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Sarah L. Nottingham
University of New Mexico

Tricia M. Kasamatsu
California State University, Fullerton

Julie M. Cavallario
Old Dominion University, jcavalla@odu.edu

Cailee E. Welch Bacon
A. T. Still University, Mesa

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Athletic Trainers' Perceptions of and Experiences With Professional Development Approaches for Enhancing Clinical Documentation

Sara L. Nottingham, EdD, LAT, ATC*; Tricia M. Kasamatsu, PhD, ATC†; Julie M. Cavallario, PhD, ATC‡; Cailee E. Welch Bacon, PhD, ATC, FNATA§||

*Athletic Training Program, Department of Health, Exercise, and Sports Sciences, University of New Mexico, Albuquerque; †Athletic Training Program, Department of Kinesiology, California State University, Fullerton; ‡Athletic Training Program, School of Rehabilitation Sciences, Old Dominion University, Norfolk, VA; §Department of Athletic Training, Arizona School of Health Sciences, A.T. Still University, Mesa; ||Department of Basic Sciences Education, School of Osteopathic Medicine in Arizona, A.T. Still University, Mesa

Context: Little is known about how athletic trainers (ATs) learn clinical documentation, but previous studies have identified that ATs have a need for more educational resources specific to documentation.

Objective: To obtain ATs' perspectives on learning clinical documentation.

Design: Qualitative study.

Setting: Web-based audio interviews.

Patients or Other Participants: Twenty-nine ATs who completed 2 different continuing education (CE) clinical documentation modules. Participants averaged 36.2 ± 9.0 years of age and included 16 women and 13 men representing 21 US states and 8 clinical practice settings.

Data Collection and Analysis: Participants were recruited from a group of ATs who completed 1 of 2 web-based CE clinical documentation modules. Within 3 weeks of completing the educational modules, participants were interviewed regarding their perceptions of how they learn clinical documentation, including their experiences completing the modules. Using the Consensual Qualitative Research approach, 3 researchers and 1 internal auditor inductively analyzed the data during 5 rounds of consensus coding.

Trustworthiness measures included multianalyst triangulation, data source triangulation, and peer review.

Results: Two themes emerged from the data, including (1) mechanisms of learning documentation and (2) benefits of the educational modules. Athletic trainers primarily learn documentation through professional education and workforce training, but training appears to be inconsistent. Participants perceived that both educational modules were effective at increasing their knowledge and confidence related to learning documentation. The CE modules incited a growth mindset and intention to change behavior.

Conclusions: Athletic trainers are satisfied with web-based CE learning experiences specific to clinical documentation and may benefit from more CE offered in these formats. Educators are encouraged to integrate clinical documentation principles throughout the curriculum during both didactic and clinical education. Workforce training is also valuable for improving knowledge and skills related to clinical documentation, and employers should onboard and support ATs as they start new positions.

Key Words: web-based learning, socialization, workforce training, continuing education, health information technology

Key Points

- Athletic trainers benefit from workforce training, or organizational socialization, related to clinical documentation. Employers should provide job-specific onboarding to promote high-quality documentation practices.
- Web-based continuing education is an effective mechanism for improving knowledge about clinical documentation and may be a useful format for other professional development topics.
- Athletic trainers learned health information technology from workforce training and the continuing education modules, and completion of the modules motivated them to improve their use of health information technology and other clinical documentation behaviors.

One of the 5 domains of athletic training clinical practice is health care administration and professional responsibility, which includes documentation of patient care.¹ Although clinical documentation is a key component of clinical practice, research suggests that athletic trainers (ATs) may not be following best practices related to documentation.²⁻⁴ Several ATs state that they rarely or never document patient

care, particularly patient-reported outcome measures, and many ATs only document significant injuries or those requiring referral.^{2,4} Proper documentation is critical to clinical practice not only for legal protection but also to monitor and improve patient outcomes, communicate effectively with other health care providers, and justify the value of athletic training services.⁵⁻⁷

Table 1. Roles and Experiences of the Research Team

	Researcher 1 (S.L.N.)	Researcher 2 (T.M.K.)	Researcher 3 (C.E.W.B.)	Researcher 4 (J.M.C.)
Role in study	Principal investigator, primary research team member, interviewer	Primary research team member	Primary research team member	Internal auditor
Experience with research methods	Experienced qualitative and CQR researcher	Experienced qualitative and CQR researcher	Experienced qualitative and CQR researcher	Experienced qualitative and CQR researcher
Experience with research topic	Established investigator of documentation practices and education research	Established investigator of documentation practices and education research	Established investigator of documentation practices and education research	Established investigator of documentation practices and education research

Abbreviation: CQR, consensual qualitative research.

