Description of an Experiential Empathy and Self-Awareness Curriculum for Medical Residents

Scott Smith, M.D., Chris Francovich, Ed.D, Janet Gieselman, MS, BSN

The medical interview and psychosocial medicine are recognized as important elements to include in the training of primary care physicians. Empathy and self-awareness are essential skills for these domains. Experts recognize the need for greater training in empathy and self-awareness. However, there is no accepted framework to guide curriculum design in these important areas. This paper reports on a primary care residency curriculum designed to increase empathy and self-awareness, which is based on experiential learning theory. The elements of the curriculum are discussed in detail, and specific examples are provided. The resources required for the curriculum are also outlined. The results of a prospective cohort evaluation of the curriculum are promising. Further outcome studies of curricula like the one described are warranted.

Key Words: empathy; self-awareness; curriculum; house staff

Rationale

Studies of primary care graduates suggest that they have not been adequately prepared to manage outpatient psychiatric complaints, interpersonal skills, or substance abuse. Clinical interactions in these three areas are notoriously difficult and share two notable features: they require empathy; and they often lead to powerful emotions in the physician. Experts perceive a need for greater training in empathy, and in transference/countertransference issues. We report here on a unique curriculum for medical residents designed to increase empathy and self-awareness.

Patient encounters are the basis of learning in the ambulatory clinic, and experiential learning theory provides a useful framework for conceptualizing the learning process. This theory, founded on work by Kolb and Schön, makes the assumption that learning occurs through the interaction between persons and their concrete experiences. Learning from experience involves a recursive cycle of concrete experience, reflecting on that experience as it unfolds (reflective observation or reflection-in-action), formulating concepts and generalizations (abstract conceptualization), and testing concepts and generalizations in new situations (active experimentation). It is with patient encounters in clinic that the concrete experience and testing of concepts and generalizations occur. However, reflection, conceptualization and priming for experimentation are time consuming and difficult to achieve during the fast-paced academic clinic.

In this paper, the authors describe a curriculum based on the assumption that these functions can be separated from the actual experience. The curriculum provides elements that focus on these critical areas of reflection-in-action, conceptualization and priming. While this report is primarily intended as a curriculum description and not a research project, we relate the results of a prospective cohort study used to assess the impact of the curriculum.

Background And Resources

This curriculum is a required component during the second-year of a primary care Internal Medicine residency program. The classes are held in a converted home located on the hospital grounds. This location provides a safe, comfortable setting outside the hospital. Refreshments are served and, while class is in session, support staff handle resident and faculty phone calls and pages. Residents participate in the curricular program during two separate months.

A collaborative learning model, founded in trust, respect and mutual commitment forms the basis of the class interaction. Faculty use active listening techniques, freely admit personal limitations and show respect for divergent opinions. Issues are explored with the goal of identifying assumptions, behaviors and natural consequences of actions, and this information is used to improve less effective strategies for patient management through collective problem solving. Faculty members arrange the learning opportunities, then act as guides, monitoring the learning process and feeding back observations to the group.

During the first month, groups of 3-6 residents participate
in a classroom session for two hours twice per week. For each class, there are generally one or two faculty (both general internists with a total of over 200 hours of faculty development training) and a process observer (trained in qualitative research techniques). The classes follow a syllabus that covers the clinic interview, asymptomatic and symptomatic disease, harmful health habits, somatization, and end of life issues as well as other topics. Instruction is almost an even mixture between a predetermined structure and learner-centered discussion.

The classes during this first month utilize a case-method format. An exemplary case is picked to focus on a specific curriculum element. A case history is written that begins at the point of “maximal mystery” (e.g., at the point of the important clinical decision such as screening, performing a diagnostic maneuver or treating). The case is handed out ahead of class, and residents are expected to come to class prepared to defend a course of action in the case.

During the second month the classes meet for two hours weekly, are smaller (one or two residents), and are increasingly learner-centered. Residents select topics of personal interest or need upon which to focus. Topics frequently covered include: critical incident reviews of ambulatory patients; videotaped role-plays; dealing with alcoholism; patient-doctor communication; and chronic pain management.

