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The One-Minute Preceptor: Evaluation of a Clinical Teaching Tool Training for Nurse Practitioner Preceptors

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A B S T R A C T

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Health professionals cite a number of barriers to precepting nurse practitioner (NP) students, including lack of time and training. The primary aim of this study was to evaluate training of health professionals who teach NP students in a clinical teaching model, the One-Minute Preceptor (OMP). The OMP is a clinical teaching tool that has the potential to increase feedback to NP learners, improving their perceived clinical experience and learning opportunities. The secondary aim was to evaluate the impact of this training on perceived barriers to clinical teaching. The training included a 2-hour workshop on clinical teaching models within a community setting, with an emphasis on the OMP. The intervention was offered twice and included 57 participants from 4 different health professions. Data were collected before and after the intervention using an online survey. There were no differences between professions in outcomes, including barriers to teaching; however, an increase was found in providing positive and corrective feedback as well as overall teaching activities.

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Nurse practitioners (NPs) have the potential to address the anticipated shortage of primary care physicians.¹ Although there are sufficient NP programs throughout the United States, there is currently a shortage of preceptors and quality clinical placement opportunities for students.² To overcome this shortage, NP programs depend on preceptors from a variety of health professions, including NPs, certified nurse-midwives, medical doctors, doctors of osteopathy, and physician assistants. However, there is a lack of standardization of preceptor preparations and expectations.²⁻⁴

There are many barriers to precepting, including lack of training, productivity demands, time burden, and lack of support from educational programs.⁵⁻⁷ The One-Minute Preceptor (OMP) is a clinical teaching tool developed for medical education in ambulatory care to improve teaching techniques.^{8,9} It has the potential to increase time efficiency in all clinical teaching sites.¹⁰ This project evaluated a training program focusing on use of the OMP and its effect on perceived barriers of clinical teaching.

Literature Review

Clinical education is a key component of the education of health care professionals.¹¹ A current shortage of primary care preceptors for NP students across the country impacts the ability to educate NPs and expand the primary care workforce.¹² With the increase in interprofessional health care settings there has also been an increase in interprofessional precepting.^{13,14} Research analyzing

barriers and incentives to clinical teaching or precepting found similar incentives and barriers across professions. Incentives include professional obligation, contact with faculty or program, and desire to teach.^{7,15} Barriers include productivity demands and time burden.⁷

The OMP clinical teaching tool includes 5 microskills: (1) get a commitment, (2) probe for evidence, (3) teach a general rule, (4) reinforce what was done well, and (5) correct mistakes (Table 1).⁹ The literature consistently supports the use of OMP as a well-established educational intervention for preceptors, specifically medical educators.^{8,9,16,17} The model has been evaluated for effectiveness, including incorporation of techniques into practice, sustainability over time, and quality of teaching. It has also been evaluated for preference over alternate and traditional clinical teaching models.¹⁸

Studies of the use of the OMP have demonstrated significant improvement in teaching skills as perceived by student and teacher. Students rated the teachers higher in their degree of inclusion of the student in decision making, evaluation of the student's knowledge, and provision of feedback.¹⁹⁻²¹ In addition, use of the OMP approach has been shown to increase feedback to students.^{10,21,22} Whereas more traditional models of preceptor and preceptee interaction focus on history taking and presentation skills, the OMP has an increased focus on building the student's skills, such as development of a differential diagnosis and a management plan.¹⁰ Use of the OMP model supports the key elements