Athletic trainers have described several barriers to completing clinical documentation, including lack of time and resources, high patient volume, and challenges with technology.^{2,3} One key barrier identified by ATs is a lack of knowledge related to clinical documentation, including what to document and how to effectively document patient care.⁸ A previous study found that ATs learn clinical documentation from professional education, both didactically and clinically, although the quality and consistency of this education varies.⁹ Some ATs have participated in continuing education (CE) opportunities related to documentation, but many of these opportunities left ATs desiring more concrete strategies and information related to quality documentation.⁹ In general, ATs desire more extensive and practical learning opportunities specific to clinical documentation.⁹

To address the need for more CE opportunities related to clinical documentation, we developed 2 web-based CE formats, a personalized learning pathway (PLP) including videos, case studies, documents, knowledge checks, and reflections, and a passive (PAS) learning module that included several readings. The PLP and PAS resources are described in other research papers.^{10,11} The purpose of the study described in this paper was 2-fold: (1) to learn more about how ATs learn clinical documentation and (2) to obtain ATs' perceptions of different CE opportunities for clinical documentation. Examining how ATs learn documentation can provide useful information for educators and CE providers to further enhance educational opportunities in this important domain of athletic training clinical practice.

METHODS

Design

This study followed a sequential explanatory mixed-methods design to compare the effectiveness of the PLP and PAS learning modules for clinical documentation.^{11,12} After collecting the quantitative data as part of a larger project, we used a consensual qualitative research (CQR) approach to obtain participants' perspectives on how they have learned clinical documentation, including their experiences completing the educational modules.¹³ The research team included 4 members with CQR experience, including a primary research team of 3 investigators (S.L.N., T.M.K., C.E.W.B.) and an internal auditor (J.M.C.; Table 1).

Participants and Setting

Participants completed the quantitative component of the study first, which included completing either the PAS or

PLP educational module.¹¹ Institutional Review Board approval was obtained before starting recruitment for the quantitative component of the study, and participants provided consent before completing the baseline knowledge assessment.¹¹ We initiated recruitment with an email to 18 981 clinically practicing ATs via the National Athletic Trainers' Association (NATA) research survey service, excluding students and educators. After completion of the postknowledge assessment, participants could indicate whether they were interested in participating in a follow-up interview. Of the 83 participants who completed the quantitative component of the study (PLP = 39, PAS = 44), 43 indicated interest in completing an interview (PLP = 22, PAS = 21). Within 1 week of completing the postknowledge assessment, individuals were invited for an interview with a scheduling link. A second reminder email was sent 1 week later. A total of 29 ATs representing a variety of clinical practice settings, experience levels, and geographic locations completed the interview (PLP = 15, PAS = 14). This represented a purposeful sample of individuals who completed the educational modules, in addition to a convenience sample of those who were interested in participating.¹⁴ We interviewed all individuals who agreed to complete the interview and determined during the analysis that saturation, or stability, was obtained. Therefore, we did not pursue additional interviewees. Participant demographics are displayed in Table 2.

Instrumentation

The primary research team developed 2 interview guides based on previously published research, the study objectives, and feedback obtained from participants during the pilot phase of the study.^{10,11,15} The guides were individualized to the module completed (PLP versus PAS) and asked about how participants learned clinical documentation, their perceived knowledge and confidence before and after completing the educational modules, and thoughts about the content, format, and general experiences completing the educational modules. The internal auditor reviewed the interview guides for clarity and fit with the research questions and provided feedback to the primary research team. The interview guides were then finalized for use with participants and are provided in Table 3. The first 2 interviews (PLP = 1, PAS = 1) were treated as pilot interviews to ensure that the guides flowed well with actual participants and the information sought was obtained. After these initial interviews, the interviewer debriefed with the primary research team, and they agreed that the interview guides

Table 2. Participant Demographics

Pseudonym ^a	Years Certified	Work Setting	Race/Ethnicity	Gender Identity
PAS group				
Eleanor	9	Secondary school	White or Caucasian	Woman
Ross Bob	2	Secondary school	White or Caucasian	Woman
Rebecca	16	College/university	White or Caucasian	Woman
Marie	12	College/university	White or Caucasian	Man
Liam	19	Clinic	White or Caucasian	Man
George	21	Hospital	White or Caucasian	Woman
Bella	5	Secondary school	White or Caucasian	Man
Lucas	14	College/university	Multiracial or biracial	Man
Greg	11	Secondary school	White or Caucasian	Woman
Lynn	9	College/university	Hispanic or Latino	Woman
Rinna	7	Secondary school	White or Caucasian	Woman
Janie	15	Club/rec sports	White or Caucasian	Woman
Mircalla	2	Secondary school	Multiracial or biracial	Woman
Brooke	11	Industrial/occupational	White or Caucasian	Woman
PLP group				
Austin	21	College/university	White or Caucasian	Man
Linus	10	College/university	White or Caucasian	Man
Derek	9	Secondary school	White or Caucasian	Prefer not to say
Jazzy	9	College/university	White or Caucasian	Woman
John	4	Military	White or Caucasian	Man
Roger	2	Secondary school	White or Caucasian	Man
Han	13	College/university	White or Caucasian	Man
Mark	36	Secondary school	White or Caucasian	Man
Jenny	6	College/university	White or Caucasian	Woman
Ruthie	31	Clinic	White or Caucasian	Woman
Michelle	6	Secondary school	White or Caucasian	Woman
Hot Gobbler	29	Secondary school	White or Caucasian	Man
Ari	13	College/university	Prefer not to say	Woman
Pam	7	College/university	White or Caucasian	Woman
Charlie	13	Secondary school	White or Caucasian	Man

Abbreviations: PAS, passive learning; PLP, personalized learning pathway.