In total, this curriculum provides 24 hours of instruction for each resident in the program, and requires approximately 150 faculty hours.

Curriculum Elements

Elements designed to increase reflection-in-action include a critical reflection exercise, and critical incidents. Elements designed to increase abstract conceptualization include a framing effects exercise, metaphors, and various graphic models. The element used to prime the learner for active experimentation is role-play.

Reflection-in-action. One important primary care skill is to learn to become “the camera observing the interview” even as we are participating in it. This skill is used to monitor the important information contained in the process of communication (e.g., “this patient is trying to split my staff and I and, therefore, may have a borderline personality disorder). Insights are gained, and are used to formulate a revised plan for future responses in similar situations. Experiential learning theorists use terms such as reflective observation and reflection-in-action to describe this skill. The curriculum contains several elements designed to increase this important skill and to foster empathy and self-awareness.

Critical Reflection Exercise

This element is a structured qualitative observation designed to heighten sensitivity to the process of communication. It is a modification of a program developed for group problem solving and organizational improvement.

During the first month, a process observer watches the flow of class discussion and keeps brief notes on a standardized form (see Table 1). The first ten minutes of each class are spent reviewing and discussing a one-page summary of the previous class. The summaries cover three areas important to the skill of critical reflection: communication (style, interruptions, air time for various participants), IDEAS (episodes of Induction, Deduction, Evaluation, Assumptions or Skills) and ECG (Emotions displayed, Concepts agreed upon, Growth displayed). This exercise quickly legitimizes discussion about the process of communication during the previous classes, and encourages reflection-in-action skills.

| Table 1 |
| Boise Process Observer Checklist* |

<table>
<thead>
<tr>
<th>Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members present/absent</td>
</tr>
<tr>
<td>Speech power/liveliness</td>
</tr>
<tr>
<td>Air time</td>
</tr>
<tr>
<td>Eye contact</td>
</tr>
<tr>
<td>Body language</td>
</tr>
<tr>
<td>Interruptions/simultaneous speakers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ideas (Inductions, Deductions, Evaluations, Assumptions, Skills)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did discussion generate any new models that might explain things?</td>
</tr>
<tr>
<td>Who was involved, and were they accepted?</td>
</tr>
<tr>
<td>Did discussion lead from broad general principles to any rules for clinic?</td>
</tr>
<tr>
<td>Were evaluations or comparisons made?</td>
</tr>
<tr>
<td>What tacit assumptions were made?</td>
</tr>
<tr>
<td>What skills were exhibited?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ECG (Emotions, Conceptualizations, Growth)</th>
</tr>
</thead>
<tbody>
<tr>
<td>What triggered emotions and who displayed them?</td>
</tr>
<tr>
<td>Was laughter or humor used to cover up other emotions?</td>
</tr>
<tr>
<td>What stages and shifts in emotions occurred and why?</td>
</tr>
<tr>
<td>Identify major themes and broad concepts agreed on by the group.</td>
</tr>
<tr>
<td>What evidence for insights, interest or new understanding?</td>
</tr>
</tbody>
</table>

Example 1

In the summary of a resident role-play of the presentation of the diagnosis of alcoholism, under emotions, the process observer wrote, "the resident showed some discomfort both before and during the role play when having to ‘confront’ the patient with the diagnosis or suspicion of diagnosis. The discussion regarding this discomfort appeared helpful."

Reviewing this summary statement at the beginning of the next class verified that the observations were correct, and stimulated further exploration of the origin and effect of anxiety in the interview.

To heighten the acquisition of skills, the job of process observer can, after one or two examples, be rotated through the learners. This classroom reflection exercise improves both empathy and self-awareness, and the resulting discussion expands the various ways in which the learner can respond to the same situation in future practice.

Critical Incidents

Critical incidents are episodes of patient care that are vividly recalled, often because of their emotional content. They invariably contain fertile ground from which to explore empathy and personal emotions. There are several ways to use critical incidents. One method we use involves transcription of audiotapes recorded during resident’s clinic visits with previously identified difficult patients. These transcripts are examined in depth. Participants look for areas of conflict or lack of communication, and explore approaches that might have worked better. This exploration often reveals undetected problems with the process of communication.

