

Community family medicine teachers' perceptions of their teaching role

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Objectives Our study explored community preceptors' perceptions of their teaching role, to better understand effective ambulatory and community-based teaching.

Methods Bandura's social cognitive theory and Schön's notion of reflective practice guided conceptual development of an interview exploring preceptors' views of their role, teaching goals, teaching techniques, student assessment practices, factors affecting teaching and learning, and balance of patient and student needs. Preceptors reflected also on a significant personal teaching experience. A total of 17 highly student-rated preceptors participated. A trained interviewer conducted each interview; all were transcribed and subjected to content analysis.

Results Preceptors (male, 14; female, 3) described learner-centred approaches, setting goals jointly with the student. Demonstration, guided practice, observation and feedback were integral to the experience. Preceptors saw student comfort in the environment as key to effective learning; they attempted to maximize students' learning and breadth of experience. They wanted students to understand content, 'know-how'

and 'being a family physician'. Patients remained the primary responsibility, but learners' needs were viewed as compatible with that responsibility. Many preceptors perceived a professional responsibility as 'role models'.

Conclusions Preceptors recognized the dynamic environment in which they taught students, and they described strategies which demonstrated how they adapted their teaching to meet the needs of the learner in that environment. These teachers combined learner-centred approaches with sound educational practices, broad learning experiences, attention to student learning and concern for development of professional expertise and judgement. These findings may assist faculty development in family medicine, and other disciplines, in providing effective ambulatory care teaching.

Keywords Canada; education, medical; family practice; interviews; professional competence; students; teaching, *methods.

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Introduction

Shifting student experience to the community, to prepare physicians to be able to function within reformed health care systems, necessitates new approaches to faculty development and to assisting preceptors to undertake and implement effective teaching roles.^{1,2} Effective preparation of family medicine preceptors

requires understanding of how they perceive and conduct their teaching role. Such understanding could facilitate approaches to faculty development for family physician preceptors, and assist clinical preceptors in all disciplines to teach effectively in ambulatory care settings. The purposes of this study were to explore how community family medicine preceptors perceive their role as educators, to understand the expertise of excellent community teachers, and to inform faculty development for community preceptors.

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Related literature

The characteristics of effective clinical teachers have been clearly and consistently described,¹⁻⁵ including the following general attributes of being a positive physician role model, effective supervisor, dynamic teacher and

Key learning points

Effective teaching in the community preceptor's office includes an understanding of the dynamic environment of practice, and an ability to adapt teaching to the changing practice context.

Preceptors' reflections on their teaching reveal their accumulated expertise as teachers, which can inform both their own teaching and that of others. It can also provide a basis for ongoing professional development.

Although teachers used established 'good' educational practices, they had established these techniques in the context of their own practice. Faculty development may need to help teachers to 'contextualize' their teaching.

supportive person.⁴ Related literature in family medicine concurs with the above,² also emphasizing the need for congruence between the process of teaching family medicine and the content of the discipline.^{6,7}

Seven categories of effective teaching behaviours of rural family medicine preceptors have been described, including: active involvement of the student, with a balance of supervision and independence; developing a supportive interpersonal relationship with the student; emphasizing problem-solving and understanding; balancing clinical and teaching responsibilities; demonstrating clinical and professional competence; using an organized approach, and providing ongoing feedback and assessment.²

Other models,^{8,9} describe evolution of the teacher-learner relationship over time and across a continuum of stages, as the learner develops knowledge and skills, and assumes responsibility. However, none of the above models adequately address the dynamic nature of the relationship, or the interaction with the environment, which are present at all learner levels. Further, there are areas where research in ambulatory and family medicine teaching is still needed. How preceptors think about their educational role has yet to be explored in depth. Specifically, Irby³ states that we need to understand teachers' knowledge and reasoning, regarding what they know that enables them to teach skilfully in this setting; how they use their knowledge to diagnose and target teaching to their learners' needs; their repertoire of teaching strategies, and how they make learning meaningful, enjoyable and recallable.