Table 1
The One-Minute Preceptor Model

The One-Minute Preceptor is a clinical teaching model that aims to improve the effectiveness and efficiency of precepting ⁹		
Five Steps	Description	Example
Step 1: Get a commitment	The preceptor gets a commitment from the students. This commitment can vary based on the learner level. For example, a preceptor may ask an advanced student to commit to a diagnosis or a management plan, whereas an early learner may be asked to commit to which physical examination components to complete based on the chief complaint or presentation.	<i>"What do you think is the most likely diagnosis is for the patient's persistent cough?"</i>
Step 2: Probe for evidence	The preceptor asks a follow-up question to elicit the student's clinical reasoning. This step can provide additional information on how the student came to their conclusion. It allows the preceptor to tailor future teaching.	<i>"Did you consider any nonpulmonary diagnosis in your differential for the cough?"</i>
Step 3: Teach a general rule	The preceptor provides additional knowledge and skills to the student. This can be evidence based or based on clinical expertise.	<i>"There are many nonpulmonary etiologies that can present with a cough. For example, gastroesophageal reflux disease can also present with an intermittent persistent cough."</i>
Step 4: Reinforce what was done well	The preceptor identifies specific behaviors that the student did well. These are actions that the preceptor expects the student to continue to do.	<i>"You did a great job of getting a history that included all of the pertinent positives and negatives to develop your differential diagnosis."</i>
Step 5: Correct mistakes	Lastly, the preceptor corrects mistakes. In addition, the preceptor should provide a rationale for why this behavior/ decision is incorrect.	<i>"In this case a chest x-ray is not indicated. We want to make sure to only order diagnostic imaging and laboratory studies when they are necessary to identifying a diagnosis or developing a management plan."</i>

of successful precepting, including the development of the student's clinical reasoning,²³ and has been shown to increase time efficiency of precepting a student.^{17,24}

The aim of this project was to evaluate an approach to train preceptors from multiple disciplines in the use of the OMP model.

Methods

A 2-hour in-person workshop, "Time Efficient Clinical Teaching," (Appendix A) was implemented in collaboration with an academic institution and a network of community clinics. The academic institution provided workshop faculty, materials, and continuing medical education credits to participants. The community clinic network recruited interprofessional community clinicians who precept NP students to participate in the workshops and hosted the workshops at their site.

Workshop objectives were that participants would be able to (1) describe the basic components of 3 evidence-based clinical teaching models, (2) apply these teaching models in their own clinical setting, and (3) set personal goals for applying the skills learned in the workshop to their own practice setting. The workshop included lecture, videos, participant polls, and skills applications through role play.

The workshop included a brief overview of other tools for clinical teaching, including the RIME (Reporter, Interpreter, Manager, Educator) framework,²⁵ a tool for identifying and monitoring student progress, and SNAPPS (Summarize, Narrow, Analyze, Probe, Plan, Select), a learner-driven clinical teaching model,²⁶ but most of the time was spent on the OMP. During the OMP section of the program, participants learned about the model, watched a video demonstrating its use, and practiced applying the model in small-group role plays. Outcome evaluation focused on use of the OMP teaching model.

Setting, Participants, and Design

The intervention was presented twice, each at a location centrally located for clinicians in the network. Both were facilitated by the same educators. Registration was online and included name, profession, email, and organization. The only criterion for attendance was being a community clinician who practiced in outpatient settings such as

primary care. There were no limitations regarding prior teaching of students or prior training on clinical teaching to restrictions on the number of years of practice. The program was available to all clinicians, including but not limited to NPs, doctors of medicine (MDs), physician assistants (PAs), and doctors of osteopathy (DOs). The workshop was evaluated using a pre-post intervention design.

Measurement

Data were collected via Qualtrics, an online survey platform. Overall quality of the session and likelihood attendees will change their teaching or professional practices as a result of the session were evaluated via a 5-point Likert scale. Clinicians were asked to indicate barriers to precepting a student at their practice via a list of common barriers using a 7-point Likert scale between strongly disagree (1) to strongly agree (7). Barriers included time burden, productivity demands, lack of administrative support, lack of teaching training, insufficient program support, and lack of space. Clinician use of the 5 microskills of the OMP was evaluated via "Use of the Teaching Skills," a validated 14-question survey which evaluates use of the 5 OMP microskills (commit, probe, "pearls," feedback, and overall). Clinicians were asked how frequently they use each of the skills via a 7-point Likert scale between never (1) and every time (7).