Example 2

A gifted resident was having problems with a particularly difficult patient suffering from chronic pain. Detailed review of a visit transcript revealed that the resident’s language was founded in a “conquest” metaphor, with the goal (and tacit promise) that the pain would be vanquished and the disease eradicated. The patient’s language was founded in a “collaboration” metaphor, with the expectation that she would have to learn to live with the pain. This double bind (a promise of pain resolution with an expectation for ongoing pain) created unwarranted hope (patient), an impossible to meet goal (resident) and tension for both parties. During this review, the resident showed increased empathy and understanding of the patient’s recent behaviors. He also related an increased awareness of his anxiety and how it affected the interview.

Stories about vivid and disturbing episodes of patient care can also be used as critical incidents. The learner relates the story in some detail. The story is then explored, examining the emotion experienced by the resident and possible explanations for the patient’s behavior. Occasionally, mindfulness-awareness exercises are used to help the learner actually re-experience the power of the emotion during the interview.

Example 3

A resident was "fired" by a patient suffering from AIDS who had presented with another episode of hypoxia and pneumonia. The learner was quite upset. She was asked to immediately write a brief (1/2 to 1 page) account of what had just happened. Later, in a safe environment, she was led through an exercise in which she was asked to relax, shut her eyes and focus on her breathing. The account was read back to her, and she became aware of her own brisk pulse, shallow and rapid respiration, and restlessness. This experience of the physiologic changes associated with fear and anger led to a discussion of transference (sharing of emotions between patient and provider) and, ultimately, greater empathy with the patient’s behavior.

In both of these techniques for capturing critical incidents, the learner can begin to view the interaction more completely, seeing connections between actions, emotions and consequences, as well as implications for future behaviors.

Fostering Abstract Conceptualization

A critical step in experiential learning is the creation of generalizations or conceptualizations from the experience of an individual case. This step is what allows the learner to transfer ‘applicability to this patient’ to ‘applicability for this type of patient’. While conceptualization, itself is internal to the learner, abstract representations can, by providing useful models, demonstrate the process and foster greater skills in building concepts. Irby’s qualitative empirical study of gifted teachers has shown that this ability to help the learner connect a case to broader concepts is a critical element of clinical teaching."

Framing Effects Exercise. In this exercise, a patient
story is presented sequentially and the resident is asked at each step to commit to a diagnosis and treatment plan. It is designed to demonstrate how our tacit assumptions can limit empathic understanding, and to create with the learner a fundamental conceptualization of doctor as fallible agent. Framing effects are those that limit and define the space within which we expect to find an answer or diagnosis. The physician’s model of disease is often very different from that of the patient’s, and point of this exercise is to demonstrate that these differences can serve as barriers to empathy and patient care.

Example 4

The residents are shown an overhead with the following information.

Mr. X is a 55-year-old smoker with hypertension who presents to the emergency department by ambulance complaining of chest pain. This is 5 out of 10, dull and substernal. He took a nitroglycerin with partial, but not complete relief. After two more nitroglycerines he called the ambulance.

The residents are asked to write down a differential diagnosis and a treatment plan. Then the next portion of the case is presented.

His chart now arrives and you find that he suffered a small myocardial infarction eight years ago. After that he underwent a 3-vessel bypass graft. He was doing well until 2 years ago when he began being admitted for episodes identical to tonight’s. This is the tenth such episode. In the past 2 years he has had 4 treadmill tests that were normal and a cardiac catheterization 3 months ago which showed all his grafts to be widely patent.

The residents are again asked to write down a differential diagnosis and a treatment plan.