More recently, the professional and general educational literature have incorporated the notion of

reflective practice in teaching,¹⁰ as a means of exploring the expertise underlying practice, as a means of fostering professional growth,¹¹ and exposing underlying assumptions, values and beliefs about teaching.¹²

Conceptual framework

The conceptual framework includes two components: social cognitive theory (SCT)¹³ and Schön's model of reflective practice.¹⁴ SCT recognizes learning as a social and interactive process involving reciprocal, ongoing, dynamic interaction among three sets of factors: personal (i.e. values, knowledge, attitudes, perceptions), environmental (i.e. barriers, reinforcers, and environmental stimuli), and behavioural (i.e. effects on and consequences of behaviour).

Secondly, SCT identifies five basic human capabilities inherent in all individuals. Among them is a self-reflective capability, allowing us to reflect on and learn from our experience. This capability relates directly to the framework's second component, Schön's model of reflective practice.¹⁴ Among several models,^{11,12,15} Schön's description of reflection as a major means of learning from professional practice has been most relevant to medicine.¹⁴ Schön describes two types of professional knowledge: the first is formal knowledge or 'knowing that', acquired in both formal and informal learning; the second is a tacit knowledge or 'knowing in action', embedded in and underlying much of professional practice. Schön also describes two types of reflective learning. The first is 'reflection-in-action', which includes the instantaneous reaction and adjustments made to 'surprises' in the physician's practice. The second type of learning from experience involves 'reflection-on-action', in which the professional can, at a later time, reflect on aspects of experience, and incorporate them into existing understandings, therefore adding to their 'knowing in action', until the reflective cycle is triggered again.

Using the combined framework of SCT and reflective practice, we viewed the family medicine preceptor as functioning in a dynamic, changing environment of many interacting influences, including both the learner and the patient. The experienced preceptor possesses extensive teaching-related knowledge, some of it tacit 'knowing-in-action', which is infrequently reflected upon or articulated. We proposed to explore that rich experience, through the preceptors' reflections, to better understand the expertise underlying excellent teaching.

Methods

Ethical approval for the study was obtained from the Dalhousie University Faculty of Medicine Ethics Committee.

Sample

Using a purposive sampling approach, we selected preceptors whom we believed could best provide us with insight into their teaching.¹⁶ Of 110 family medicine preceptors at our institution, situated in communities across three provinces, we identified those who were rated consistently highly on standardized student evaluations, and had precepted six or more third- or fourth-year medical students over the past 3 years. Preceptors had third-year students for periods of 10–14 days, and fourth-year students for 4 weeks. There was only one student with one preceptor at any one time. A total of 20 preceptors were invited to participate, to share their expertise as excellent teachers; 100% agreed.

Instrument and data collection

A semi-structured interview was developed, reflecting current understanding of effective precepting in family medicine and clinical teaching,^{2,3,5,6} and questions raised in the medical education literature,³ and 13 open-ended questions were included. The interview emphasized respondents' personal teaching experience, rather than desirable teaching behaviour, and explored the following areas: preceptors' views of their role; their teaching goals and educational techniques to achieve them; assessment of learner performance; balancing responsibility to the learner and the patient; factors affecting learning and teaching, and their own teaching effectiveness. Each preceptor also described in detail and reflected on a recent experience which they believed provided a significant learning opportunity for a learner, and how they helped the student to learn.

