

Calgary's Standardized Patient Program appears to be the wave of the future

Lynne Sears Williams

The 45-year-old man in the Emergency Department has stopped breathing. His electrocardiogram trace on the monitor fluctuates in the distinctive pattern of ventricular tachycardia. A doctor, looking at his team in panic, yells contradictory orders: "Get the paddles. No, get 1 milligram of epinephrine. No, make it 1 milligram of atropine." Without warning, the monitor beeps shrilly and displays a flat line. The doctor gapes at the patient. "He's not supposed to die," the physician says angrily. "He's not supposed to die, is he?" The crash team waits for directions. When none are forthcoming they shrug their shoulders and exit, while the doctor stares, open-mouthed, at his dead patient. Then the patient sits up, leans on an elbow and says: "Hey, you don't give me the right treatment, I punch asystolic and I'm gone." The doctor, who is really a second-year medical student, storms out of the room. He has just experienced a "standardized patient" scenario, part of the training program at the University of Calgary medical school. This heart attack was only a simulation, but some day soon it won't be.

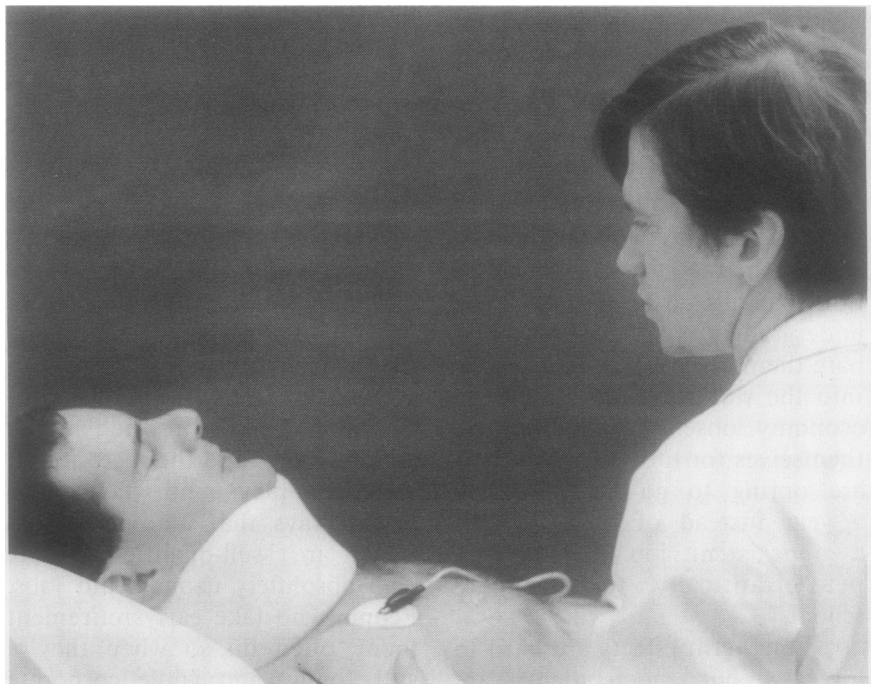
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Building better doctors is the goal of the Dramatic Actor Program at the University of Calgary medical school. The concept was introduced 10 years ago, but in the last 3 years it has experienced exponential growth by focusing on the most central of medical principles: do no harm. Short of receiving too many pin pricks from students during neurology exams, these are patients

who won't suffer if the doctor makes a mistake.

The Standardized Patient Program at Calgary now accounts for more than \$70 000 of the medical undergraduate program's annual budget, says Dr. Henry Mandin, the associate dean of undergraduate medical education. "It's not an insignificant sum," he says, and expansion is in the works.

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Actor Brian Martell, student Simon Bryant

The idea behind the Calgary program is simple: train actors to present a convincing case history to medical students, and then evaluate the student's clinical skills and diagnostic expertise as they treat these "patients."

Mandin says the students are exposed to patient scenarios that are simply meant to teach, as well as to ones for which they will be evaluated. The heart attack situation outlined at the start of the article, in which the patient may choose to die, is reserved for educational purposes — the death of a patient during an evaluation might be considered too prejudicial to the student.

During 3 years of learning, each class of 72 medical undergraduates has many opportunities to meet the up to 70 actors the medical school has hired to provide portrayals of diseases ranging from renal colic to schizophrenia. Graduates boast that some of the most convincing psychotics they have met came from the medical school's drama program. The program director, Brian Gromoff, accepts that as a compliment.

