Effectiveness of the One-Minute Preceptor Model for Diagnosing the Patient and the Learner: Proof of Concept

Eva Aagaard, MD, Arianne Teherani, PhD, and David M. Irby, PhD

ABSTRACT

Purpose. To compare the One-Minute Preceptor (OMP) and traditional models of ambulatory teaching in terms of the preceptors' (1) ability to correctly diagnose patients' medical problems, (2) ability to rate students' skills and confidence in doing so, and (3) satisfaction with both models.

Method. A within-groups experimental design study was conducted with 116 preceptors at seven universities in 2000. Participants viewed scripted, videotaped precepting encounters of both models using two cases and were asked to rate students' abilities, their confidence in rating the students' abilities, and the effectiveness and efficiency of the teaching encounters.

Results. Preceptors who viewed the videotapes of the OMP model were equally or better able to correctly diagnose the patients' medical conditions than those viewing the traditional model. Preceptors viewing the OMP rated students' abilities higher on history taking/physical examination, presentations, clinical reasoning, and fund of knowledge than did those viewing the traditional model. Preceptors viewing the OMP rated themselves as more confident in rating students' abilities in presentation, clinical reasoning, and fund of knowledge. Preceptors rated the OMP as more effective and more efficient than the traditional model.

Conclusions. Preceptors viewing scripted, videotaped teaching encounters using the OMP model were equal to or better able to correctly diagnose patients' medical problems, had greater self-confidence in rating students, and rated the encounter as more effective and efficient than when viewing the traditional model.

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Teachers in the ambulatory setting struggle to find ways to integrate students into their busy clinical practices while minimizing the disruption to patient care.[1] Because students' participation decreases clinical productivity and lengthens the workday,[2,3] clinical preceptors have a strong desire to find time-efficient teaching strategies for the ambulatory setting.

Studies of ambulatory teaching reveal inadequacies in both the quantity and quality of teaching in the ambulatory setting.[4] In the traditional (patient-centered) model of ambulatory teaching, a model commonly adopted by clinical educators, up to three fourths of the interaction time with students is consumed with patient care issues, leaving little time for teaching.[5] Preceptors tend to direct their attention toward patient care issues rather than learner issues, ask low-level questions mostly to clarify clinical data, give minilectures to students rather than promote discussion, and provide little or no feedback.[4] These approaches ignore more contemporary, effective teaching behaviors in the ambulatory care setting[6–8] and may result in decreased student satisfaction and learning.[9]

To address these issues, several strategies for efficient and effective teaching in ambulatory clinical settings have been proposed.[1,2,9–14] One of these models, the One-Minute Preceptor (OMP), is a learner-centered model[12] and the subject of this investigation. The model consists of five microskills deemed desirable for effective clinical

Dr. Aagaard *is assistant clinical professor of medicine and* ***Dr. Irby*** *is vice dean for education and professor of medicine, Division of General Internal Medicine, Department of Medicine;* ***Dr. Teherani*** *is research scientist, Office of Medical Education; all are at the University of California, San Francisco, School of Medicine, San Francisco, California.*

Correspondence should be addressed to David M. Irby, PhD, Office of Medical Education, School of Medicine, University of California, San Francisco, 521 Parnassus Avenue, Room C-254, San Francisco, CA 94143-0410.

For a report on a related topic, see pp. 50–55.

teaching: (1) get a commitment from the learner about what he or she thinks is going on with the patient, (2) probe for underlying reasoning, (3) teach general rules, (4) provide positive feedback, and (5) correct errors. The model focuses the teaching encounter on the learner's reasoning while also providing patient care. In so doing, the preceptor gains a better understanding of the learner's knowledge, reasoning, and learning needs while still providing appropriate patient care. The model's name reflects its time efficiency.

