

Improving Nurse Practitioner and Physician Assistant Preceptor Knowledge, Self-Efficacy, and Willingness in a Hospital Medicine Practice: An Online Experience

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abstract

Background: A hospital medicine practice experienced an increased demand for additional nurse practitioner (NP) and physician assistant (PA) preceptors. **Method:** An online preceptor education course was developed that included eight modules: communication and feedback, expectations for assessment and evaluation, pedagogy, time management and efficiency, goal setting and coaching, working with struggling or at-risk students, legal and ethical considerations, and teaching procedures. Knowledge, self-efficacy, and willingness to precept were examined in a precourse and postcourse format. **Results:** Postcourse, knowledge improved from 69.4% to 90.6%. Self-efficacy improved by 35.2%, and willingness to precept also improved. Qualitative themes emerged, including excitement to precept, helpful course, and time constraints. **Conclusion:** An online NP and PA preceptor training program increased preceptor knowledge, self-efficacy, and willingness to serve as a preceptor. Additional research is needed to explore the time constraints to serving as an NP or a PA preceptor in the inpatient environment. [*J Contin Educ Nurs.* 2020;51(6):275-279.]

There is a shortage of clinical preceptors with a paucity of solutions that provide timely results for increasing preceptor capacity. The Recruiting and Maintaining U.S. Clinical Training Sites (2013) survey identified a concern for the quantity and quality of clinical rotations among multiple health professionals. The project site, a hospital internal medicine practice at a large midwestern academic medical center that employs approximately 45 nurse practitioners (NPs) and physician

assistants (PAs), experienced an increased demand for NP and PA preceptors. The demand also was burdened with a lack of a formal preceptor on-boarding or training program.

The literature regarding an online format for NP and PA preceptor education is limited. Bazzell and Dains (2017) noted there are few resources regarding transitioning into the NP preceptor role, as well as an absence of NP or PA preceptor best practices to use when developing preceptor education. Wilkinson et al. (2015) identified that online education for preceptors is an effective approach for training compared with an in-person format and may increase willingness to serve as a preceptor. In addition, they reported a high level of satisfaction and feasibility among NP preceptors when an online format for preceptor training was used.

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TABLE 1
MODULE CONTENT TOPICS

Module	Topic
1	Communication and Feedback
2	Expectations for Student Assessment and Evaluation
3	Pedagogy
4	Time Management and Efficiency
5	Goal Setting and Coaching
6	Working With Struggling or At-Risk Students
7	Legal and Ethical Considerations
8	Teaching Procedures

METHOD

Course Content Development

An online format was used to create eight preceptor education modules; content topics were derived from an existing, system-wide preceptor needs assessment survey created by Cieslak et al. (2017). The content topics for the modules are listed in **Table 1**. Course objectives were to:

- Discuss communication techniques to use when delivering student feedback.
- Describe methods to improve time management and efficiency.
- Review the documentation process for students in the electronic medical record.
- Reflect on the legal and ethical considerations when precepting students.

Each of the eight modules consisted of a pretest, video or voice-over PowerPoint® recording, a one- to three-page article to read, and a posttest. The participants started by completing a precourse survey and finished with a postcourse survey that captured preceptor self-efficacy, preference for learning modality, willingness to precept, and importance of receiving continuing medical education (CME) credit. Participants were able to offer insight into their experiences serving as a preceptor and completing an online preceptor education course. Implementation of the course was determined to be exempt by the Mayo Clinic and Creighton University Internal Review Boards.

Expert Content Review

Prior to releasing the eight online modules to course participants, the pretests, posttests, and content underwent an expert content review by seven NP and PA faculty from local collaborating universities. No major changes

were made to the course content or knowledge test on completion of the expert content review.

Implementation of the Project

NPs and PAs in the Division of Hospital Internal Medicine at a large midwestern academic medical center were recruited through personal or electronic communication and at monthly NP and PA staff meetings to participate in the course. The course was open to all NPs and PAs in the Division of Hospital Internal Medicine regardless of eligibility to precept, interest level in precepting, or full-time equivalent status. Course participants did not receive introductory training to the online learning platform. In this group of participants, some may have been more familiar with the online learning format than others due to prior experience in completing department-specific education for new hire orientation purposes in the same learning management system.

The modules could be completed in any order and in any amount of time. It was estimated that each module took approximately 30 minutes to 1 hour to complete. Participants were given 1 month to work through all of the modules, and an additional 10-day extension was given to three participants who had difficulties completing the modules on time due to work or life conflicts. The course did not include any interactive discussion board postings with the course director or other participants.