^a Participants were permitted to choose their pseudonym and pronouns.

were appropriate, and no changes were needed. Because no changes were made to the interview guides, the initial 2 interviews were included in the final data for analysis.

Procedures

After scheduling the interview via an online scheduling tool, participants completed an audio interview with 1 researcher (S.L.N.) using a web-based platform (Zoom). At the beginning of the interview, participants provided consent to be audio recorded. Interviews were automatically transcribed via Zoom. A research assistant reviewed each transcript and corrected errors by listening to the audio files; the transcripts were then deidentified and finalized for analysis.

Data Analysis

The data analysis process followed the inductive CQR approach, including multiple investigators, an internal auditor, and several consensus meetings, to ensure accurate representation of data and saturation, or stability, of the data (Figure 1).¹³ The robust data analysis process also enhanced the trustworthiness of the study by including multiple data analysts, including 1 individual outside of the primary research team.^{13,16} Triangulation of multiple data sources (PLP and PAS participants) and peer review of the interview guides also improved the trustworthiness of the

study.¹⁶ Lastly, we used the Consolidated Criteria for Reporting Qualitative Research to ensure that all key aspects of the study were reported.¹⁷

RESULTS

Analysis revealed 5 themes regarding participants' experiences completing the CE modules. Two themes are presented in this paper: (1) mechanisms of learning documentation and (2) benefits of the educational modules. Themes, supporting categories, and participant quotes are described in the following paragraphs. The frequencies of findings for each category are displayed by group in Table 4, and additional supporting quotes are shown in Table 5.¹³

Theme 1: Mechanisms of Learning Documentation

When asked to describe how they have learned clinical documentation, participants identified 3 categories during the interviews: (1) professional/postprofessional education, (2) workforce training, and (3) CE (Figure 2).

Category 1: Professional/Postprofessional Education.

Most participants described that their first exposure to clinical documentation was in the didactic setting during their professional education. Charlie stated, "I assume we all started with the basics in class with our administration course during my undergraduate studies." Likewise, John said, "I think the most I learned was probably in grad school during our administration

Table 3. Interview Guides^a

PLP Group

1. Please tell me about your past experiences learning about athletic training clinical documentation.
 - a. Formal education
 - i. Professional education—didactic and/or clinical
 - ii. Continuing education
 - b. Informal education
 - i. Job training, coworkers, etc
2. Please reflect on the pros and cons of learning documentation in these formats.
3. Please reflect upon your knowledge of clinical documentation prior to completing the personalized learning pathway, also known as the PLP.
4. Please reflect upon your confidence with clinical documentation prior to completing the PLP.
5. Please tell me your general thoughts about the PLP.
6. What did you find helpful about the PLP? Please describe.
7. Did you face any challenges completing the PLP? If so, what were they?
8. Please reflect upon your knowledge of clinical documentation now that you have completed the PLP.
9. Please reflect upon your confidence with clinical documentation now that you have completed the PLP.
10. Overall, were you satisfied with the PLP? Why or why not?
11. Is there anything you would change about the PLP? If so, what?
12. Was there any information you were hoping would be in the PLP that was not included? If so, please describe.
13. Is there anything else you would like to add regarding clinical documentation or your experiences completing the PLP?

PAS Group

1. Please tell me about your past experiences learning about athletic training clinical documentation.
 - a. Formal education
 - i. Professional education—didactic and/or clinical
 - ii. Continuing education
 - b. Informal education
 - i. Job training, coworkers, etc
2. Please reflect on the pros and cons of learning documentation in these formats.
3. Please reflect upon your knowledge of clinical documentation prior to accessing the documentation resources provided to you.
4. Please reflect upon your confidence with clinical documentation prior to accessing the documentation resources provided to you.
5. Please tell me your general thoughts about the documentation resources provided.
6. How many resources did you access?
 - a. Can you please provide your rationale for selecting which resources to access?
 - b. To what extent did you read the resources provided? Please explain.
7. What did you find helpful about the documentation resources? Please describe.
8. Did you face any challenges accessing or using the documentation resources? If so, what were they?
9. Please reflect upon your knowledge of clinical documentation now that you have accessed the documentation resources.
10. Please reflect upon your confidence with clinical documentation now that you have accessed the documentation resources.
11. Overall, were you satisfied with the resources provided? Why or why not?
12. Is there anything you would change about the resources provided? If so, what?
13. Were there resources you were hoping would be provided that were not included? If so, what were they?
14. Is there anything else you would like to add regarding clinical documentation or your experiences accessing the documentation resources?

Abbreviations: PAS, passive learning; PLP, personalized learning pathway.

^a Reproduced in their original format.

class.” Participants described this didactic learning as largely centered around foundational information, such as “basic SOAP [subjective, objective, assessment, and plan] notes” (Ross Bob), “different abbreviations” (Eleanor), and “legal aspects” (Liam).

Although didactic education addressed the principles of clinical documentation, participants described that they did not apply the information until clinical education experiences. Roger stated, “In the classroom, they taught us how to do it, but then we got to practice writing them in clinical.” Several participants, including Marie, enjoyed learning how different preceptors approach documentation: “It is very interesting to see how each different preceptor or certified likes their documentation done.”