Prior to its use in the study, the interview guidelines and questions were reviewed for content validity by two family physician teachers. Two investigators piloted the interview with one preceptor, to determine the time required (30–40 min), and the clarity and completeness of the questions. Revisions were incorporated accordingly. The interviewer telephoned to arrange the face-to-face interviews, at a mutually convenient time and location, typically the preceptor's office or home. Interviews were conducted by a trained interviewer, unrelated to the Faculty or Department of Family Medicine, between November 1997 and March of

1998. One investigator observed our interviewer conducting the first interview, to provide feedback and to ensure consistency with our intent. Throughout the interviews, frequent communication was maintained between the interviewer and investigators to ensure the continued consistency of the interview process. (A copy of the interview is available on request.) Interviews were continued until saturation was reached, with no new information or insights emerging. Each interview was audiotaped, transcribed, and sent to the participant for member-checking and review.

Analysis

Content analyses of the interviews was conducted by the investigators. Two investigators were appointed in the Department of Family Medicine; two were medical educators. All transcripts were edited to remove any identifying information, prior to the investigators' reviewing them. Initially, the four investigators jointly analysed three interviews, to develop a coding scheme of key concepts developed inductively from the data and from the conceptual foundations and related literature. Investigators coded the remaining transcripts individually. Discussion followed to analyse emerging themes and insights, assure congruity and reach consensus, so that others who examined the data might reach the same results.

Results

A total of family physicians (14 men and three women) participated. Eight had rural, and nine had urban practices. They practised in two Canadian maritime provinces. All were members of the College of Family Physicians of Canada, i.e. had completed specialty training in family medicine, a requirement for all of our preceptors.

Three physicians who had originally agreed were unable to participate, due to scheduling conflicts. Interviews lasted approximately 45–90 min. The results will be presented according to the themes which emerged in each area of the interview. Each theme synthesizes what preceptors told us about their perceptions, intentions and actions.

Teaching role

The terms 'guide', 'coach', 'mentor', and 'role model' were used frequently by preceptors to describe their process of introducing the learner to the practice of family medicine, and to the role of family physician. Statements like 'introducing them to the clinical

setting, to show learners how family medicine involves people medically, psychologically and socially', supported the preceptors' view of their role as a bridge for learners from the classroom and tertiary care setting, to the patient and the community care setting. Others expressed their role more generally. As one preceptor said, 'My job is to be a role model, to try to instil in students those qualities that are important, not just for a family physician, but for all physicians to have.'

Teaching goals

Preceptors expressed goals that were 'learner-centred', i.e. their goals were focused on helping students to learn, rather than on specific content and skills they wished to teach. They expressed their intent to create an enjoyable learning environment, to know the learner's goals, to help the learner achieve them, and a willingness and ability to adjust teaching and learning goals based on the individual learner's needs. Most preceptors wanted learners to develop an approach to patient problems and the office visit, to understand continuity of care, to see the physician as a patient advocate and resource for patients and the community, and to understand the family physician's multiple roles, obligations, financial pressures and lifestyle. A few preceptors expressed more specific teaching goals, including that students would learn minor procedures, therapeutics, experience clinical decision-making first-hand and experience common problems. Implicit in preceptors' teaching goals were two themes: the concept of clinical acumen and its development over time, and the notion of assimilating the learner into the context and content of family medicine through first-hand experience.

Techniques to accomplish teaching goals

Preceptors described their individual approaches to achieve their teaching goals. Concern for the student as a person was stated explicitly by most preceptors, as the context in which they set their goals. All preceptors used a variety of techniques; those most frequently cited included:

- Establishing the learner's goals for the experience, and setting a joint agenda to achieve those goals.
- Learning about the student. Preceptors wanted to understand their learners' previous experience, explicitly acknowledging the importance of other relevant skills and experience outside medicine.
- Tailoring the learning experience to the learners' experience, goals and ability, addressing both breadth and pace of the experience.
- Actively selecting learning opportunities, including 'interesting cases', opportunities to experience the richness of family medicine, and to care for the 'whole person and family'.
- Modelling skills, attitudes and knowledge to introduce learners to particular approaches to patient and family problems.
- Coaching learners by rehearsing before, attending during the student-patient interaction, and conversing with the student following the encounter.
- Assessing the student's level of ability. Preceptors most often used direct observation of the learner with the patient; sometimes assessment was complemented by reviewing the student's progress with a particular patient, while in the patient's presence.
- Being accessible. This was one of the most frequently expressed techniques. One preceptor's advice to students in his office summed it up: 'Wherever you get to [with the patient], come and knock on my [office] door.'
- Supporting the learner. One-third of the preceptors used the term 'safety net' in describing how they achieved their goals. They stated that students must be assured that the preceptor will set and monitor boundaries for learning, and protect both the student and the patient from harm.
- Respecting the learner. Preceptors expressed variously the belief that learners are valuable contributors to their work, who require opportunities to learn.
- Demonstrating concern for learners, by consistently attending to their comfort in the setting.
- Preparing the environment to promote learning. Preceptors prepared patients and staff for the student, adjusted office bookings to incorporate the student, and provided space for the student to work independently.

Assessing students' performance

Preceptors consistently utilized frequent observation to assess their learners. Feedback to the learner was regular, sometimes after each patient, always at the day's end.

Midway through the experience, most preceptors reviewed the learners' goals with them, provided goal-related feedback and revised goals as appropriate. All preceptors held a final evaluation meeting with the learner to discuss their performance, using the standard clerkship evaluation form. Students' observations about the experience were invited; about half of the preceptors required students to prepare a self-assessment of performance; others frequently stated that they invited and always encouraged student self-assessment.

Establishing appropriate levels of responsibility

Preceptors described a graduated approach to establishing learner responsibility for patients. Initial assessment of the learner always involved several information sources: the learner's self-assessment of experience and seniority, learner comfort, patient response to the learner, the learner's assessment of patients' problems, and direct observation. Preceptors frequently described using a 'gut feeling' in assessing students. This 'gut feeling' might be interpreted as subjective or biased. However, judging from the broad and ongoing assessment preceptors undertook, it is probably an expression of 'know how', or expertise accumulated over the supervision of many students.

Most preceptors expressed that they tried to challenge learners to grow, to test their abilities, and to assume as much responsibility as they could manage; one preceptor said, 'Give it your best shot.' Another added, 'If you don't take chances, you aren't going to learn.' This challenge was always linked with support for the learner, regular constructive feedback, and encouragement.

Factors affecting learning and teaching

Initially, preceptors expressed difficulty in identifying individual factors that affected learning. They emphasized the importance of learner comfort, enabling optimal learning, and the importance of respect for students as learners. They also identified individual student factors, including motivation, open-mindedness, desire to learn, and self-directed learning skills. Pressures of early career choice, and concurrent stressful life experiences were seen to affect learning negatively. Preceptors acknowledged the importance of 'good teaching', selecting relevant experiences and opportunities for students to apply learning. Some identified themselves as learners with the student, as well as teachers. One noted, 'I never stop. I am still a student.'

Time was an important, but not the determining factor in teaching for over half of the respondents. As noted, these teachers had adjusted booking schedules, and arranged their offices to maximize the efficient use of time. Further, although the preceptors acknowledged that 'time is money' in our fee-for-service environment, they did not perceive this as an insurmountable barrier. Other factors mirrored those perceived to affect learning, including commitment to teaching, energy and a desire to teach, knowledge, confidence in teaching and in their practice, and an enjoyment of medicine. They also noted that, as teachers, they needed to 'know what they didn't know'.

Most teachers reiterated the importance of realistic goals, focus, relevance, the ability to motivate learners' interest, conscious role modelling, and the benefits of learning from and with the learners.

Reflection on a recent learning experience

Reflecting on a recent significant teaching experience, and on how they used that experience to help a student learn, was challenging for the preceptors. The difficulty notwithstanding, their responses were thoughtful and illuminating, regarding what they saw as significant learning experiences.