In the traditional precepting model, the case presentation and discussion has three components: (1) case presentation by the learner that takes half of the time, (2) inquiry by the preceptor regarding patient data that consumes one quarter of the time, and (3) discussion of the case and plan for patient care that uses the remaining time.[5] The learning encounters range from three to six minutes in length and typically contain little teaching and virtually no feedback.[4] In the traditional model, the inquiry phase is diagnosis driven and gathers information the preceptor needs to correctly diagnose the patient's condition. For example, "Has the patient ever had pain like that before? What is the patient's oxygen saturation?" The teacher functions as an expert consultant, generally focusing on areas missed by the student and/or on the preceptor's plan for the patient, not on teaching. In the traditional model, little is discovered about the learner's understanding of the patient's problem.

In the OMP, the inquiry and discussion phases are learner focused. In the inquiry phase, the OMP elicits the learner's understanding of the case by asking open-ended "what" types of questions. For example, "What do you think is going on with this patient? What were the major findings that led to your diagnosis or decision? What else did you consider?" Based upon this information, the preceptor is better able to diagnose the patient and the learner's understanding of the case, make a targeted teaching point, and provide positive and corrective feedback.

The OMP is based on principles of learning and has gained acceptance in the literature as an effective teaching strategy in the ambulatory setting.[2,15] Although the model is conceptually sound, it remains largely untested. Evaluation of the model has been primarily limited to opinion surveys of preceptors being trained to use the model who found the model to be helpful to them as clinical teachers.[12] One study by Furney and colleagues[16] demonstrated that training residents to use the model modestly improved students' ratings of residents' teaching in the inpatient setting. No studies have assessed the effectiveness of the model to enhance learning in the ambulatory setting.

The objectives of this study were to compare the effectiveness of the OMP with that of the traditional precepting model in terms of the preceptors': ability to correctly diagnose patients' medical problems, ability to rate students' skills and confidence in doing so, and satisfaction with both models.

Method

Design

To compare the effectiveness of the OMP model of ambulatory care precepting with that of the traditional precepting model, a within-groups experimental design was completed in 2000. Faculty members at seven universities were asked to observe a stop-action videotape containing two reenacted precepting encounters. Each videotape contained two cases (Case 1, pneumothorax; Case 2, hiatal hernia and gastroesophageal reflux) and two precepting models. During the viewing of each precepting encounter, faculty were asked to rate the student's abilities, their confidence in rating the student's abilities, and the effectiveness and efficiency of the teaching encounter twice during each case. The study received approval from the Institutional Review Board of the University of California, San Francisco.

To develop the videotaped encounters, we selected two standardized cases that had been used for years as a component of a medical student clerkship on history taking and physical examination at the University of California, San Francisco, School of Medicine. The cases were chosen because they represented a focused diagnostic dilemma and were appropriate for third-year students. Two third-year students were videotaped, as they were precepted twice using both models, in response to seeing the standardized patients. The videotapes were then transcribed and used to create two teaching scripts for each case, one using the OMP model and one using the traditional model. Using these scripts, the preceptor (EA) and two new third-year students, who served as actors, were videotaped.

The scripts standardized the information presented thereby reducing confounding variables. Every attempt was made to hold all information constant except for the particular differences between the traditional and OMP models. The preceptor was the same in all four videotapes (EA) and the initial patient presentation was identical for each case regardless of model. Although two students were used, the same student was used in both teaching models of the same case. The only variation in the scripts was the method by which the preceptor questioned the student and, therefore, the answers the student gave. The information provided about the patient was kept constant across both teaching encounters; only the way it was obtained was different. Furthermore, the teaching points provided by the preceptor in each case were similar regardless of model used, and the duration of the entire encounter was the same for both models of the same case.

