The doctor-patient relationship is the medium through which doctoring occurs and the ethical core of medicine.\(^1\)\(^2\) Instruction to manage this relationship is an integral part of medical training that is heavily influenced by informal and hidden curricula.\(^3\) Informal curricula entail learning that takes place through interpersonal interactions. Hidden curricula reflect the values of the organizational structure and culture. Intrinsic to these curricula is role modeling—students learning from observing and imitating the behaviors of their teachers. The impact of role models on student learning has thus become the focus of considerable inquiry.

Research has explored the dynamics of quality role modeling and the influence of role models on the student acquisition of ethics and humanistic behavior,\(^4\)\(^5\) communication skills,\(^6\) and professionalism.\(^7\) Students evaluate role models according to their teaching skills, personal qualities, and clinical competence.\(^8\) Physicians who enjoy teaching, spend additional time with trainees, stress interpersonal and psychosocial aspects of care, and build supportive relationships with trainees are highly valued.\(^9\)\(^10\) Impatient, dogmatic, overextended, personally remote, or unengaged teachers are negatively perceived.\(^11\) Positive role modeling strongly influences a student's choice of medical specialty.\(^12\) Clearly, role modeling profoundly influences the outcomes of undergraduate medical education.

Exemplary role modeling includes “role modeling consciousness,” the awareness that one is being a role model when interacting with trainees.\(^5\)\(^11\) Cruess et al summarized strategies to improve role model performance such as awareness of being a role model, protected time for teaching, being reflective, and participating in staff development.\(^13\) They stress the importance of Schon’s “reflection in action”\(^14\) and theorize about the importance of “reflection from the inside.”

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From Tacoma Family Medicine, Tacoma, WA (Dr Egnew); and Faculty of Medicine, Dunedin School of Medicine, Dunedin, New Zealand (Dr Wilson).
on action”—reviewing the impact of the encounter on all involved—as a way to prepare for future actions, “reflection for action.” Yet some teachers have difficulty analyzing situations or behaviors where they attempted to model relationship skills. Others often do not directly address the human dimensions of care with learners.

Few studies have examined what and how students are learning about doctor-patient relationship skills, specifically in the clinical environment where trainees observe how medicine is actually practiced. Nogueira-Martins et al reported the negative impact of informal and hidden curricula on student empathy, while Bergh et al described trainee confusion over whether relationship skills are innate or could be developed. Haidet et al queried clinical students at nine medical schools and found significant variance in the patient centeredness of their learning environments. Other research indicates that clinical training leaves trainees angry, isolated, cynical, less empathetic, and more paternalistic at a time when they could rightly be expected to assert their humanistic values. Clinical training thus has a potentially negative impact on the acquisition of optimal doctor-patient relationship skills.

The perceptions of both faculty and students about the teaching and learning of doctor-patient relations in clinical settings within the same institution were unexplored until we initiated such an inquiry at the University of Otago School of Medicine. The structure of the medical school with three separate clinical campuses was particularly valuable for investigating the informal and hidden curricular influences that shape teaching and learning in clinical settings. Given that perceptions are personal and our study was exploratory, we used qualitative methodology, asking general questions to generate as much data as possible. Our initial results suggested that teaching and learning about doctor-patient relationships in the clinical environment occurs primarily through role modeling.

In this article, we report further analysis of our data. If role modeling is the primary means by which doctor-patient relationship skills are taught and learned in clinical settings, further information on role modeling in clinical settings could augment clinical teaching.

**Methods**

The curriculum of the University of Otago School of Medicine entails 6 years of training. The first 3 years occur on the same campus, and medical training begins in the second year with a preclinical curriculum of basic biomedical sciences. In year 4, the students divide into cohorts to pursue 3 years of clinical studies at three separate clinical campuses. Curricula vary slightly between campuses but are largely hospital based with graduated patient-care responsibility. Sixth-year students do a trainee intern rotating internship before graduation.

A purposive sample of faculty from each clinical campus was electronically solicited and consented to semi-structured long interviews. Course directors were selected under the assumption they would be aware of what students were learning about relationship skills within their rotations. A convenience sample of students from each year at each campus was electronically solicited to participate in focus groups to explore their attitudes, perceptions, beliefs, and experiences of medical education.