"It's great fun," he says. "The actors are continuing their form of art and they are giving feedback

to the students as well. And it's nonthreatening to the students as a learning situation — they can't really harm anyone."

Students are encouraged to view the actors as real patients: they meet them in an examining room, test for physical findings and query for relevant information. Students who decide to order laboratory tests will receive a pre-arranged computer printout of the results. They may then proceed to treatment, order additional tests, arrange for a consultation, or take another course of action.

"It is relatively easy to evaluate knowledge, primarily with written examinations," Mandin explains. "But the only way in which clinical skills and judgment can be evaluated is by observing the students in a situation and seeing how they respond."

In some cases the students react with shock or anger when a patient dies or refuses to respond to incorrect treatment. Gromoff describes that as an effective way to learn what not to do the next time.

Sometimes this type of learning can also produce tears of laughter, not frustration. Dr. Murray Archdekin, a 1991 graduate,

says legends have grown up around such incidents. In one case an actor pretending to be a patient with a drug overdose explained his problem by mumbling, "I OD'd." Thinking the actor had said "I don't eat," the student proceeded to give him a lengthy work-up to test for eating disorders.

On another occasion a male actor told a student he was recovering from a discectomy. The student launched into a long discussion about fertility and birth control, assuring the man he would probably be sterile, but it would take 6 weeks to make sure. Students viewing the interlude through a two-way mirror howled with glee. The future doc thought the patient had said "vasectomy."

The actors spend a lot of time preparing for their roles. Prepped with their character's medical history and a lexicon of abnormal physical findings, they are coached by Gromoff on the parameters of the problem, whether physical or mental.

They learn to make a conscious effort to delay their reflexes, to exhibit pain on range-of-motion tests, and to simulate disease states ranging from seizures

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to personality disorders. "We train them to understand a medical condition and then we build cases where physical signs are reproducible," Gromoff says.

It is "amazing that by a variety of means it is possible to simulate abnormal findings," says Mandin. For example, blood pressure readings are skewed by changing the markings on the manometer; abnormal electrocardiograms are preprogrammed into the heart monitor; the actors fake adventitious lung sounds by adjusting their breathing patterns. The goal is to produce a patient who appears to be as legitimately

sick as the real thing. Because the actors cut across a wide age range, they provide a realistic cross-section of a patient population and the medical problems seen in it.

The actors primp with enthusiasm for their roles. Theatre blood fills in for real blood, bruises are applied with stage makeup, and obsessive-compulsives' hands are scrubbed raw before the exam. Manic-depressive patients sport flamboyant hats. The actors may repeat the same scenario for an 8-hour shift, as successive students work through the sessions. Gromoff, who is responsible for training the patients,

says it is easier for actors to stay in character than volunteers from the community, or other medical students.

"It's part of an actor's armoury of skills," he says. "They're used to being a character. That, after all, is part of the actor's baggage."

Actor Rod Padmos, employed with the program for 3 years, says he practised religiously to perfect the gait and stutter of a recovering alcoholic suffering from cerebellar ataxia. And he is pleased with his work as a patient with a herniated disc: his pain portrayal generally gets a gratifying reaction.

"Some of the students get really concerned and you get to see their natural responses," Padmos says. "For the most part they really get involved." On occasion, he is faced with a noncompliant doctor, unwilling to suspend disbelief long enough to make the scenario work, but he says that's rare.

The actor-patients are called on to play various roles, from patients with simple trauma to those with psychosocial problems. Padmos has specialized in renal colic, alcoholism and temporal lobe epilepsy, for which he fakes seizures. "It was interesting to see how they'd deal with it." So far he has avoided the electrocardiogram scenario: "I've luckily avoided anything that had to do with machines."

Padmos says he can prepare for some illnesses within a matter of hours, but others take weeks to memorize. And he notes the program has recently begun scripting actors for successive visits, for which they present again and again to the same group of students, preparing the future MDs for an ongoing patient relationship.

"It's a whole new process for us and there's a lot of material to learn," he explains. The actors memorize family histories back to

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Actor Brian Martell, with "serious" injury

their grandparents, can recall their supposed background and lifestyle, and are familiar with the ins and outs of their particular medical problem.