Michelle described how helpful it was to receive feedback from her preceptors as she practiced documentation:

As a newly certified and then for my undergrad education, I really appreciated preceptors that would take the time to go over SOAP notes with me and take the time to

be like, “Why didn’t you ask this or why did you write this down and why did you choose to put this information in this section?” because I think that’s where I learned documentation the best.

Although many participants touted the effectiveness of clinical learning for documentation, they also noted that this was implemented inconsistently. Jazzy described,

Most of the technical aspects of [documentation] were probably just learned with your preceptor at your different clinical sites, which meant that some places you learned a little bit more and some places you learned a little bit less.

Jenny also noted that, although she gained practice with documentation during clinical education, she generally did not receive feedback on it:

I vaguely remember submitting a couple of SOAP notes to preceptors, and they would look over it, but I

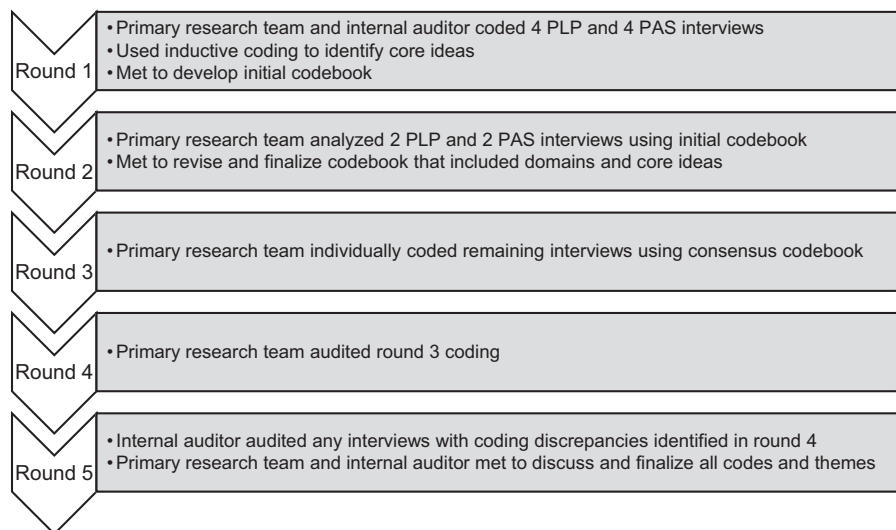


Figure 1. Data analysis flowchart.

don't know if we ever really got any feedback on it, or corrections or "hey you should write it like this, instead." And then, even in my masters, once I was certified I don't think we had like any oversight on documentation.

Category 2: Workforce Training. Most participants described that workforce training was a major mechanism of learning documentation. Rinna summarized,

I think on-the-job training is the most beneficial way to learn documentation. Especially from someone who has been in the field for a long time because you can see how they do it. Someone who has had more experience can show you quicker ways to document or exactly what you're supposed to document.

Several participants described that on-the-job training was particularly effective for learning the electronic medical records (EMR) system that was used at that site and the nuances of setting-specific documentation expectations. Linus described,

Documentation at my first job, we went over how to do it when we first got there, and that was definitely helpful. Learning Sportsware, talking about specific documentation for an electronic medical record. And then when we went to an industrial setting; for that one we had to relearn all of documentation, because it was based on workers' comp.

For several participants, working in different settings, particularly with other health care providers, helped them expand and improve upon their documentation practices. Greg described how he learned from other providers:

When I got into the clinic and I saw that the physical therapists' documentation, I realized how much more detail I could be including and how much more specific and how many more rules they had to follow, so I learned a lot from them.

Most participants experienced on-the-job training informally, often learning from supervisors or colleagues. Mark described how he was exposed to employer expectations for documentation:

It was informal. This is how we want our notes to look, these are the abbreviations you can use, this is acceptable or not acceptable. We didn't really do anything very formal. But over time, you would have a peer review of your notes. They would help tell you what direction they wanted you to go in.

In addition to informal workforce training, some participants also had formal on-the-job training, which they described as helpful. Liam described his onboarding and annual training experience in detail:

We take an annual learning course on HIPAA [Health Insurance Portability and Accountability Act], compliance, and

Table 4. Frequency of Each Theme and Category

Theme	Category	Frequency ^a	PLP (n = 15)	PAS (n = 14)
Mechanisms of learning documentation	Professional/postprofessional education	Typical	14	14
	Workforce training	Typical	13	12
	Continuing education	Typical	13	13
Benefits	Improved knowledge/confidence	Typical	13	14
	Growth mindset	Typical	9	8
	Satisfaction	Typical	14	7
	Intention to change	Typical	11	6

Abbreviations: PAS, passive learning; PLP, personalized learning pathway.