Focus groups were segregated by class; in two instances, at different campuses, only one student volunteered, a trainee intern and a fifth-year student. Long interviews with these students were conducted as validity checks for the focus group data. All respondents answered analogous open-ended questions designed to solicit unspecified information (Table 1). Data were collected in total in 8 days through discrete visits to the clinical campuses. The interview

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What are your perceptions of what students need to learn regarding the doctor-patient relationship?</td>
<td>1. What are your perceptions of what you need to learn regarding the doctor-patient relationship?</td>
</tr>
<tr>
<td>2. What are you teaching about the doctor-patient relationship?</td>
<td>2. What are you being taught about the doctor-patient relationship?</td>
</tr>
<tr>
<td>3. Are students learning what you’re teaching, and are they learning things about the doctor-patient relationship in other ways apart from your formal teaching in your rotations?</td>
<td>3. What are you learning about the doctor-patient relationship in your work and by what you’re being taught?</td>
</tr>
<tr>
<td>4. How do you assess what the students have learned about the doctor-patient relationship?</td>
<td>4. How does faculty assess what you have learned about the doctor-patient relationship?</td>
</tr>
<tr>
<td>5. What, if anything, do you think would improve the teaching you are providing regarding the doctor-patient relationship?</td>
<td>5. What, if anything, do you think would improve the teaching you are receiving regarding the doctor-patient relationship?</td>
</tr>
</tbody>
</table>
questionnaire was thus not amended during data collection.

Audio recordings from all interactions were transcribed to verbatim transcripts. Fourth-year student responses were coded first, under the assumption that they represented the most sensitive indicators of the hidden curriculum.26 Subsequent coding expanded categories and enriched our findings. We used an iterative, dialectic process to reach consensus on coding, and data were winnowed to assist manageability.27 Once coding was completed, codes were electronically shared with our study respondents with a request for additions or corrections; feedback was confirmatory. Comments specifically mentioning or describing role modeling constituted a theme under the topic “Teaching and Learning” and were subjected to a second coding using the same iterative, dialectic process. The University of Otago Human Ethics Committee approved the study.

Results
Fifteen faculty and two students were interviewed individually. Thirty-three students participated in seven focus groups, five of which met the desired size criteria of at least four participants (Table 2).28 The total number of respondents was equivalent to other studies of student perceptions of training.29-32

Faculty directed more comments toward role modeling than any other topic, and all emphasized the importance of role modeling as a method of teaching about doctor-patient relationships. Of 53 faculty comments addressing role modeling, 38% (20) were deemed positive (“... everyone is more aware of the importance of providing a good role model...”), 55% (29) negative (“... the people who are abrupt and don’t leave space for patients to talk...”), and 7% (four) neutral (“... they’re [students] learning that that’s not a good way to make people comfortable, so out of a negative comes a positive, I guess”).

Students were likewise adamant that role modeling was a predominant method by which they were learning about doctor-patient relationships. Role modeling garnered the second most comments from students, behind specific training in medical communication. Of 63 student comments, 30% (19) were considered positive (“... it’s really good

Table 2: Respondent Demographics

<table>
<thead>
<tr>
<th>FACULTY COHORT</th>
<th>Gender</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus A</td>
<td>1 female, 4 male</td>
<td>5</td>
</tr>
<tr>
<td>Campus B</td>
<td>1 female, 3 male</td>
<td>4</td>
</tr>
<tr>
<td>Campus C</td>
<td>1 female, 5 male</td>
<td>6</td>
</tr>
<tr>
<td>Totals</td>
<td>3 female, 12 male</td>
<td>15</td>
</tr>
</tbody>
</table>

Specialities Represented
Behavioral science (one), emergency medicine (one), neurology (two), general practice (four), geriatrics (one), obstetrics and gynecology (two), psychiatry (three), respiratory (one)

<table>
<thead>
<tr>
<th>STUDENT COHORT</th>
<th>Campus A</th>
<th>Campus B</th>
<th>Campus C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus Groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourth year</td>
<td>8 (4 female, 4 male)</td>
<td>7 (1 female, 6 male)</td>
<td>4 (2 female, 2 male)</td>
</tr>
<tr>
<td>Fifth year focus groups</td>
<td>4 (3 female, 1 male)</td>
<td>3 (female)</td>
<td>—</td>
</tr>
<tr>
<td>Trainee intern focus groups</td>
<td>5 (3 female, 2 male)</td>
<td>—</td>
<td>2 (male)</td>
</tr>
</tbody>
</table>

| Interviews |          |          |          |
| Fifth year | —        | —        | 1 (female) |
| Trainee intern | — | 1 (female) | — |
| Ethnicity: |          |          |          |
| New Zealand European | 9 | 7 | 4 |
| Maori | 0 | 0 | 1 |
| Asian | 6 | 1 | 0 |
| Indian | 0 | 1 | 2 |
| No response | 2 | 2 | 0 |
to watch how different doctors explain things . . .
informally most clinicians would teach you the tricks of the trade . . .
they're not consciously done, it's you pick up as you go along” (fifth-year student).