For Case 1 (pneumothorax), the student describes a 34-year-old woman with no significant medical history who

Table 1

Order of Case and Precepting Models on Two Sets of Videotaped Precepting Scenarios*

Videotape	Order (Case–Precepting Model)	
One	Case 1–Traditional	Case 2–One-Minute Preceptor
Two	Case 2–One-Minute Preceptor	Case 1–Traditional
Three	Case 2–Traditional	Case 1–One-Minute Preceptor
Four	Case 1–One-Minute Preceptor	Case 2–Traditional

*Case 1 was pneumothorax, Case 2 was hiatal hernia and gastroesophageal reflux.

presents with the sudden onset of pleuritic, right upper quadrant/ lower chest pain of two hours duration that occurred while playing with her children. A cough has since developed. She reports no medical history, is taking no medicines, and has no allergies. She has smoked a half pack of cigarettes per day for the last ten years. On physical examination, she is afebrile, with a blood pressure of 120/85, heart rate of 100, and a respiratory rate of 20. Findings of the heart examination are normal. Her left lung is clear to auscultation; the right side has decreased breath sounds throughout. Abdomen has good bowel sounds, is soft, nontender, and nondistended. In both teaching models, the student incorrectly believes the diagnosis is gallstones. In the inquiry and discussion phases, in the traditional model, the preceptor asks questions about lung symptoms, risk factors for deep venous thrombosis and pulmonary embolism, and then explains why pneumothorax is the likely diagnosis and that a chest x-ray is in order. The preceptor never questions the student about differential diagnosis or the student's plan for workup. In the OMP model, the student thinks the diagnosis is gallstones because of the patient's age and pain location. Through questioning, the preceptor gets the student to name a differential diagnosis that includes kidney stones, cardiac disease, and ultimately lung disease. The preceptor then discusses why a lung process may be likely based on the history and physical examination findings (with pulmonary embolism and pneumothorax being the most likely), and through questioning elicits that a chest x-ray is the next step. The preceptor ends by giving feedback and correcting mistakes.

In Case 2 (hiatal hernia and gastroesophageal reflux), the student describes a 40-year-old man with a medical history significant for heartburn, who presents with sudden onset of burning and sharp substernal chest pain of two hours duration on the evening before his visit. The pain improved with sitting up or taking deep breaths. The patient tried Pepto-Bismol, aspirin, and water, none of which helped. He denies any shortness of breath, nausea, or vomiting. The patient takes no medications. He has a significant social stressor in that he is currently undergoing a divorce with a custody battle over his children. He smokes and drinks about six alcoholic drinks per week. On physical examination, his vital signs are described as stable. The patient is obese with poorly auscultated heart sounds. The findings of the remainder of his examination are within normal limits. During the inquiry and discussion phase of the traditional model, the preceptor asks the student if the patient has each of the cardiac risk factors, then teaches the student about the differential diagnosis (including gastrointestinal, cardiac, and psychiatric diseases) and the risk factors the patient has for each one and the appropriate workup. The preceptor never asks the student what he or she believes the diagnosis to be. In the OMP model, the preceptor asks the student what he or she thinks the likely diagnosis is. The student correctly states that the likely cause is gastrointestinal disease and why. The student also considered cardiac causes, but feels it is unlikely based on the history and suggests electrocardiography to be sure. Furthermore, the student also has considered psychiatric illness as a cause. The preceptor provides positive feedback, adds the diagnosis of hiatal hernia, and discusses risk factors for a gastrointestinal etiology of the patient's pain.

Four separate videos were created to vary case order and teaching model order (see Table 1) to control for possible confounders. Videotapes were stopped four times, two times for each case, so participants could successively complete each segment of the questionnaire. Stop 1 was at the end of the students' case presentations, which were identical regardless of model. Participants were asked to rate the students' skills in history taking/physical examination, presentation, clinical reasoning, and fund of knowledge, and to rate their own confidence in rating the aforementioned skills. Ratings were based on a five-point Likert scale. The student abilities scale was 1 = poor through 5 = excellent, and the confidence scale was 1 = not at all confident through 5 = very confident. Faculty were also asked to identify the two most likely diagnoses and what two teaching points the students might have benefited from at that particular point in the videotape. Stop 2 for each case was after the inquiry and discussion phases of the encounters were completed. During Stop 2, faculty responded to the same set of questions as in Stop 1 and also rated the effectiveness and efficiency of the teaching encounter, again using a five-point Likert scale (1 = not at all effective/efficient, 5 = very effective/efficient). At the end of the videotape, participants were

