT, Clinical Documentation Personalized Learning Pathway, and Clinical Documentation Audit Tool. These resources are currently cost-free, requiring no additional financial resources. Although the Personalized Learning Pathway is directed toward an audience of practicing clinicians as a

continuing education course, I have found this resource to be useful and engaging for our students. For our program, the CORE-LT has been an essential tool for engaging students in electronic documentation, particularly since many of our clinical sites do not use EMRs or have EMRs that students can access. To supplement these external resources, I found it necessary to create some program-specific resources that include foundational content on documentation. We house these resources on a central program Canvas page, helping us facilitate consistency across courses, examinations, clinical education, and simulations.

CHALLENGES AND FUTURE NEEDS

While I consider our process to be generally successful, our program continues to experience challenges engaging students in patient care documentation, particularly EMRs, during their clinical education experiences. Several of our clinical sites do not have EMRs, therefore limiting our students’ exposure to these essential platforms. Early in our implementation process, I inquired with a few EMR software providers used by our clinical sites to see if we could obtain student access via their own personalized login credentials. Unfortunately, the price of these individual licenses for students was cost prohibitive. Making EMRs more accessible to students during clinical education experiences, with the collaboration of preceptors and software providers, would be a meaningful area to explore to help improve student engagement with these essential tools during clinical education. In the meantime, the CORE-LT is a useful tool for engaging students in EMR use when this is limited elsewhere.⁵

Additionally, we are continuing to work with preceptors to emphasize the importance of documentation in clinical practice and professional education. Previous researchers have described a need to better prioritize and improve the quality of documentation across the athletic training profession, with findings noting inadequate documentation practices

Table 3. External Resources for Teaching Documentation

Resource Name	Description	Where to Access
Clinical Documentation Personalized Learning Pathway	4-hour, self-led, self-paced interactive Web-based educational program	Athletic Training Practice-Based Research Network free continuing education courses: http://ceus.atpbrn.org
Athletic Training Clinical Documentation Audit Tool	Validated tool to assess the comprehensiveness of initial examination, daily treatment, progress, and discharge notes	Download available within the Clinical Documentation Personalized Learning Pathway within the Strategies for Documentation section
CORE-LT Academic Electronic Medical Record	An electronic medical record modified for an educational environment	Athletic Training Practice-Based Research Network: http://atpbrn.org

Table 4. Outline of the Program-Specific Clinical Documentation Resource Guide

Section Heading	Contents
Background	Reasons and need for documentation
Documentation in MSAT program	How documentation is integrated through athletic training curriculum and general expectations for students
Methods of documenting	Overview of EMRs, EHRs, and paper documentation and different ways these are completed
CORE-LT Academic Electronic Medical Record	Login and access instructions; emphasis that students must be ready to log in and use at all times
Types of documentation	Overview of patient encounter documentation (eg, initial assessment, daily treatment, progress notes, discharge)
SOAP note format	Definition of components of the SOAP note and general examples of how the content varies by note type
Electronic documentation	Suggestions for how to document electronically versus paper formats (eg, where SOAP note content goes on paper versus EMR)
Types of outcomes	Definitions and examples of clinician and patient-reported outcome measures
Clinical Documentation Audit Tool	Reminder and access instructions for how to use the audit tool
References	References to textbooks the students have from different courses in the program
Appendix: initial assessment guidance and templates	Each appendix includes the same headings of Format, Reasons for Documenting, and Contents; notes about common formats (eg, SOAP, rehab flowchart, etc) are included where relevant
Appendix: daily treatment record guidance	
Appendix: progress or reassessment note guidance	
Appendix: discharge note guidance	

Abbreviations: EHRs, electronic health records; EMRs, electronic medical records; MSAT, Master of Science in Athletic Training; SOAP, subjective, objective, assessment, plan.

by many athletic trainers.^{3,6,11} Athletic training students need role models who demonstrate thorough and efficient clinical documentation to facilitate their uptake of these behaviors as students and professionals.^{3,12} Our program-specific challenges appear to align with recent published literature, suggesting these are widespread concerns in our profession.^{2,3} Clinicians and educators need to work together to continue improving the quality of documentation, and each has a responsibility to facilitate students' knowledge translation. I plan to continue involving our program's stakeholders to improve student engagement in clinical behaviors, including documentation practices.

CONCLUSIONS

Athletic training educators are guided by the CAATE standards to integrate documentation, electronic record-keeping, and continuous QI in their athletic training programs. I have shared a stepwise QI process to improve the instruction of clinical documentation throughout my athletic training program. In collaboration with athletic training faculty, we were able to improve the depth and breadth of how we teach documentation across our curriculum. Additionally, students are frequently engaging with an academic EMR, which improves their knowledge and experience of navigating electronic patient records. We plan to maintain these changes and continue improving other areas, such as helping students document more during clinical education and strengthening their ability to use data to improve clinical practice and outcomes.

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