“I think the students do see a whole lot of different forms of medicine being practiced . . .
some are very good examples, some are poor examples” (faculty).

**Incongruity**
The incongruity between some behaviors modeled and what students had been taught about optimal doctor-patient relationships was at times confusing for students. Callous and paternalistic behaviors, poor body language, “abominable” communication skills, and abuses of power toward patients were cited as examples of poor modeling. Yet, students also described role models who demonstrated compassion and caring on the wards. The challenges of service delivery in the clinical environment created time pressures that necessitated students adapting behavior, like cutting patients off or ignoring a patient’s emotion, that contradicted preclinical teaching. Students also lamented being excluded from sensitive consultations and complained they received little modeling that reinforced teaching about handling difficult interactions.

Students reported that the preceptors in the psychiatry and general practice rotations placed a higher premium on relational skills and attempted to model behaviors that reinforced preclinical learning:

“...in General Med wards there’s no time really to develop empathy and do things like that . . .” (fourth-year student).

“. . . breaking bad news, any sensitive topics . . . we are almost always not included . . . being a ghost in the corner would be better than nothing” (trainee intern)

**Discernment**
Faculty and students believed that students are sufficiently discerning to learn from good and bad role models. Still, students struggled to determine which skills to incorporate from the modeling they observed, as a trainee intern noted: “... there’s a lot of bad habits you can pick up . . .” The perception of deficient doctor-patient relationship skills that appeared effective with particular patients confused some students. Others expressed concern that peers who were uncomfortable relating to patients might rationalize inappropriate behavior by observing poor modeling, as a fourth-year student noted: “Oh, that doctor does that, so I can get away with it as well.” Overall, students appreciated the diversity of doctor-patient relationships observed with multiple role models and reported increased abilities to recognize poor role modeling.

The awareness of the need to be discerning grew with training:

“. . . the skill that we need to learn is almost an analytical one in terms of how to analyze the good and the bad and to build from that” (fourth-year student).

“. . . the ones that I learn most from are the doctors that I think, ‘Oh, I hope I’m never like that’” (trainee intern).

**Transparency**
Transparency, a teacher sharing observations about and experiences of doctor-patient interactions, augmented learning from role modeling and was highly valued. Students reported that transparency helped them learn to manage the intricacies of the doctor-patient relationship, such as how to handle strong emotions. They appreciated preceptors who were aware of the importance of relationship skills and who discussed relational issues with them. Students noted that this preceptor transparency helped them to put perceived negative interactions into a context that fostered a deeper understanding of observed interactions.

Students also appreciated the transparency of attendings and senior trainees regarding the stresses and vulnerability of medical training. Examples included an attending reporting uncertainty regarding
a diagnosis and a senior trainee relating being intimidated by an attending’s knowledge. Such reflections helped students normalize their own responses to the challenges of lifelong learning, as a fourth-year student summarized: “Oh, it never stops.”

Faculty endorsed the power of modeling, and some made conscious efforts to provide good modeling. Only a few ward-based faculty voiced the importance of debriefing students to elicit and help process their observations; time was mentioned as a significant barrier to debriefing in ward environments. General practice faculty described explicitly discussing with students their interactions with patients to clarify what they were trying to demonstrate:

“I had a really great GP who was a really great role model . . . he would pick up instances in a consultation . . . we’d discuss what techniques he’d used and how difficult it can be . . .” (fifth-year student).

“. . . transparency would help because we would have all seen situations where for some reason the doctor’s had a short fuse with the patient . . . and we just don’t know the background . . .” (trainee intern).

**Discussion**

Our results are consistent with other research into role modeling. Students observe models whose behavior is incongruous with prior teaching about doctor-patient relationships, and this challenges them to discern which behaviors they wish to adopt. In particular, Balint groups and mindfulness training emphasize self-awareness and reflection. Sharing experiences that are difficult to discuss can help faculty develop a vocabulary for conveying personal knowledge. Still, being transparent risks personal critique for sharing vulnerability and uncertainty in a medical culture that values expertise, certainty, and control.

Effective role modeling requires not only excellent practice for students to emulate but also reflection to process observations and dialogue to clarify impressions. To our knowledge, our respondents’ description of transparency is the first data from students that supports Cruess et al’s theoretical observations about “reflection on action” and advances insight into the processes involved in exemplary role modeling. Role models who made the implicit explicit by articulating the relational qualities they were attempting to portray and the interpersonal struggles they experienced were highly valued by our respondents.