^a *General* would apply to all cases, *typical* applies to half or more cases, and *variant* would apply to 2 or 3 but less than half of cases.¹³

Table 5. Additional Quotes

Theme 1: Mechanisms of Learning Documentation

Workforce training:

[My documentation has] changed from each employer that I've been at. I've worked at a physical therapy clinic and then at a Division III college and now for the military, and it's been a little bit different in each setting. I've just had to learn along the way, get used to those systems. (John, PLP)
I think [one of] the pros [of learning documentation was] when I was working in the office setting with doctors and other health care professionals, just to see how they're doing it and collaborate with them. Especially when it comes to abbreviations, just being able to kind of communicate that way. I think that's very important as opposed to just learning from just athletic trainers, trying to broaden how other people are documenting. And for your profession to be on the same page with other health care professionals is important so being able to learn in that setting, I think that was very pro aspect of it. (Lucas, PAS)

We had a full company-wide training [on our EMR]. We sat down and the company rep showed us how to do everything. We can always contact our vendor for the system and go through it. As far as what was expected to be documented, I would like on the job training... and what they expect that this the school district or the university expects to be documented. (Lynn, PAS)

My supervisor, who is our head athletic trainer, kind of really took me under his wing and he would look at everything that I did and give me advice on how to make it more thorough, how to document rehab in particular, was not something that we really had a lot of experience with in undergrad documenting... I didn't know what I was doing with that and he really helped me figure that out. So I think that was a pretty transformative experience. (Pam, PLP)

Continuing education:

I don't remember the exact course, but it was during NATA there was a course on documentation. That was kind of like a roundtable discussion to see how current documentation practices in certified athletic trainers in the college and university setting was being tracked. It was kind of a meshing of what was the standard best practice for documentation with what is the commonality of a lot of athletic trainers and how they're using their abbreviations, and what type of information is being recorded as well as how does that shape up against the gold standard. (Marie, PAS)

Theme 2: Benefits

Improved knowledge and confidence:

After doing the PLP, I kind of realized I was lacking in my documentation. A lot of the specifics on [documentation] and also how I laid my documentation out. I guess like I was a lot less organized, but now that I went through the PLP I feel a lot more confident. Like if I got subpoenaed and had to present one of my SOAP notes to a jury, I feel a lot more confident that me or my facility would be covered. (Roger, PLP)

I don't know if it's necessarily an increase in knowledge, but more like reinforcing the knowledge. Specifically, what I can accomplish for myself by having the data that comes with doing clinical documentation? You're always told how important it is, but that reinforcement of these are the things you can do with this data and how it can help me in my setting whether it's getting increased salary or eventually down the road probably trying to get another athletic trainer to help at my setting. Showing how many injuries and kids I see. And even just being able to obviously cover your butt with the documentation in the case of something going wrong. (Michelle, PLP)

Growth mindset:

It was wonderful to do and it helped me grow as an athletic trainer especially one that's been certified for over 20 years that grew up on pen and paper I think it helped me grow a little bit and realize that it's not as hard as I think to document in my EMR. That I can do it quickly, and I can do it efficiently and provide an accurate record. (Austin, PLP)

Intention to change:

I have a better idea of how to structure documentation and I think that I personally have been doing a lot better in managing my time with documentation, so making sure that things are done within at most 72 hours, just so that it's completed and in the system. Whereas before I would write everything down so that I had it, but then I wouldn't necessarily enter it into our system until weeks later. (Ross Bob, PAS)

I'm focusing more on being more detailed with my documentation as well as working with my students on documentation. I think, part of the part of [the PLP] made me realize that I don't help my students enough with documentation. And I don't feel like I was helping my students be prepared enough to document well and I think learning through this [module] is going to help me help them prepare to be a better practitioner and provide better documentation. (Austin, PLP)

Abbreviations: EMR, electronic medical record; NATA, National Athletic Trainers' Association; PAS, passive learning; PLP, personalized learning pathway; SOAP, Subjective, Objective, Assessment, and Plan.

making sure for documentation that we understand the HIPAA aspect of it... As far as the actual documentation of clinic notes and progress notes, that was more done as a new employee. We have a full 3- to 6-month onboarding process where you're teamed up with 1 or 2 other ATs that are walking you through how to put in your notes, how you document on what you're physically observing, and what the provider is telling you and making sure that what you are putting in the note is the correct thing. And then our providers will go back to review that not only during our onboarding process but also throughout our whole careers.

Overall, workforce training was impactful for ATs learning how to document, not only at the start of their careers but also when changing job settings, employers, or software systems.

Category 3: Continuing Education. During our interviews, we specifically asked participants whether they previously completed CE related to clinical documentation.

Most participants, including 8 PLP participants and 11 PAS participants, had not completed CE specific to documentation. Several participants, like Pam, commented that it was not a priority: "To be perfectly honest, I focus elsewhere." Similarly, Lucas described,

Not that I can remember. Usually in the field, you want to learn more about the new rehab techniques or the best new ways to do assessments or treatments and stuff like that, so documentation gets put on the backburner as far as continuing education.

In addition to not prioritizing documentation, some individuals, such as Brooke, perceived that there were limited CE offerings related to documentation: "I have not seen too much of that actually out there from the BOC [Board of Certification] that they usually have more injury prevention and things like that." Several participants, including Lynn, stated that participation in the research study was their first

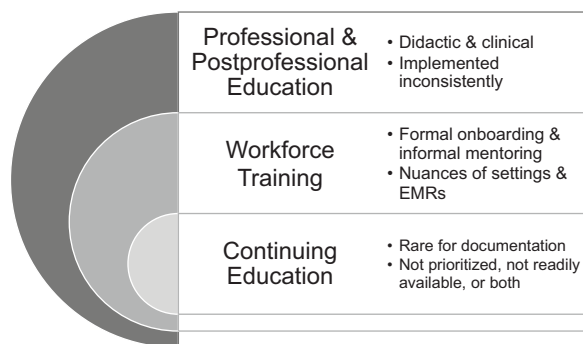


Figure 2. Mechanisms of learning documentation. Abbreviation: EMRs, electronic medical records.