Figure 1 is used as a framework to ground the discussion of this exercise and encourages the residents to explore the framing effects of their assumptions. The physician’s model of the illness should explain the contents of all four quadrants. The patient may have confusion in the subjective half of the diagram, especially as to the causal relationship between symptoms and affect. The physician may have difficulty trying to explicitly locate the illness in the objective half of the diagram (e.g., Is it biological or psychological?) The experienced physician does not require an objective label of the illness but, rather, seeks to understand better the subjective experience of illness from the patient’s point of view. During the discussion, faculty point out that some physicians simply admit the patient to “rule out MI” (the only option that is purely biological). Residents often are frustrated by the obvious biomedical-psychosocial discrepancies and want to obtain psychiatry consultation— if it’s not biological, then it’s psychological. Still others are not concerned about ‘where the illness is’ and want more information about the patient’s perception of the illness and treatment, symptoms and affect. Focusing the discussion on which of these approaches is likely to be most successful in achieving the goals of patient care can lead to increased self-awareness and empathy. Confronting ineffective strategies and misconceptions can help to restructure the resident’s conceptual system, particularly with regard to roles and responsibilities, and lead to improved patient interactions.

Parallel Experience

While the concepts of fallibility and uncertainty create the need for empathic understanding, they are simply too threatening for some residents. The parallel experience exercise searches for an area in the resident’s life that is metaphorically similar to their patient care difficulty. Metaphorical situations can be useful tools for helping a resident with rigid psychological defenses conceptualize the patient’s perspective when empathy might otherwise be too threatening.

Example 5

A resident was observed in clinic to be inattentive to patient’s agendas and highly controlling with “scientific evidence”. This same resident related discomfort with the number of patients he was expected to see in clinic. A faculty member used this knowledge to pro-
vide an experience for the resident that was metaphorically similar to that of the patients’ in his clinic panel.

The resident was given the report of a study that showed that learning was maximized when the number of patients was similar to that which the resident was seeing. Either more or fewer patients per clinic resulted in less learning. The faculty member delivered these data in a didactic manor.

Discussion then focused on the feelings that this evoked in the resident, and pointed out the potential fallibility of population-based evidence when applied to a unique individual situation. The encounter led to better understanding of the patients’ perspective and improved physician performance in clinic, as reported by observers.

To be most effective, the root or generative metaphor that is driving the situation must be openly discussed. Examples 2 and 5 above demonstrate a common tension generated between the metaphors conquest and collaboration. One metaphor sets up a win-lose situation, the other a win-win situation. In using a parallel experience learning intervention, the resident may be more able to actually experience an interaction similar to that which his patient experienced, allowing him to explore the feelings generated, and perhaps to behave differently in the future.

Graphic Models

Abstract representations can often be effectively reduced to simple graphic models. These graphic models are useful in making abstract concepts more concrete, so that complex relationships, interactions, and implications can be more easily understood and discussed. Figure 1, introduced earlier, is one example. Figure 2, a model of dysfunctional discourse, is used in class whenever faculty or peers perceive that a learner feels overly abused, overly responsible, or overly resentful in the patient interaction. If one participant moves toward a vertex of the triangle, it drives the other to move to a complimentary vertex.

We may take on the role of rescuer when the patient plays passive victim, then feel burdened by the needy patient (feeling like a victim ourselves), and then lash out or withdraw (blaming the patient). The graphic reminds us that paying attention to our own feelings can tell us something useful about the patient-doctor interaction. There are many other graphical representations in the syllabus that are drawn upon as needed to help residents understand the process of interaction and to guide the search for effective responses.

Figure 2

Model of Dysfunctional Discourse

VICTIM

RESCUER

BLAMER

---

**Priming for active experimentation.** Learners can get the most out of active experimentation if they are "primed", that is, focused on critical elements of the coming patient interaction with a structure for dealing with these elements. We use role-play in a specific way to focus attention on empathy and self-awareness, and to prime the learner.

**Role-Playing**

Role-playing (acting out an interview) can be an excellent way to increase empathy (having the learner play the patient) or to analyze more closely the learner’s reactions during a difficult interview (self-awareness). A video camcorder can be used to replay both student and expert performance for the purpose of reflecting and coaching. Because it is a high-threat learning modality, we introduce role-play by first demonstrating it with faculty using an unscripted unknown. This allows mistakes to be made, allows learning to occur, and demonstrates that faculty are committed to the technique and are also willing to take risks.