- Preceptors valued 'fresh' learning experiences, where learners could tackle a new patient problem *de novo*
- Learning situations which provided new insights or 'for a light to go on' were described, e.g. mastering an effective problem approach (to understanding neurological problems), seeing a patient in context (understanding the patient's family and work situation), and seeing patients and families coping with illness at home.
- Complex, difficult emotional issues were seen to provide excellent learning, by involving learners in problem-identification, learning to acknowledge problems which cannot be addressed immediately, and understanding the 'privilege' of having a patient 'let you be part of it (their life and/or experience)'.
- Learning can be substantial, and fear and anxiety overcome, if the learner works through a challenging problem, for example, with the preceptor watching from the sidelines and coaching, if necessary. One preceptor noted wryly, 'It's like driver-training. You think, "it would be nice to make a right turn here before we crash".'

Balancing patient and learner responsibilities

The patient comes first: on this point, all 17 preceptors were unanimous. Preceptors prepare their patients for the learner's arrival, ask their consent, and occasionally elect to see patients alone when either wishes it. Office bookings are altered to accommodate the learner's presence. Preceptors maintain connection with and responsibility for the patient, accomplishing this through spending part of the visit with the patient and the learner, reviewing the learner's work, and observing the patient's response to the learner. As they had earlier, preceptors described themselves as a 'safety net' for both the student and the patient. In this context, one preceptor told his students, 'I won't ask you a question [in front of the patient] unless I know that, whatever you come out with, I'm not worried.' Another valued

the patient seeing him/her as a learner, and being a 'team' with the learner to care for the patient.

Personal teaching effectiveness

Preceptors readily identified factors contributing to students' positive experience in their practice, including: a preceptor who listens and is open to learners' ideas; a comfortable collegial learning environment, which includes and welcomes them, and broad patient exposure. Preceptors particularly valued their one-to-one relationship with the learner. Last, but not least, they expressed and valued enjoyment in their teaching.

Several preceptors described the importance of active learner involvement, using phrases such as, 'welcoming them into the fold', 'working with them as colleagues', 'making them part of the experience'. They also described helping learners to acquire 'know-how'.

Preceptors believed their teaching is effective because they work at it, they enjoy it, they are non-intimidating, they like learners and are genuinely interested in them and their progress. They get reinforcement and pleasure from watching learners get 'those first feelings of being a physician'. They 'find something interesting in all patients'. They see opportunities to learn from students. As one preceptor said, 'Teaching causes me to reflect.'

Discussion

We used the conceptual framework of social cognitive theory¹³ which incorporated a dynamic, ongoing interaction among persons, their actions and the environment. Congruent with this framework, preceptors' reflections on their teaching clearly reflected an awareness of all three interacting elements. They expressed clear perceptions of their roles, both as teacher and physician, and they acknowledged these roles as changing, in interaction with the learner, the patient and the community. Further, for most preceptors, the role of teacher was not separate from that of physician. Goals for the patient and the learner were integrated, sometimes seamlessly. Shapiro & Talbot⁷ have described the parallel process of the practice and teaching of family medicine. The preceptors in this study expressed positive attitudes and beliefs, strongly held values about teaching, and held positive perceptions of their self-efficacy and skills as teachers.

Preceptors' responses specifically highlighted the need to adapt their teaching to the ever-changing environment, to adapt to the needs of individual students, and to recognize and include the patient as part of the interaction. They were also conscious of the

broader community environment, of which they and their patients were a part. Finally, preceptors expressed awareness of the effect of their behaviour and actions, and how those actions affected the learner both directly, and indirectly, by affecting the environment in which they learned.

Overall, preceptors' responses incorporated the notion of being part of a dynamic system. Understanding and adapting to this system allowed them to anticipate and address barriers to teaching and learning, and to respond rapidly to feedback. Three other elements of preceptors' perceptions were congruent with SCT. They recognized the importance of goals for the student, as a means of navigating through the constantly changing environment; they appreciated the need for regular, ongoing feedback to enhance learning and progress toward goals, and they understood the value of observational learning, which they addressed as role models.