CE related to documentation, “This is the first time I’ve done any continuing education based on documentation.”

Participants who had completed CE related to clinical documentation described accessing a variety of resources. Eleanor noted the recent emphasis of CE related to the value of documentation: “I’ve been to talks about documentation. More recently there’s been a lot of talks about taking documentation and how to show the value of what you have documented.” Han described sessions specific to legal implications of documentation,

I think some of the documentation continuing education things that I’ve gone to have been more on the litigious side of if you don’t document, people can get sued, and a lot of them were presentations on this is what happens.

Other participants described completing other activities to keep up on documentation practices that were not formal CE opportunities. Hot Gobbler described reading current resources related to documentation,

Not continuing education specific, but I do read the legal journal for athletic training. I read all the standard practice acts and the state licensure acts and try to keep myself up to date on what those requirements are.

Similarly, Jazzy described accessing best practice documents to ensure compliance with documentation standards,

Just through the different content like the NATA has used or put out. So we based quite a bit of the things that we’re doing now on the best practices document that they put out a few years ago. . .that would probably be the primary resource that we’ve been using.

Theme 2: Benefits

Participants identified 4 benefits to completing the documentation educational modules, including (1) satisfaction, (2) improved knowledge and confidence, (3) growth mindset, and (4) intention for change (Figure 3).

Category 1: Satisfaction. When asked whether they were satisfied with the educational resources provided, participants in both the PLP and PAS groups overwhelmingly said yes. Linus, a PLP participant, said, “Yes, I was overall satisfied with the PLP.” Ari, another PLP participant, said,

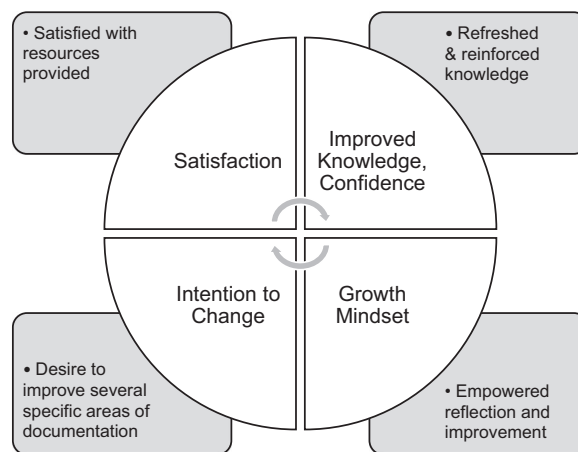


Figure 3. Benefits of continuing education documentation resources.

“Yeah, I thought it was great. I thought it was a great educational resource.” Michelle elaborated on the PLP, stating, “It was a really fun and engaging way to learn about a topic that I feel like could otherwise be pretty boring.”

Passive learning participants were also satisfied with the resources provided. Lucas said, “Overall yeah, I think I was satisfied. I thought it was, it was good and [I was] definitely happy with the content.” When asked about her satisfaction with the materials, Rebecca said “absolutely” and that she was “very appreciative” to receive the materials. Lynn stated in more detail,

Yeah, I would say so. I think they were pretty in depth, and they gave a good variety of resources. It wasn’t just 1 study or 1 set of rules or anything like that. I think they were pretty helpful overall.

Participants’ reactions to the educational resources demonstrated that ATs were satisfied with CE resources related to clinical documentation, regardless of the format of the resources provided.

Category 2: Improved Knowledge and Confidence. During the interviews, participants of both groups described experiencing improved knowledge and confidence after completing the educational modules. Pam, a PLP participant, stated, “I definitely feel more like up to date with what’s going on now. And I think that it highlighted a lot of areas that we can work on in my particular setting.” Rinna, a PAS participant, described,

It definitely has changed. I feel like I just have expanded my knowledge on documentation, and I have a lot more confidence going into documenting efficiently, instead of just documenting what you think needs to be in there. Just having a better sense of knowledge of what needs to be included, and what doesn’t.

Several participants described that the educational resources changed their perception of their documentation quality. Janie, a PAS participant, said,

The resources that you have provided really made me realize maybe I have not been doing as much as I should have been doing in my documentation to make sure that I’m providing

the best health care or covering myself and the school that I'm working with in case of the possibility of a medical issue or lawsuit. I feel like I had very limited knowledge of documentation once I started your research.

Lastly, participants described that the resources provided were a good refresher of their knowledge on documentation. Lucas, a PAS participant, said, "I think was a good refresher, to keep up to date with all the laws. I think that was probably the most beneficial thing about it, is just getting a refresher course in it."

Category 3: Growth Mindset. In addition to improved knowledge and confidence, participants described that completing the educational modules incited a growth mindset to change their behavior. By completing the modules, several participants felt empowered to change their documentation behaviors and work through challenges they face when documenting. Michelle, a PLP participant, described,

Now after doing the PLP, I'm really going to make more of an effort to get [documentation] done. I would say my confidence in my ability to be able to get it done changed. I would say it got stronger like, "Okay, I really can make this work," after [I completed] the PLP, so that it really helped my confidence in ways I can make it work for my setting.