Measures

The precourse and postcourse survey examined NP and PA preceptor self-efficacy using the Preceptor Self-Efficacy Tool, which was modified to include NP or PA preceptor, with permission by Dr. Rachelle Larsen. Larsen and Zahner (2011) described self-efficacy as an individual's judgement of his or own capability to achieve a designated performance. They developed the 21-question preceptor self-efficacy questionnaire to self-rate level of confidence specifically in the areas of preceptor role, dealing with challenges, critical thinking, providing feedback, and teaching strategies. Larsen and Zahner (2011) reported a Cronbach's alpha of .96 for the instrument.

The precourse and postcourse survey also included opportunities for participants to disclose personal demographic data, years serving as a preceptor, prior completion of preceptor training, top three most helpful content areas, perspective on serving as an NP or PA preceptor, perspective on completing an online preceptor training course and general course comments, preference on type of learning format to receive preceptor education and orientation, willingness to serve as a preceptor, and perception of importance in receiving CME credit for course participation.

TABLE 2
DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS (N = 30)

Characteristic	n	%
Age range, y	25 to 45	
NP or PA role (< 10 y)	26	86
Preceptor role (< 2 y)	12	40
No prior preceptor training	26	86

Note. NP = nurse practitioner; PA = physician assistant.

Incentive to Participate

If participants received a postcourse test score of 80% or higher, they were eligible for five CME credits awarded through the facility at no cost. The number of five CME credits was calculated and arrived on by expert content review of the amount of time it would take faculty to complete the entire course.

Participant Demographic Data

Data were recorded for 30 participants from a total of 45 NPs and PAs who were invited to participate. One participant agreed to complete the modules but did not successfully finish prior to the deadline. Two individuals agreed to participate but did not start. Participants were between ages 25 and 45 years; 26 (96.7%) participants had been in the NP or PA role less than 10 years, with 12 (44.4%) having served as a preceptor for 0 to 2 years. Of the participants, 26 (96.7%) had not completed any prior preceptor education training (Table 2).

RESULTS

Knowledge and Course Content

The 32-question knowledge test was written to assess learning of each course module, and each module contained three to five multiple-choice questions in the pretest and posttest format. All questions allowed for only one correct answer. Knowledge of course content improved from an average of 69.4% to 90.6%. The modules with the most improvement in pretest and posttest scores included working with struggling or at-risk students (137.5% increase), pedagogy (64.3% increase), and time management and efficiency (20.5% increase).

The three content topics identified to be the most helpful were working with struggling or at-risk students, time management and efficiency, and expectations for student assessment and evaluation. The most helpful postcourse content included communication

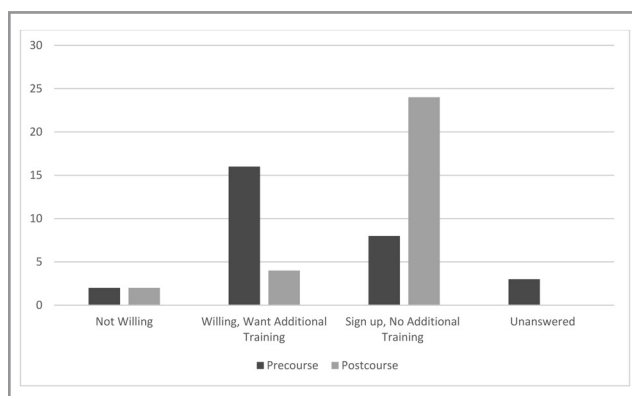


Figure 1. Preceptor willingness and additional training desire.

and feedback, goal setting and coaching, time management and efficiency, and working with struggling or at-risk students.

Online Course Format

Of the participants, 56% reported a preference for learning in the online format versus a blended approach with online modules and either a face-to-face class, online with simulation, formal class, or simulation class only. Postcourse, the preference for online format remained at 50% as the preferred education method.

CME Incentive

Participants were asked to rate the importance of receiving CME credit as an incentive to participate in the preceptor training program. Postcourse importance of receiving CME credit increased by 42% from precourse results of neutral to very important.

Preceptor Self-Efficacy and Willingness to Precept

The 21-item Preceptor Self-Efficacy Tool demonstrated an improvement in each of the 21 items from precourse to postcourse, with an overall 35.2% increase in preceptor report of self-efficacy. Preceptors were asked to identify their willingness to precept by choosing “not willing,” “willing to precept, want additional training,” or “sign up, no additional training.” Willingness to serve as a preceptor without additional training improved in the postcourse survey. Willingness to serve as a preceptor with additional training improved from 16 to 24 respondents, representing a 50% increase. Two participants indicated they were not willing to precept in both the precourse and postcourse survey (Figure 1).

Preintervention department NP and PA staff volunteerism ranged from 47% to 60%; postintervention, NP and PA staff volunteerism improved to 70%. Due to the timing of course completion, NP and PA staff members

were asked for their preference to precept outside of the usual survey. An e-mail was sent from a department secretary to all NP and PA staff asking for their preference to precept students. However, two staff members who typically precept did not respond; thus, the department preceptor rate may be higher than reported.