Registered participants received an email with a link to the preprogram survey 24 hours before the session. An opportunity to complete the survey was also provided upon arrival to the training session. After completion of the training session, clinicians were encouraged to immediately complete the postsurvey using a provided link. Clinicians also received an email 24 hours and 1 week after the session with a reminder to complete the postsurvey. An anonymous 4-digit number was used on all surveys to prevent duplication. Data were analyzed using IBM SPSS 24 software (IBM Corp). The collected data were analyzed by a Mann-Whitney *U* test with a significance of $P < .05$. Both sessions were analyzed individually and then as a whole to identify any variance.

Ethical Considerations

This project was approved by the University of California, San Francisco, Internal Review Board. Participants were informed of the

Table 2
Reported Use of the One-Minute Preceptor

Domain	Content	Pre-session	Post-session
		Median (range)	
Step 1: Get a commitment	<ul style="list-style-type: none"> • Ask for the student's diagnosis • Involve the student in decision making 	5.5 (3-7)	5.5 (1-7)
Step 2: Probe	<ul style="list-style-type: none"> • Ask for their reasoning • Evaluate the student's knowledge 	5.0 (2-6.5)	5.5 (1-7)
Step 3: Teach a general rule	<ul style="list-style-type: none"> • Teach a general rule 	5 (2-7)	6 (1-7)
Step 4 & 5: Positive and corrective feedback	<ul style="list-style-type: none"> • Give positive feedback • Explain why it is correct • Offer suggestions for improvement • Provide feedback frequently 	5 (3-7)	6 ^a (1-7)
Overall teaching	<ul style="list-style-type: none"> • Motivate the student to do outside learning • Overall teaching effectiveness 	4.5 (1-6.5)	6 ^a (1-6.5)

^a $P < .05$ (statistically significant).

use of the results of the surveys and opted in to participate. Participation in the survey was not a requirement to attend the workshop.

Findings

In the first session, there were 24 participants from 4 professions (NPs, MDs, DOs, and a doctor of psychology). In the second session, there were 33 participants from 2 professions (NPs and MDs). The presurvey was completed by 36 participants, a 63% response rate, and 27 participants completed the postsurvey, a 47% response rate. Incomplete surveys were not included in the data analysis. Of the participants who responded, 85% stated that they were currently involved in clinical teaching at their clinical site. There was no difference in responses between health professions to any of the survey items. There was no significant difference in their use of the OMP or in their perception of barriers to precepting.

When compared with preprogram data, there was a statistically significant increase in intended use of steps 4 (reinforce what was done well) and 5 (correct mistakes) ($U = 308.5, P < .05$). A significant increase was also noted in overall teaching ($U = 309.5, P < .05$) in the OMP approach. For one of the sessions, there was also a significant increase in step 2 (probe for evidence) ($U = 89.5, P < .05$; Table 2).

All listed barriers to precepting students were rated low by participants. There was no significant change in reports of perceived time burden, productivity, lack of administrative support, lack of teaching training, or insufficient support between pre-session and post-session evaluations. However, there was a significant increase in the perception of lack of space as a barrier to teaching on post-session evaluations ($U = 346.5, P < .05$; Table 3).

Participants rated the overall satisfaction of the session on a scale of poor (1) to excellent (5). The overall quality of the sessions was rated 4.74 and 4.14. Respondents rated high the likelihood that they would make changes in their teaching or professional practices as a result of the sessions, with mean scores of 4.5 and 4.31 in the 2 sessions.

Discussion

This study sought to determine response to education of preceptors in use of the OMP clinical teaching model by community clinicians from multiple professions who teach NP students. Self-reported use of the 5 OMP microskills preintervention and post-intervention and whether there was an impact on the barriers to precepting were also examined. Consistent with previous studies by Salerno et al,²¹ Eckstrom et al,²⁷ and Teherani et al,¹⁸ training in the OMP model led to increased self-reported incorporation of use of some of the microskills in clinical teaching. This is in contrast to

the study by Ong et al²⁸ that found no change in clinical teaching. In the study by Salerno et al,²¹ training led to incorporation of all 5 microskills, whereas we found a statistically significant increase in reported use of only 2 of the 5 microskills. The study by Eckstrom et al²⁷ saw an increase in steps 1 (get a commitment), 2 (probe for evidence), and 4 (give positive reinforcement), whereas we found an increase in intent to do steps 4 (give positive reinforcement) and 5 (correct mistakes).