Table 2

Demographic Characteristics of 116 Preceptors Rating Videotaped Precepting Scenarios

Characteristic	No. (%)
Gender	
Male	73 (63)
Female	43 (37)
Institutional Affiliation	
University of North Carolina at Chapel Hill School of Medicine	28 (24)
University of California, San Francisco, School of Medicine	22 (19)
University of Wisconsin Medical School	18 (15)
University of Texas Medical School at San Antonio	17 (15)
University of Washington School of Medicine	11 (9)
Harvard Medical School	10 (9)
Keck School of Medicine of the University of Southern California	10 (9)
Departmental affiliation	
Internal medicine	64 (55)
Family medicine	33 (28)
Pediatrics	5 (4)
Psychiatry	3 (3)
Other	11 (10)
Academic rank	
Instructor	19 (16)
Assistant professor	39 (34)
Associate professor	15 (13)
Professor	11 (9)
Resident	17 (15)
Fellow	12 (10)
Other	3 (3)
Location of precepting	
University clinic/office	48 (41)
Community clinic/office	36 (31)
Inpatient care	15 (13)
Both	7 (6)
County clinics	1 (1)
VA clinic	2 (2)
Other	7 (6)
Attended faculty development on teaching in ambulatory setting	73 (63)
Previous exposure to OMP model	41 (35)
Used OMP model in own teaching	19 (16)
Correctly identified three or more features of the OMP model	8 (7)

asked if they had ever been exposed to the OMP, and if so, had they ever used the model in their teaching and could they name the steps in the model.

Sample

A convenience sample of participants in faculty-development fellowship programs was obtained by contacting nationally recognized leaders in faculty development. Seven leaders from different universities agreed to implement the research protocol in the context of their faculty-development programs.

A total of 116 preceptors participated in the study from the following universities: University of California, San Francisco, School of Medicine (n = 22, 19%); Harvard Medical School (HMS) (n = 10, 9%), University of North Carolina at Chapel Hill School of Medicine (n = 28, 24%); Keck School of Medicine of the University of Southern California (n = 10, 9%); University of Texas Medical School at San Antonio (n = 17, 15%); University of Washington School of Medicine (n = 11, 9%); and the University of Wisconsin Medical School (n = 18, 15%) (see Table 2). Many of these preceptors were enrolled in faculty-development programs.

The preceptors were from departments of internal medicine (55%), family medicine (28%), pediatrics (4%), psychiatry (3%), and other (9%). Nine percent were professors, and the remaining ranks were 13% associate professors, 34% assistant professors, 16% instructors, 10% fellows, 15% residents, and 3% other. The average number of years of precepting in ambulatory settings was 5.4 with a range of zero to 25 years. Thirty-seven percent were women and 63% were men. Approximately 35% of the preceptors had been previously exposed to OMP, and 16% had used the model in their teaching. Despite being exposed to it, only 7% were able to correctly identify three or more of the OMP features, and none correctly identified all five features.

Data Analyses

The preceptors' responses to the open-ended question about the most likely diagnoses for the patient were compiled and coded by one author (EA) and verified by another (DI). The preceptors were asked to give the two most likely patient diagnoses. If either written response was the correct diagnosis, they were given credit for a correct diagnosis. Differences in this categorical outcome variable (preceptors' ability to identify the correct diagnoses) based on model portrayed were tested using a chi-square analysis. Analysis of the teaching points are presented in a separate article.[17]

Table 3

Effect of Teaching Model (Traditional versus One-Minute Preceptor) on 116 Preceptors' Ability to Correctly Diagnose the Problem at Two Stops of Two Sets of Videotaped Precepting Scenarios Using Chi-Square Analysis

		No. (%) of Correct Diagnosis		
Stop	Case	One-Minute Preceptor	Traditional	*p* Value
1	1	22 (52)	47 (64)	.24
1	2	29 (60)	54 (73)	.65
2	1	66 (89)	34 (81)	.22
2	2	68 (92)	32 (76)	.02