At the start of the role-play, participants are asked to state their goals. For instance, the person playing the doctor may state, “I want to present the diagnosis of alcoholism” and the person playing the patient may state, “I want to keep the doctor at a distance”. This gives the person in the “hot seat” some warning and also provides a structure for debriefing. The debrief should begin by asking the person playing the doctor about their reaction to the role-play, both in general and then specifically in relation to their goals. The same is done for the person playing the patient. Video taped role-plays should be paused immediately
after a significant learner behavior early in the tape. It is useful to start with a behavior that worked well. Ask the learner questions such as “What were you doing at this Program Evaluation

Methods. We evaluated this curriculum with a quasi-experimental, prospective cohort design using mixed qualitative/quantitative outcome measures. The main outcomes were self-assessed skills and attitudes, and analysis of semi-structured interviews. Residents who received the curriculum described in this paper were matched with a comparison cohort from another primary residency site. All residents from both sites spend there first and third years together. During their R-2 year, twelve residents stay at the comparison site and ten come to the treatment site, where they participate in the empathy and self-awareness curriculum. Although there is no formal ambulatory curriculum in the comparison site, there are weekly resident-conducted primary care conferences on various topics. In addition, several hospitals at the comparison site conduct pre or post-clinic conferences discussing clinical problems. Besides exposure to the special curriculum, the main differences between the two sites center around greater patient responsibility and continuity, and more continuous exposure to a smaller group of faculty at the treatment site. These program differences may confound our outcome data.

Measures

Skills. At the beginning and end of the second year for two consecutive academic years, the residents at the treatment site (n = 10/year) and a convenience sample of the comparison group (n = 8 in year one and 6 in year two) completed a questionnaire in which they assessed their primary care skills. Data from both years were pooled. This questionnaire asks users to score twelve primary care skills with 6-point Likert-style questions (very poor to excellent).

Questions such as, “My ability to negotiate appropriate treatment goals in a patient with diabetes” are designed to cover content and process issues simultaneously. The questionnaire has been validated in two ways. Internal consistency of the self-assessment questionnaire is moderate (coefficient alpha = 0.65). Also, some individual questions have been validated using external measures (for instance “My ability to communicate with patients” has a significant direct correlation with scores on the American Board of Internal Medicine Patient Satisfaction Questionnaire dealing with communication). Analysis was done using two-sample Student’s t-test. A copy of all evaluation questionnaires is available from the authors by request.

Attitudes. Resident attitudes towards clinic patients and towards alcoholism were similarly measured at the beginning and end of each year. After thinking about “Clinic patients” and thinking about “Alcoholism”, residents were instructed to place an X at a point along each of seven visual analog scales to indicate their preference regarding the concepts listed. The scales are anchored on either side by semantic differentials (polar opposite concepts such as valuable/worthless, unpleasant/pleasant). Using semantic differentials in this fashion, as outlined by Henerson et. al., one effectively measures the global attitude and affect toward the evaluated concept. Analysis of the attitudinal data was also performed using two-sample Student’s t-test.

Qualitative Interviews. At the end of each academic year, the same two groups of residents participated in semi-structured interviews. These were conducted in person (87%) or by phone (13%) by experienced interviewers who were not part of the faculty at either site. The answers to trigger questions were transcribed and trends were sought to further elucidate the quantitative data. The process of content analysis of the question, “How has your ambulatory training been this year?” is reported here to help the reader evaluate the results obtained by this method. First, a blinded reviewer grouped all the responses into “OK”, “good” “very good” and “excellent”. The answers for each resident group were then compared by the Mann-Whitney rank-sum test (a non-parametric test of significance for rank-ordered data). In addition, answers to the question, “How useful were lectures and classroom discussion?” were analyzed for both sites and reported here.

