



# LIVE AT THE HEALTH SCIENCES IMPROV



All eyes are on the screen, where students take turns “acting” like the professionals they soon will become.

In matinee performances of “Patient Farmer—CHF, COPD,” staged in the health sciences clinical skills lab at the University of Utah, everyone assumes a new role.

Four associate deans share responsibility as executive director; two health sciences librarians are producers; a physician turns playwright; and a clinical nurse coordinates stage production, with technical assistance from a pharmacist, nurse, physical therapist, and dietitian. Standardized patients—actors paid to play sick people—are cast in supporting roles.

Their parts are carefully scripted: *Mr./Ms. Farmer is a 65+ year old patient with a past medical history of advanced heart failure and emphysema. He/she is in the office today for low blood pressure and shortness of breath. He/she appears tired, not cheerful. The patient should cooperate with the student but be disappointed and down about continued deteriorating health. The patient will have a weak handshake.*

“I am doing bad.”

*Standardized Patient should let the student continue from there. If they ask for a further description of symptoms or an open-ended question to tell them more, state:*

“My blood pressure is low and I can’t breathe. I can’t do anything anymore.”

*From now on, the student needs to ask specific questions for specific answers.*

But there are no questions scripted. Though they receive top billing as “The Physician,” “The Nurse,” “The Pharmacist,” “The Therapist,” “The Dietitian,” and “The Speech Pathologist,” students from the School of Medicine and colleges of Pharmacy, Nursing, and Health have to improvise. That’s the point of the Clinical Team Experience (CTE), a new graduation requirement for health sciences students.

“CTE is not a class. We don’t lecture; there are no grades. It’s a real ‘experience,’” explained Larry G. Reimer, M.D., professor of pathology and associate dean for curriculum and graduate medical education at the medical school. “It’s an exercise in team



## Students Star in New Collaborative “Experience”

building, and it does what we intended: it demonstrates the importance of other health-care providers.”

It’s also unique. When Reimer presented CTE at the 2008 regional meeting of the Group on Educational Affairs, Association of American Medical Colleges (AAMC), no other school in the West reported a similar course. Interprofessional collaboration, however, has been identified as “a key strategic area” by AAMC President Darrell G. Kirch and “one of five core competencies for all health professionals” by the Institute of Medicine (IOM).

By 2010, the Association of American Colleges of Nursing is expected to require an interdisciplinary course for certification, according to Lynn Hollister, R.N., M.S., assistant clinical professor of nursing and baccalaureate curriculum chair at the U College of Nursing. “The IOM report—‘To Err Is Human’—identified health-care problems, and medication errors are huge,” said Hollister. “Part of the reason is communication. If students start learning together, they’ll be much more effective in their work.”

“I’m most interested in the triangle of pharmacists, physicians, and nurses, and how the team experience allows them to work more closely,” said Mark Munger, Pharm.D., professor and associate dean for academic affairs in the College of Pharmacy. “CTE should help reduce the number of medication errors, because students had this interaction during their education.”

The motivation behind the interdisciplinary experience is a unique structure on the U of U campus: the Spencer F. and Cleone P. Eccles Health Sciences Education Building (HSEB). The five-story facility opened in summer 2005, featuring large lecture halls, classrooms of varying sizes, labs, training facilities, and student lounges. With its centralized location, the HSEB literally is “the centerpiece of academic programs at the health sciences center,” noted A. Lorris Betz, M.D., Ph.D., senior vice president for health sciences, at the grand opening. Medical, pharmacy, nursing, and health students pass each other in the halls; hang out in the public lounges; share tables in the cafeteria; browse aisles in the bookstore.

But were they studying together? Betz posed that question in 2006 to Wayne J. Peay, M.L.S., then director of the Spencer S. Eccles Health Sciences Library, who oversaw HSEB administration. He

convened a meeting to brainstorm how to encourage interdisciplinary interaction. The result was CTE, which the planning committee piloted one Saturday morning in spring 2007. It was so successful that CTE was formally implemented the next year.

Joan M. Stoddart, M.L.S., Eccles library operations, and Nancy T. Lombardo, M.L.S., systems librarian, produce CTE. “It’s quite a unique role for a library to run an education building and to be involved in curriculum,” acknowledged Stoddart, who presented the project to the Medical Library Association last year. But, as Lombardo noted, “the library is neutral ground for the health sciences, so it makes sense for a neutral party to manage the experience.”

The toughest part of their role is the logistics of registration. Lombardo used a new computer program last spring to schedule nearly 400 students for 15 three-hour sessions, dividing them into teams of four to seven and making sure each discipline was represented: seniors from the medical school; nursing students in their final third or fourth semester; third- and fourth-year pharmacy students; and graduate students in communication sciences and disorders, nutrition, and occupational and physical therapy from the College of Health.

Students met for a group orientation where they were given a synopsis of CTE. Individually, they would take a patient’s history; collectively, they would decide upon a differential diagnosis and treatment plan. “It doesn’t have to be perfect,” emphasized Munger at a session



“My blood pressure is low and I can’t breathe,” the standardized patient—a local actress paid to portray an ailing Ms. Farmer—tells a health sciences student in the scripted encounter.

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Every exam room becomes a stage, with production by Wendy Hughes who looks on from the Clinical Skills Lab central control room.



last February. “Your focus should be on the different techniques used to question the patient and the answers and data gathered.” His only cue: “Do the assessment the way you were taught.”

Students proceeded upstairs to the clinical skills lab, a configuration of 18 fully equipped exam rooms, where they took on their professional roles. Backpacks and water bottles were stowed under chairs; jackets taken off and name tags adjusted. All eyes turned to the patient—on the computer screen. The lab features a closed-circuit video system with cameras in every room.