The primary research question concerned how much each preceptor's scores varied across model type. Thus, a within-subjects design repeated-measures analysis of variance (ANOVA) was used to analyze differences between the traditional and OMP models on preceptors' ratings of students' skills, their confidence in rating students' skills, and the efficiency and effectiveness of the two precepting models. Years of teaching experience and tape number were used as covariates. The basic assumptions necessary for a repeated-measures ANOVA were met. All continuous outcome variables were normally distributed. The assumption of compound symmetry was met for all continuous outcome variables as well, and all epsilon values equaled 1.0. This required no corrections be made to epsilon values and, thus, no adjustments were made to the resulting degrees of freedom. For the pairwise comparisons in Tables 4 and 5, resulting F values, associated degrees of freedom, differences in the means and *p* values were used. To adjust the observed significance level for the multiple comparisons, the Bonferroni test was conducted.

To determine if years of teaching experience influenced ratings, a repeated-measures ANOVA comparing novice (up to six years of teaching experience) with experienced (seven or more years) preceptors' ratings on all items. Thirty-four preceptors were experienced and 76 were novices.

To assess the possible effect of prior exposure to the OMP model, a repeated-measures ANOVA was conducted on the outcome measures with exposure to the OMP model as the between-subjects factor. Forty-one preceptors reported having prior exposure and 59 reported no prior exposure to the OMP model. Twelve preceptors stated they were "not sure" if they were ever exposed to the OMP model, and their responses were considered as missing data.

Table 4

Mean Differences in 116 Preceptors' Ratings of Students' Abilities and Confidence to Rate Students at Two Stops of Videotapes Comparing Traditional and One-Minute Preceptor Models Using Repeated-Measures Analysis of Variance

	Stop 1				Stop 2			
Rating Item	Mean Difference (OMP − Traditional)*	*n*†	F	*p*	Mean Difference (OMP − Traditional)*	*n*†	F	*p*
Student ability								
History taking/physical exam skills‡	−.09	90	.6	.44	.58	97	31.36	.00
Presentation skills	−.18	108	3.00	.09	.27	105	8.75	.00
Clinical reasoning skills	.07	15	.12	.74	1.00	70	51.75	.00
Fund of knowledge in subject matter of the case	.00	19	.00	1.00	.89	66	51.24	.00
Confidence to rate students'								
History taking/physical exam skills	.03	102	.13	.72	.18	109	3.48	.07
Presentation skills	−.22	109	5.28	.02	.27	109	8.58	.00
Clinical reasoning skills	−.04	68	.21	.65	1.11	105	84.00	.00
Fund of knowledge in subject matter of the case	−.03	71	.09	.76	1.12	104	102.05	.00

*Preceptors used a five-point Likert scale for student ability and confidence ratings.

†If preceptors responded to an item with "unable to rate," it was treated as missing data—thus accounting for the small numbers in several cells of this table.

‡For all variables $df = 1$.

Table 5

Mean Differences in 116 Preceptors' Ratings of Effectiveness and Efficiency of Two Sets of Videotaped Precepting Scenarios (Traditional and One-Minute Preceptor Models) Using Repeated-Measures Analysis of Variance

	Mean Difference (OMP − Traditional)*	*n*	F	*df*	*p*
Effectiveness	1.11	107	96.42	1	0.00
Efficiency	0.73	107	40.82	1	0.00

*Preceptors used a five-point Likert scale to rate effectiveness and efficiency.

Results

Diagnosis of Patient Problem

The initial case presentations for both models were identical up to Stop 1. Therefore, we expected and found the preceptors' ability to correctly diagnose the patient's condition to be the same at Stop 1 for both models (see Table 3). At Stop 2 in Case 2 (gastroesophageal reflux disease), participants were more likely to correctly diagnose the patient if the OMP model was used than the classic model (92% versus 76%, $p = .02$). No such differences were found at Stop 2 for Case 1 (pneumothorax).