Yet, making the implicit explicit is challenging for “we know more than we can tell.” The tacit knowledge that is operative when performing complex skills and in the nuances of interpersonal relationships occurs below the surface of conscious awareness. To share such personal knowledge therefore requires that a role model be aware, reflective, and articulate.

Awareness may be augmented by practicing mindfulness, noticing what is present without judgment or interference. Mindful practitioners have the ability “to observe the observed while observing the observer in the consulting room.” Mindfulness can sharpen the role model’s awareness of personal experience during a consultation that then becomes the substrate for reflection.

 Reflexivity involves “a self-conscious account regarding the condition of knowledge production as it is being produced.” Unlike mindfulness, reflection entails systematic, critical evaluation and analysis of the actions, beliefs, and underlying assumptions that are important to learning from experience. Through reflection, past experience guides future performance. But mindfulness and reflection alone are insufficient for exemplary role modeling. The personal knowledge they comprise must be articulated to be comprehended.

Transparency involves communicating the content of mindful and reflective processes. Through transparency, the role model explicitly describes the intuitive knowledge guiding his or her actions during the consultation. The intra-personal experiences of mindfulness and reflection thus become accessible to students, deepening their understanding of the consultation observed. Given the tacit nature of personal knowledge, not all processes operative in the doctor-patient relationship will be accessible for reflection and comment. Still, articulating those processes that can be made explicit augments the value of teaching through role modeling.

Enhancing role model transparency may entail both personal and institutional change. Many physicians are unconscious of how they are perceived by their patients and how their responses to patients affect their care. Faculty development activities that foster self-awareness and reflection are therefore necessary. In particular, Balint groups and mindfulness training emphasize self-awareness and reflection. Sharing experiences that are difficult to discuss can help faculty develop a vocabulary for conveying personal knowledge. Still, being transparent risks personal critique for sharing vulnerability and uncertainty in a medical culture that values expertise, certainty, and control.

While efforts to change the culture of medical schools show promise, further research is required to determine how interpersonal transparency by clinicians can be effectively nurtured.

Fortunately, ambulatory clinical training, where active observation is the most important learning event for students, may be particularly suited to support transparency. Office settings support the debriefing of critical clinical encounters at the end of each clinic. Continuity of care promotes an insightful use of self in clinical relationships that preceptors can model and reflectively describe. Continuity of teaching fosters dynamics of trust, respect, and reciprocal influence that parallel optimal
doctor-patient relationships. Precepting by mature physicians who are not conflicted with their own learning needs and may be more comfortable with the inevitable uncertainty of medicine can encourage transparency. Lastly, students associate a focus on the doctor-patient relationship and the psychosocial aspects of care, essential aspects of family medicine, with quality role modeling.

We believe transparency augments the promise of role modeling as a strategy for teaching doctor-patient relationship skills. Without transparency, the ability of students to learn the subtleties of managing complex relationships simply by observing role models may be considerably over-rated. Given the reported value of transparency and the impact of role modeling on medical specialty choice, the explicit sharing of the experience of doctoring by reflective family medicine preceptors who model quality relationships with their patients may resonate with the altruistic motivations that bring students into medicine. By taking advantage of their ambulatory settings to transparently reveal the rewards of primary care, they may be instrumental in attracting students to family medicine careers.

This study is limited by the use of samples generated from a single institution, though each clinical campus had its unique informal and hidden curricula. Our convenience sample of students may not be representative, as their interest in the subject may have biased their responses. Likewise, the responsibility of faculty for the educational experiences of students may have biased their perspectives. Our data are self-reports; the actual context from which respondent opinions were drawn is unknown. The interview questionnaire was not piloted, so the questions posed may not have produced definitive data. However, our results are consistent with considerable other research on role modeling, and there is little reason to assume that the educational needs or perspectives of our respondents differ widely from those of other medical educators and students around the world.

Conclusions

Students and faculty agreed that the predominant strategy for teaching relationship skills in clinical settings was role modeling. Students scrupulously observed doctors at work and learned from both good and bad role models. They noted incongruities between preclinical teaching and the behavior modeled in clinical settings and often struggled to identify and discern facilitative relationship skills. Faculty understood the power of modeling but reported little or no coaching or discussion with individual clinical teachers about its importance. Clinical teachers who modeled exemplary skills and transparently shared their thinking and feeling experiences of doctoring were highly valued by students. Role model transparency is an under-appreciated means to enhance student learning of relational skills.

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