“Student #1, go to your patient room,” instructed Wendy Hughes from the central control room. She coordinates the standardized patient program for the School of Medicine and directs the HSEB clinical skills lab. “Do not knock and enter until I tell you....Now—”

Hughes set the timer for 15 minutes. On two large LCD screens divided into 20 grids, she and two faculty facilitators watched seven students interviewing various Mr. and Ms. Farmers, alongside teams of students watching from their assigned rooms.

“The important lesson learned is that different professionals get to the same issues through different questions,” said Patricia Eisenman, Ph.D., professor of exercise and sport science, and associate dean in the College of Health. “One

person can’t get all of the patient’s information. But if they work with others and share, they have more information. They also gain a newfound respect.”

“The culture of health care is different within each discipline. We each have our quirks and differences,” said Hollister. “But if we break down barriers by learning together, we’ll break down stereotypes. Then we can be much more therapeutic.”

Whether students already have formed professional stereotypes of their future colleagues is debatable. “I don’t think they’re locked in yet,” said Reimer. But the physician does believe that CTE enables students to experience how preconceptions can break down. “Before they walk in the door to see the patient, students are thinking: I have to listen to three or four others ask questions. If I’m last, there won’t be anything left to talk about. But it doesn’t happen the way they assume.”

For medical students to observe occupational therapy students take patient histories not only gives them a glimpse into another profession, but into their own thought processes as well. “Observing each other interview helps students understand how they think about the patient and the information they glean to make clinical decisions,” noted Hollister. That can lead to what she called an “aha” moment for students: as they communicate and understand



Kassi Harris, graduate student in communication sciences and disorders, waits for the director’s cue to enter the exam room.

## Where the Calculator Meets the Stethoscope

When measured by grade point average and test scores, medical students represent the best and brightest in academia. When it comes to understanding the real world of health-care business and economics though, many are closer to the bottom of the class.

Richard Sperry, M.D., Ph.D., is trying to change that reputation. He holds the Governor Scott M. Matheson Presidential Endowed Chair in Health Policy and Management at the University of Utah and oversees the interdisciplinary Matheson Center for Health Care Studies.

“One of our goals is to provide current and future physicians with a basic skill set in health-care administration and economics,” said Sperry, who also serves as an associate vice president for health sciences and professor of anesthesiology. “Doctors have come to realize that knowing medicine isn’t enough. If they want to run a successful practice or become a leader in a large health-care institution, they must understand the business side of medicine.”

Sperry teaches a required fourth-year course during medical school that exposes students to the basics of health policy and medical economics. In addition, the center co-sponsors, with the U’s David Eccles School of Business, an intensive 12-day program for practicing doctors known as Administration for Physician-Executives.

The center also brings together students from across campus to study health-care policy and economics as part of the U’s Health Services Administration (HSA) master’s program. It’s open to students concurrently enrolled in an affiliated master’s program including: anthropology, business, economics, health education, biomedical informatics, nursing, pharmacy, political science (master’s in public administration), family and preventive medicine (master’s in public health), and social work. Sperry says he’s especially proud of the center’s annual peer-reviewed journal and statistical update, *Utah’s Health: An Annual Review*. The journal is compiled and edited by undergraduate and graduate students from a variety of disciplines.

—Christopher Nelson



Richard Sperry, M.D., Ph.D.

what each other is doing, they realize that “my way isn’t always the best.”

In fact, CTE seems to reinforce students’ willingness to admit that they often don’t know. When Team #7 began discussing a diagnosis and treatment plan, the student in nutrition wondered aloud, “What is emphysema?” “How is this different from COPD?” said a young woman in pharmacy. Both turned to the medical student who shook his head: “I don’t know.”

Yet team members were just as ready to reach a consensus through assuring each other and acknowledging contributions unique to their professions. “I’d order a chest X-ray,” said the nurse. “Definitely,” agreed the physician, “and I’d want an EKG, maybe an echo.” “A CMP, I’d like that,” added the pharmacist. “Did you ask about grapefruit juice?” asked the dietician. “I should have,” said the pharmacist. “That’s a good one.”

Faculty facilitators at the debriefing that followed in a nearby classroom referred to students by their professional roles. “Okay, let’s get everyone’s recommendations. Nursing, what are yours?” asked Brandon Jennings, Pharm.D., assistant clinical professor of pharmacotherapy. “Tell us, what is your terminal degree? How many years does it take you?” To the speech pathologists, he asked, “Where do we find you? In



Steve Stocking, a fourth-year College of Pharmacy student, reviews medications for “Patient Farmer” with his clinical team.

hospitals, private practice, schools?”

CTE has been a learning experience for faculty. “It requires great teamwork for those of us administrating it,” said Munger. Scripts for the two standardized patient cases were written by Caroline K. Milne, M.D., assistant professor of internal medicine. “Every college had input, so the cases apply to all disciplines. It’s been quite rewarding,” he added.

Eisenman shares his enthusiasm: “It’s been very gratifying to see students benefit—and enjoy CTE. They don’t always go together.”

As for future performances, Reimer would like to incorporate team building

with other colleges into the medical school curriculum. Everyone envisions students taking CTE before, as well as after, they begin clinical training. Adding other disciplines like social work would be valuable. So would be staging CTE in a real clinic with real patients.

For now, the tightly controlled environment ensures that students’ first interprofessional experience—the one that sets the stage for future collaboration—is positive. As one student said in a CTE evaluation, *I think it reflects how teams will, and should, work in the real world, and it’s good practice—a final line that couldn’t have been better scripted.* ▣



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Jan Petty, a College of Nursing senior, listens as Mr. Farmer gives his patient history: “I’ve smoked two packs a day since I was 15. Started when I was 10. But I’m afraid I won’t be strong enough to climb the steps to the café to keep having breakfast with my buddies.”