A PAS participant, Marie, also discussed the need to reflect on and change individual practices:

I think the big takeaway for me from this is, it's very much just like any other part of athletic training. [Documentation] has to be a continual part of our learning process and that complacency that oftentimes can become a standard within documentation is easily kind of fallen into and so that ability to continue to review documentation and understand what [is the] best practice and how is that not only protecting the individual as well as the company or the institution that athletic trainer is working for? I think this cannot be stated enough.

Several participants later in their careers discussed how reviewing the materials helped them re-evaluate their documentation practices and promote change. Mark described that reviewing the PLP helped him break his habits related to documentation.

I thought I was doing pretty well, then I realized I could do better. I think it's pretty easy, when you're doing this long as I've been doing it, to get into a comfort zone, and this kind of brought you out of that a little bit. It made me think a little bit more and helped me realize you can do better at this, so I thought was really good. [The PLP] brought a lot of things to light that I think as a profession need to be brought to light.

Category 4: Intention to Change. As participants described a general motivation to grow and change behavior, they also specified areas that they have changed, or intended to change, since reviewing the educational resources. Han, a PLP participant, discussed how he plans to make changes within his facility.

I like the idea and I think it's something that we all fall into is the trying to document in real time. So the idea that we are going to approach, and it was suggested in the PLP, is getting tablets and being able to document some sort of evaluation as we're doing it to better assist with our overall and follow up documentation. And I think that a long-term goal for us would be something that was talked about in the PLP as well is not just [documenting] the initial evaluation, but [documenting] the follow up evaluations as well.

John, a PLP participant, described that, "I've been more focused on trying to make sure that we have documentation for no shows, that was one of the things that was emphasized in [the PLP]." John also said the ATs in his facility have also implemented peer reviewing of documentation "as well as making sure that we're continuing the peer review process, that's something that we just got started."

Marie, a PAS participant, talked about broader changes within her facility, including shared communication and expectations amongst clinicians.

I think moving forward, making sure that all my staff, at least the people that I work with, are on the same page regarding what our own expectations are and make sure those are clearly delineated and communicated so that standard can be [consistent] throughout the institution that we work at from a student to an intern to a full time certified. I think that is widely important.

Participants of both educational modules touched on several other areas related to documentation that they have changed or plan to change since completing the modules, including adopting an EMR (Bella, PAS; Brooke, PAS), improving thoroughness of documentation (Ari, PLP), and getting more consistent with coworkers (Hot Gobbler, PLP; George, PAS).

DISCUSSION

Mechanisms of Learning Documentation

Similar to previous research, our participants described that their first exposure to learning about clinical documentation was typically during their didactic education.⁹ Like Welch Bacon et al's participants, ATs in our study described that the information learned during didactic education was mostly foundational and often lacked application.⁹ Application of documentation skills was frequently expected during clinical education experiences but occurred inconsistently and often without guidance or feedback. These findings are similar to those of Neil et al's study, which found that nearly 19% of preceptors do not allow their students to document patient care.¹⁸ Adult learners, including athletic training students, thrive on application and experiential education opportunities.^{19,20} Hands-on learning is important not only for clinical skill development but for administrative duties.⁹ Several participants in this study noted the value of receiving feedback from different preceptors at different clinical sites regarding their documentation. Clinicians who serve as preceptors should help students learn and practice clinical documentation during actual patient care, including providing guidance and feedback on their documentation. Application of documentation can also occur in the classroom setting by

using case studies and assignments that integrate instructor feedback.

In addition to professional education, our participants described the value of learning documentation on the job. Participants found workforce training to be particularly helpful for learning the nuances of documenting in different settings, with new EMRs, and with new employers. However, it is interesting that ATs frequently described differences in documentation expectations between different practice settings. This has also been noted in previous studies.^{8,21,22} Athletic trainers have also described in previous research that more standardization of documentation across the profession would help improve their documentation practices.⁹ As a profession, athletic training should consider strategies for improving consistency in documentation across practice settings to help educate and improve upon the execution of clinical documentation. Participants in our study enjoyed learning documentation strategies from colleagues who were other health care professionals, and some noted the more structured and consistent nature of other clinicians' documentation. Athletic training may consider streamlining their documentation guidelines to improve consistency with other health care professions.

Our participants found both formal and informal mechanisms of learning about documentation in the workforce to be helpful. Formally, ATs thought onboarding sessions with new employers helped them learn the documentation expectations in their new workplace, including the use of specific EMRs. Informally, ATs appreciated getting feedback from supervisors and colleagues on their documentation practices.²³ Participants' descriptions of learning documentation represent the process of professional and organizational socialization, where behaviors are initially learned during formal professional education before entering the workforce (professional), and further guidance and learning are obtained after entering the workforce (organizational).²⁴ This process was helpful for participants across their careers, not just new graduates. This finding emphasizes the value and importance of employer onboarding and support for new employees.²⁵ Athletic trainers are more likely to meet expectations and produce high-quality documentation when they know the expectations and have the support to meet them. Employees can also take the initiative to identify mentors within and outside their workplace to help them learn and refine professional behaviors, including those specific to clinical documentation.²⁵ Regarding technology barriers, our findings suggest that employers and supervisors should onboard new employees to their EMR system and provide ongoing guidance and feedback to ensure proper use of health information technology.²⁶