Ability to Rate Learners

We expected that preceptors' ratings of students' abilities or preceptors' confidence in rating these abilities would not differ by model at Stop 1 because both presentations were identical to that point, and we anticipated differences favoring the OMP model would be seen at Stop 2. Controlling for years of experience and tape number, the repeated-measures ANOVA indicated no differences between the traditional and OMP models at Stop 1 on any of the items except for one, confidence in rating student's presentation skills, and all except one of the variables at Stop 2 favored the OMP model (see Table 4). At Stop 2, we found no significant differences in preceptors' confidence in rating students' history/physical examination skills, which was expected because the preceptors did not observe the students taking the history or doing the physical examination in either model.

Efficiency and Effectiveness of Models

The repeated-measures ANOVA indicated that the OMP was rated significantly more efficient and effective than the traditional teaching encounter ($p = .00$; see Table 5).

Impact of Prior Teaching Experience and Exposure to OMP on Ratings

We found no significant differences in ratings based on preceptors' years of teaching experience (novice versus experienced).

With the exception of two items, no significant differences were found between preceptors exposed and not exposed to the OMP model. Preceptors with prior exposure to the OMP model were more likely to rate students' clinical reasoning abilities overall more highly ($F = 8.62$; $p = .01$). Specifically, when rating students' clinical reasoning abilities during the OMP case, preceptors exposed to the OMP model rated students' clinical reasoning abilities higher than did preceptors with no prior exposure to the OMP model.

Preceptors with no prior exposure to the OMP model rated all teaching encounters more highly when asked about their effectiveness ($F = 4.07$; $p = .047$) than those with prior exposure to the OMP model. However, this was due entirely to the higher ratings of the traditional teaching encounter by those without exposure to the OMP model. Both groups rated the OMP model identically and significantly higher than the traditional model.

Discussion

Our investigation of the OMP model of teaching provides preliminary support for claims that this model may be both an effective method of managing patient care and a more effective and efficient way of teaching in the ambulatory care setting.

By asking diagnosis-driven questions, as is done in the traditional model, one might expect the preceptor to obtain the required medical information in a more time-efficient manner and be more adept at making the correct diagnosis—something necessary in the time-constrained environment of the ambulatory setting. However, we found that preceptors were able to correctly diagnose the patient's medical condition as well (Case 1, pneumothorax) or better (Case 2, gastroesophageal reflux) when viewing the OMP model as when viewing the traditional model. The OMP model begins with open-ended questions that force the learner to reveal his or her thinking process along with patient care information. Responses to the open-ended questions may aid preceptors' pattern-recognition processes by providing more relevant connections among the facts of the case. This process may also prevent the preceptor from premature closure on a diagnosis, thus enabling him or her to obtain a more complete picture of the patient's medical history and physical examination findings.

The variability in our findings by case is likely due to differences in the two cases presented. Although the cases were tightly scripted, there is no question that in the outpatient setting, gastroesophageal reflux is likely to be an easier diagnosis to make than is pneumothorax. Gastroesophageal reflux is more common and presents with more characteristic findings than does pneumothorax, which can be a difficult diagnosis to make by history and physical examination alone. In accord with this reality, the students' differential diagnoses were scripted to include gastroesophageal reflux in the first case but not pneumothorax in the second.

We also found that preceptors viewing the OMP model rated students' abilities and their own confidence in rating students' abilities more highly than when viewing the traditional model. The ability to accurately assess learner abilities is determined in part by experience working with learners of similar levels and with similar cases over time.[18] The OMP may be rated superiorly because, although fewer questions are used than with the traditional model, the questions elicit the students' deeper thinking rather than the more superficial information spontaneously in the traditional model. Because the organization of knowledge in memory determines clinical reasoning ability,[19] the OMP may help make the students' knowledge and reasoning visible for analysis and instruction.

The traditional model is thought to be the most commonly used model of teaching in the ambulatory setting, presumably because of its time efficiency. However, the preceptors viewing both the traditional and OMP teaching models in our study rated the OMP to be both a more efficient and also a more effective teaching method in the ambulatory setting. The former is a particularly interesting finding because both models were of equal duration in our study. We believe that preceptors rated the OMP model as more efficient because it provided them with more information in the same amount of time. Not only did they receive the necessary patient-care information, but they were also able to assess the student's abilities and knowledge to a greater extent than with the traditional model. The OMP was, therefore, rated as not only more efficient but also more effective.