The second component of our framework combined the notion of self-reflective capability, i.e. the individual's ability to reflect on experience,⁹ with Schön's description of learning from experience through reflective practice. Preceptors clearly articulated an essential component of reflective practice. They described the process of learners acquiring 'know-how', both in translating and transforming formal knowledge to experience through practice, and in accumulating from their experience a tacit knowledge, 'getting a sixth sense of what's happening'.

Several authors have written of the use of reflection, as a vehicle for improving teaching, exposing tacit knowledge, and underlying values and assumptions.^{10-12,15,17} Not only did the preceptors recognize the value for the learners of acquiring tacit knowledge, they also, through their own reflections, were able to make explicit for us, and for themselves, some of what lies beneath 'the iceberg of professional practice'.¹¹ They had the opportunity to look beneath their actions and their experience, to uncover some of their own values, beliefs and expertise.

Generally, preceptors found it challenging to reflect on specific learning incidents, suggesting that although critical reflection may be an inherent skill, it requires development and practice. In the context of current interest in reflective practice in medical education, this may have implications for undergraduate medical curricula and faculty development. Also the interview's time constraints may have made in-depth reflection an unrealistic goal. In describing significant learning experiences, preceptors selected examples of complex situations, in the 'swampy lowlands of practice', described by Schön. They described how their own or

students' reflection on a difficult experience could lead to meaningful learning, and growing expertise. Despite the difficulty in reflecting on a specific experience, preceptors had clearly incorporated reflection into their teaching, as many of their comments reflected their learning from earlier experience.

Preceptors described family medicine as a 'way of life', extending beyond the office into a community of relationships and practice. They described their role in gradually assimilating the learner to the 'community' of practice. As one preceptor stated, 'I make them part of my practice, and for a lot of cases, part of my life as well.' Preceptors' descriptions mirrored descriptions of situated learning, described by Lave & Wenger.¹⁸ These authors describe how students 'learn from talk' and 'learn to talk', and how they absorb and are absorbed into the professional community. These crucial aspects of learning to be a physician were very much a part of the preceptors' reflections, and they described approaches that were exemplary in this regard.

A possible limitation of our study is the study sample, which included only excellent preceptors. We reasoned, however, that understanding the expertise of these teachers might inform programme development to prepare and support teachers in community and ambulatory settings. A recent study of distinguished clinical teachers' reflection on successful teaching revealed many similar findings, in terms of teaching behaviours and views toward students, to our own study.¹⁹ The consistent themes revealed, described through different perspectives, suggest the possibility of a useful framework for designing programmes which will facilitate expertise, enjoyment, and excellence in teaching.

Implications for faculty development

Our study suggests some considerations as we develop programmes to assist faculty to teach effectively in community-based or ambulatory settings. First, similarly to our student learners, faculty development of teacher skills needs to be 'contextual'.²⁰ Faculty need help to analyse the context of their individual practice, to understand the many interacting influences, so they can 'situate' their teaching, and anticipate ways of adapting it to the environment. Further, this implies that faculty development that occurs in a decontextualized setting, away from the preceptors' practice, may not easily facilitate transfer of new teaching skills to the practice setting. We need to find ways to maximize this transfer. Finally, as our study and others have revealed, faculty, especially experienced teachers, have accumu-

lated much 'tacit knowledge' about effective teaching. By reflecting on their experience and teaching, they can both uncover and share expertise which may be helpful to all teachers, and better understand their own teaching, and the assumptions and values they hold. Reflection goes beyond techniques of teaching. This understanding provides the basis for effective ongoing professional growth as teachers.

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Contributors

KVM, DBH, FIB and VMH were involved in the conception of the study, and its development and implementation. All contributed to the analysis and to the preparation of the manuscript. PWV conducted the interviews, assisted with developing the framework for analysis, and contributed to writing and revising the manuscript.

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