Results

Skills. Self-assessed primary care skills were comparable at the beginning of each study year (average scores 4.12 out of 6 in the treatment group and 4.18 in the comparison group, NS). These skills improved an average of + 1.16 (29%) in the study group and +0.64 (16%) in the comparison group (p = .003). The greatest improvement was for questions relating to the management of chronic pain, bad news delivery, somatization and alcoholism. There was no significant difference in questions covering the management of diabetes, chronic obstructive pulmonary disease or hypertension.

Attitude. Attitude towards clinic patients was similar at the beginning of each study year (average scores 4.9 out of 7 in the treatment group and 4.92 in the comparison group, NS). Attitudes improved by an average of +0.15 (3.1 %) in the treatment group over the course of the year.
while they dropped by -0.22 (4.3%) in the comparison group (p = .03). Attitude towards patients suffering from alcoholism was also similar at the beginning of each study year (average scores 6.05 out of 7 in the treatment group and 5.92 in the comparison group, NS). These attitudes rose +0.1 (1.7%) in the study group and fell -0.08 (1.4%) in the comparison group (p = .3; NS).

Qualitative Interviews. Content analysis of the response to the question, “How has your ambulatory training been this year?” demonstrated a difference in resident’s perceptions at the two sites (Treatment group: OK 0%, good 42%, very good 23%, excellent 35%; Comparison group: OK 36%, good 25%, very good 28%, excellent 11%; significant at p = .013). Lectures and classroom discussions dealing with ambulatory care were considered important by 70% of the treatment group residents as opposed to 13% of comparison residents. Despite the limitations of our study design, it appears from the following verbatim comments made by residents in the treatment group that at least some of the residents found the empathy and self-awareness curriculum to be specifically helpful.

It is like [the class] plants the seeds and then you do the growing.

It provided a forum for the sorts of things we used to talk about before residency . . . the patient as a person and the patient as part of health care.

We had good discussions; you came away with ideas you tried to incorporate.

I was able to fine-tune skills and get a lot more feedback from the attending.

Pretty good. Better than I expected. Particularly alcoholism and smoking cessation and how to interact with patients in more constructive ways.

Discussion

As training moves into the outpatient clinic, it can be confusing and stressful for residents. The ambulatory clinic generally provides less instruction, supervision and structured feedback than other settings.24 Wooliscroft and Schwenk argue that the truly major difference between inpatient and ambulatory training is the shift of control from the hospital to the patient.25 This shift puts much more emphasis on accurate empathy and self-awareness. While most of the learning in this environment is experiential, the classroom can play an important role in guiding reflection-in-action, conceptual thinking and in priming the learner for active experimentation. There are several critical features that an institution should consider before attempting to implement a curriculum such as this. It requires a dedicated, stable faculty who has protected time and is willing to experiment and admit personal limitations. There should be familiarity with collaborative learning techniques used to create mutual respect, trust, and disclosure. The curriculum emphasizes learning process (e.g., protection from beepers, providing a process observer, assuring videotape resources). Finally, a commitment to obtaining honest feedback and willingness to change are fundamental.

The impact of this curriculum was evaluated using a prospective cohort design over two consecutive academic years. These data showed improvements in self-reported skills, in attitude toward clinic patients and in the perceived usefulness of ambulatory training for the treatment cohort relative to the comparison cohort. Resident self-evaluation is an uncertain method, and further research should seek to replicate these important results using other external outcomes. Another limitation is that these residents, although similar at baseline on several academic criteria, were not randomly assigned to the two experiences. As mentioned above, these experiences have other differences that might also introduce bias in the evaluation.

The global assessment of the curriculum at the treatment site is positive. Besides the results presented here, residents during quarterly reviews often independently mention it to the program director as important. Further investigation should focus on other measures of effectiveness such as faculty evaluations, patient evaluations or standardized patients. The current version of the curriculum does require a significant outlay of institutional resources for the months that the curriculum is offered. Further research should also focus on other, less resource intensive methods to provide guided reflection, empathy and self-awareness skills.

References


Acknowledgments

The research described in this manuscript was supported in part by a grant from the Veterans Administration Health Services Research and Development (#DEV 92-009) and the Veterans Administration Office of Academic Affairs.