To help answer our research question, we specifically asked participants to share whether they have completed CE related to clinical documentation. Most participants said no, usually because they prioritize other patient care activities (eg, rehabilitation and clinical examination) over documentation. This finding is similar to recent research that has shown that ATs often select CE based on interest rather than gaps in their knowledge.^{27,28} Babiarz et al found that over 40% of ATs were least interested in pursuing CE specific to domain 5, health care administration and professional responsibility.²⁷ Clinicians need to select CE that addresses gaps in their knowledge to ensure that they are providing comprehensive, high-quality patient care.^{27,28} Athletic trainers can use existing resources, such as professional knowledge assessments, to help identify practice

gaps and seek out CE accordingly.²⁹ As Babiarz et al noted, it may also be helpful to demonstrate to clinicians how administration and documentation help improve patient care, which may help motivate ATs to seek out CE in this area.²⁷

Additionally, several participants said that they have not completed CE specific to clinical documentation because of a perceived lack of CE opportunities in this area. This emphasizes the need for more CE related to all domains of athletic training clinical practice, including clinical documentation. As more CE opportunities become available, including those that are accessible and applied, ATs may be more inclined to expand their knowledge in this area.

Benefits

Considering the need for CE related to clinical documentation, 1 goal of this study was to obtain participants' perceptions of different CE opportunities. Our qualitative findings demonstrate that both CE learning formats were beneficial to participants. Participants perceived that their knowledge of clinical documentation improved, regardless of which CE format they completed. Like previous authors, our participants thought that the CE experiences provided a valuable refresher of their knowledge.^{27,30,31} These findings emphasize that ATs value CE opportunities, and CE provides an important mechanism for keeping up to date with standards of practice.

The completion of our CE opportunities also motivated participants to improve their documentation practices. Many participants described that the educational resources prompted them to change behavior, exhibiting a growth mindset. A growth mindset is important for health care professionals to keep current with best practices and changing evidence and adapt their practice to reflect these changes.³² Other researchers have also found that CE experiences help incite changes in behavior.^{31,33} However, others have noted that actual behavioral change often does not occur.¹⁵ We completed interviews with participants within 1 month of their completion of the CE modules, and some ATs already described making changes in their clinical practice. It would be valuable to further investigate long-term behavioral change to gain a better understanding of the effects these CE opportunities have on documentation practices.

Several researchers have examined different formats of CE and their influence on participant satisfaction, behavioral change, and selection of CE.^{27,28,30,31,34} Findings have emphasized the importance of accessible and applicable learning opportunities for adult learners.^{15,23,30,34} Our 2 CE offerings were quite different in format, with 1 including only documents to read and the other including videos, case studies, documents, quizzes, and reflections. Despite the different formats of learning, participants in both groups described learning valuable information from the CE opportunities. The PLP was more time intensive to develop for researchers and to complete for participants than the PAS resources. Although there are benefits to more active, varied formats of learning, these results suggest that learning still occurs from passive formats, such as reading.³⁴ Developers of CE should consider both active and passive learning options for participants. If there is not adequate time or resources available to develop more elaborate CE opportunities, passive learning formats may still help meet the objectives of CE.

Limitations and Future Directions

Participation in this study included the completion of a CE opportunity specific to clinical documentation. Therefore, participants may have been more interested in participating in CE, less satisfied with their previous education experiences related to clinical documentation, and/or more interested in improving their documentation practices than other ATs.²⁷ It would be valuable to learn more from individuals who lack interest in participating in CE related to documentation. Although participants described initial changes and/or intentions to change behaviors, we did not assess actual behavioral change as a part of this study. Future studies examining long-term behavioral changes would improve our understanding of the effectiveness of CE. Finally, participants in this study only completed 1 version of the CE modules provided. Future research obtaining perspectives from individuals who can compare CE formats side by side may provide valuable insight regarding preferred formats of CE.

CONCLUSIONS

Our findings emphasize the need for continual improvements to education related to clinical documentation. Professional education should integrate documentation throughout the curriculum, both didactically and clinically. Students should be given frequent opportunities to apply documentation skills and obtain feedback from instructors and preceptors. Beyond professional education, employers should onboard employees to their workplace expectations and provide ongoing support and feedback to facilitate quality clinical documentation and effective use of health information technology. Continuing education is an important mechanism for filling gaps in knowledge and providing updated best practice standards to clinicians. Athletic trainers find CE opportunities specific to clinical documentation to be valuable, regardless of format. Participants believed that both active and passive CE opportunities increased their knowledge and confidence related to documentation and motivated them to make changes in their clinical practice. The athletic training profession may benefit from more CE offerings specific to clinical documentation, particularly those that provide concrete strategies for documentation and demonstrate the importance of documentation to quality patient care. Likewise, ATs are encouraged to seek out professional development opportunities that help fill gaps in their knowledge rather than only CE that is of interest to them.

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Address correspondence to Sara L. Nottingham, EdD, LAT, ATC, Athletic Training Program, Department of Health, Exercise, and Sports Sciences, University of New Mexico, 1 University of New Mexico, MSC04 2610, Albuquerque, NM 87131. Address email to nottingham@unm.edu.