"You have to give the students enough information to lead them on the right track, but you can't explain your problem to them," Padmos notes. Occasionally, the actor will be stumped by a question from a student. "You have to say 'I don't know' and find out for the next time."

Padmos's wife, Murhi Kencayd, and their 16-year-old daughter, Aramis, occasionally work together on psychosocial scenarios that call for family counselling. Kencayd says she is glad that at the conclusion of an exercise the actors are given an opportunity to assess their "doctor's" skills. "It makes me more confident to know that this is the type of training our doctors undergo," she explains.

Some of the situations are open-ended. In the scenario in which the heart patient died suddenly, the actor might have responded to cardiopulmonary resuscitation had the student thought to use it. The actors have a thorough understanding of what

procedures and medications will benefit them, and how quickly they should receive treatment. In one instance, a woman with a broken arm turns out to have pathologic fractures resulting from bone cancer, and the limb must be amputated.

"It brings up lots and lots of issues and makes the student realize that nothing is simple," Gromoff says. "We try to make it as realistic as possible." He says the students respond realistically too, and at times may show too much enthusiasm. "Sometimes the pin pricks can get pretty fierce," Gromoff relates. "They have drawn blood."

Other scenarios are used to evaluate students on their clinical skills and ethical behaviour. These are observed by a preceptor and graded pass or fail. Mandin reports that ethics and attitudes are difficult to assess. "One way of evaluating their behaviour in a given situation is to take a peer group or an expert group and run them through the same situation and see how they respond," he says.

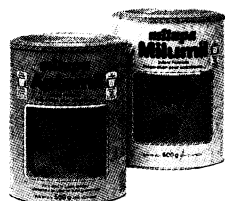
The workups are tested first on residents and preceptors and critically assessed before being

given to students. "That's how we establish the norm by which they are measured," he says. "Once we've done it a number of times and a number of classes have gone through the situations then we know what the appropriate pass/fail level is. The more we use a situation, the more we know what the appropriate behaviour should be."

The program also integrates cultural and social problems into profiles to help the generally upper-class students scale cross-cultural barriers. In one, a Catholic woman from Brazil who has chronic menorrhagia probably should have a hysterectomy, but is reluctant to do so because her spouse expects them to have children. Students are expected to draw on their counselling abilities and to integrate principles they have learned from ethics and human sexuality courses.

"The actors can be used in the context of a different cultural background or a different racial extraction so the student can begin to use some of the variables that can come into the doctor-patient relationship, rather than concentrating on the physical illness itself," Mandin adds.

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Brian Gromoff (top right) discusses a diagnosis with medical students

Occasionally, glitches occur. During one exam, an actress with a heavy Spanish accent began to describe her problem to a student. When she insisted she couldn't speak enough English to answer his questions, the student shifted into Spanish. The scenario ground to a halt: the actress wasn't Hispanic, she was only trying to portray a character who was.

Mandin says the use of "standardized patients" neatly avoids the ethical dilemma of allowing students to hone their clinical skills on real patients. "It's difficult to have students train taking a history and doing a physical exam on sick patients," Mandin explains. "They're novices at that when they first start. And it's difficult to ask someone who's unwell to put up with repeated

questions and repeated examinations, particularly when it's done by students who are not as expert as they will eventually become."

Mandin says the patient scenario also allows examiners to standardize the test situation so each student receives the same sets of variables and degree of difficulty in diagnosis, thus ensuring greater fairness in evaluations.

The amount of time a student is exposed to the actor-patients increases over the span of the undergraduate program. The first 2 years are largely assessed by written exams. By the clerkship year, almost two-thirds of a student's evaluations are conducted through the use of standardized patients.

Thus, the standardized patient scenario is a concept whose

time has apparently come. Pioneered in US medical schools, the notion has recently been integrated into the Medical Council of Canada (MCC) licensing exams. By 1993 Canadian medical students will be tested on a standardized patient profile that will be worth 50% of their final grade. Few medical schools have programs in place to administer the patient portion of the MCC exam. Initially, part 2 of that exam will be offered at only three test sites — Calgary, Toronto and Sherbrooke.

Mandin is gratified Calgary was chosen, but says projections suggest that within 5 to 10 years the standardized patient programs will be so common "it will be possible to do this at all the medical schools across Canada." ■