Participant Qualitative Themes

Perspective on Precepting. In their precourse and postcourse survey, preceptors were asked, "Please share your perspective on serving as an NP or PA preceptor." Two themes emerged from participants' feedback: 1) excitement and motivation to serve as a preceptor and 2) the time constraint challenges while taking on the additional workload of mentoring a student.

Excitement and motivation. Participants identified feelings of excitement and motivation to serve as a preceptor prior to and upon completion of the course. Precourse and postcourse feedback to the prompt, "Please share your perspective on serving as an NP or PA preceptor" elicited comments such as "I would like to start precepting students and am looking forward to learning how to do so" and "precepting is an opportunity to positively influence future providers, which is very exciting." One participant wrote, "We should all be assisting future generations of NPs and PAs."

Time constraints. Time constraints when serving as an NP or PA preceptor were identified as an issue among course participants in the precourse and postcourse survey. One participant stated, "Time constraints often challenge my ability to adequately precept students. The clinical burden does not change when students join the team." One participant noted, "My greatest challenge is managing a busy and unpredictable service while attending to the student's needs."

Even though NP and PA preceptor education is an excellent start at boosting preceptor knowledge and confidence to successfully prepare NP and PA students for clinical practice, one participant summarized the challenge of precepting in the inpatient environment by stating:

The challenges of serving as a preceptor are not the knowledge base that it takes to be a preceptor...it is the time element. We need to help offload calendars and hospital practice such that learning continues to be a primary focus.

Perspective on the Online Environment and General Course Comments. In the precourse and postcourse surveys, participants were asked to, "Please share your perspective on completing an NP and PA preceptor education course online and any general course comments you have." Two themes emerged from the feedback: Continued Excitement to Participate in the Course, and Course Content Was Helpful for Preceptors.

Continued excitement to participate. In the precourse survey, there was an overwhelmingly response of excitement in participating in the online course. Comments included "excited to learn some new ideas and teaching strategies" and "I'm excited about it. It is an opportunity to learn potentially some new ways to teach students and thus could influence current daily interactions."

One participant spoke of being excited from a larger systems perspective and not just the course content itself in that the course supports the need for a formal preceptor structure within the health care system. Another participant noted, "[I am] excited for formal expectations and role delineation for our preceptors. I am hoping this gives some structure to a job that has been asked of us without much governance."

Three course participants wrote about the online environment of the course. One of these participants noted, "You need to be sure to have a good Internet connection if you are doing online classes. I find online is very appealing especially with adult learners who have other obligations." Another participant said, "The online/asynchronous learning is great. My clinical schedule and availability are variable; online self-directed learning is very useful." The online and self-paced structure was important to one participant who noted, "I enjoyed being able to take each module at my own pace."

Helpful course content. In the postcourse survey, many participants identified that the course was helpful in providing essential information. Comments included the following:

- The videos were helpful, especially on struggling students. I had some misconceptions prior to completing that module.
- Very informative and taught me many things I did not know would be helpful in precepting.
- This was helpful, particularly how to adapt student learning styles to my own teaching style and practice.
- Very helpful and applicable content that has heightened my confidence in precepting.

FUTURE RECOMMENDATIONS

Future recommendations for developing and maintaining an online NP and PA preceptor course include open access to course content, identifying a course director to maintain the content, and exploring NP and PA preceptor perceptions of time constraints in the hospital internal medicine practice. Course content should be readily available to preceptors beyond completion of the course. It is not uncommon for preceptors to intermittently work with students, and having open access to preceptor education course content can assist preceptors in real time.

Identifying a course director is important to maintain

and update the course content. After rolling out the course to participants, items were identified that could be updated, such as titles and roles of participants and changes to the electronic medical record documentation guidelines. The course director could continue to update the course with new teaching techniques or evidence-based guidelines as they evolve. In addition, the course director could simultaneously serve as a mentor to preceptors taking the course and be available for interactive group discussions.

Future research should explore course participant perspectives on the time constraints while precepting in the inpatient environment, where patients are acutely ill and workflow can be unpredictable. It also would be valuable to identify whether preceptor perception of time constraints in the inpatient setting improved after completing a formal preceptor on-boarding course.

CONCLUSION

NP and PA preceptor education delivered in an online format is the preferred learning approach for preceptor education training in a group of busy NP and PA hospitalists. Course content was related to eight module themes that included communication and feedback; expectations for student assessment and evaluation; pedagogy; time man-

agement and efficiency; goal setting and coaching; working with struggling or at-risk students; legal and ethical considerations; and teaching procedures to improve preceptor knowledge, self-efficacy, and willingness to serve as a preceptor in a hospital internal medicine practice. Further research should explore the time constraints to serving as a preceptor in the inpatient setting.

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