Our study has a number of limitations. Although we randomly stratified case order and model order, we were not able to use a true randomized-controlled design of preceptors. We attempted to limit this bias with a rigorous experimental design and attention to controlling for known and likely confounders during data analysis. Many of the preceptors in our study were participants in faculty-development programs. As such, they may have been more likely to be exposed to and recognize OMP than would other preceptors. However, only seven percent of the study's participants were able to recall any of the five steps in the model, and none could recall all five steps. Furthermore, analysis of the data by self-reported exposure to the OMP model resulted in no significant differences in the overall outcomes of our study. Importantly, we did not attempt to assess whether these findings derived from observations can be replicated in actual patient-care settings or with actual medical students and, therefore, we cannot state whether the OMP model actually leads to better educational outcomes. Finally, we did not attempt to assess if these findings can be replicated with more advanced learners such as residents. These latter two issues are important areas of future research.

Our study also has several important strengths. It is the first study to use an experimental design to assess the effectiveness of the OMP and to do so using the ambulatory setting. In addition, the relatively large sample size, using preceptors from multiple specialties and institutions, enhances the quality and generalizability of this study.

Conclusions

Preceptors viewing videotaped, scripted teaching encounters were as likely or more likely to correctly diagnose patients' medical problems and felt more confident in assessing students' abilities when viewing the OMP than when viewing the traditional model of teaching in the ambulatory care setting. Further, preceptors rated the OMP as both a more effective and efficient teaching method than the traditional precepting model.

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Teaching and Learning Moments

Professional Development at the Gas Station

One sunny weekend morning early in my third year of medical school, I drove to my local gas station to refuel my car. While I was sleepily trying to press the right sequence of buttons on the pay-at-the-pump device, a woman in her mid-60s approached me. "Excuse me," she said, "can you help me start my car?"

I hadn't seen her coming and wasn't expecting to talk to anyone during this transaction, so I was taken aback. "I'm sorry?" I said.

"I've forgotten how to start my car. Can you help me?"

I had just finished my neurology rotation, and it was still fresh in my mind. My first thought was, *She has an apraxia! Parietal lobe lesion!* Fragments of the Mini Mental Status Exam flashed through my head. *Take this piece of paper in your right hand, fold it in half, and place it on the floor.* I tried to critically assess her. She appeared reasonably well dressed and groomed, but I had strong concerns about her driving. I tried to stall a bit, asking her if she was feeling okay. She became increasingly irritated. I eventually started her car. I watched her drive down the road until she was gone, and then stood there another minute, stunned, listening for a crash. There was none, and I went home.

This incident was a defining moment in my "professionalization." As a new clinical clerk, I was acutely aware of my transformation from college student to student physician, but still maintained the illusion that this change was solely professional. At the gas station, I suddenly realized that my acquisition of medical knowledge had increased my insight, and therefore my responsibility, in some everyday situations as well. My basic knowledge of apraxias caused me to feel an increased responsibility for the woman and anyone she might injure with her car.

Situations requiring professional ethics in nonprofessional settings can be difficult for medical students, who are accustomed to operating at the bottom of a hierarchy of supervision. When I told this story to a group of third-year medical students, their immediate response was to wonder whether I as a medical student would be legally liable if the woman injured someone with her car. My encounter with this woman occurred at the beginning of my clinical training, when I was still uncomfortable in my proverbial white coat and appropriately hesitant to make decisions without a resident's approval. If I had it to do over again, I would intervene by asking the woman's permission to call her physician, and, if she refused, calling the police. As this, of course, isn't possible, the best I can do is learn from the experience. This was my first independent (non-) clinical decision, and led me to recognize that my medical education impacts not only my career but also my relationship to society.

Kelly Register-Brown, MD

Dr. Register-Brown *is currently working toward a master's degree in social policy at Nuffield College, Oxford University, Oxford, UK.*