The increase in feedback in steps 4 and 5 of the OMP is consistent with the literature. Arya et al,²² Eckstrom et al,²⁷ Furney et al,²⁰ Ignoffo et al,¹⁰ and Salerno et al²¹ all demonstrated increased feedback to learners as a result of the OMP. This is important, because nursing students perceive feedback as an important attribute of an educator and of a good clinical experience.²⁹

Training community clinicians in use of the OMP model did not decrease the perceived time burden of clinical teaching, which to our knowledge has not previously been evaluated in the literature. These results could be due to the high number of participants already teaching in the clinical setting, since they may have already overcome these barriers.

This intervention demonstrates that training in the OMP is well-received across health professionals who teach NP students. It also demonstrated no difference in use of the OMP model by different health professionals. This may be due to the similar roles that MDs and NPs maintain in community clinics.³⁰ This interprofessional model of training community clinicians in clinical teaching has the potential to support the interprofessional clinic models that are expanding to meet health care demands.

Limitations

Outcomes are limited to self-report at the time of or shortly after the intervention. We did not measure actual use of the OMP in the clinical setting. The findings may not be generalizable to inpatient or other clinical settings where the role of varied providers may be significantly different.

Table 3
Barriers to Clinical Teaching

Barrier to Clinical Teaching	Pre-session	Post-session
	Median (Range)	
Time burden of teaching	6 (2-7)	6 (4-7)
Productivity demands	6 (1-7)	6 (2-7)
Lack of administrative support	4.5 (1-7)	4 (1-7)
Lack of teaching training	5 (2-7)	4 (1-7)
Insufficient program support	5 (1-7)	4 (2-6)
Lack of space	4 (1-7)	5 (2-6) ^a

^a $P < .05$ (statistically significant)

Participants in the intervention also self-selected to participate. This may indicate they value clinical teaching training and the OMP intervention more than those who did not choose to attend.

The sample size is also a limitation. With a larger sample, we might see statistical significance in use of the other microskills of the OMP. In addition, only 51% of participants completed both the pre and post surveys. Although this number is high for survey response, it may impact the findings.

Lastly, the data were collected over a short time period and were not based on actual observation of use of the OMP approach. Long-term data and information may provide a broader perspective of the potential impact of the OMP on clinical education.

Conclusion

The OMP model is a clinical teaching tool that can be taught to community clinicians who teach NP students. Although there was not a reported increase in use of all 5 of the steps, this was not directly observed. Feedback is one area that students consistently want more of, and this tool may therefore help improve students' perceptions of their clinical experiences. Standardization of preceptor training to include the OMP could enhance NP student clinical education. Future studies could evaluate actual behavior change of preceptors and student perception of teaching skills post OMP training.

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Appendix A
 Intervention

Time	Activity	Active Engagement Strategy
10 min	Preworkshop survey	Qualtrics link
10 min	Introduction	Go around with participants, state their profession and what they want to get out of this day, write themes on board
5 min	Background—review challenges in clinical teaching	Ask participants about challenges
5 min	Observer-Reporter-Interpreter-Manager-Educator (O-RIME)	Have participants describe times they have switched from manager to reporter; or other switches
10 min	Summarize, Narrow, Analyze, Probe, Plan, Select (SNAPPS)	Overview Evidence –brief literature review Video
10 min	One-Minute Preceptor (OMP)	Overview
10 min	OMP	Microsteps 1, 2, and 3
10 min	OMP	Microsteps 4, 5, and 6
25 min	OMP	Literature Video Evidence
15 min	Feedback—overview of best practices	Small groups/practice Participants think of when they received feedback in an effective manner Poll
5 min	Summary	
5 min	Evaluations	Give time to complete
10 min	Complete postintervention survey	Qualtrics link
Total 120 minutes		