WELLS Center immersion tour

State Reps Get Behind-the-Scenes Health Care Peek

By Tyler Smith

The man with the blood-stained face stood on a patch of asphalt, holding an infant and shouting into his cell phone.

“They say there’s an ambulance coming,” he yelled. “The guy didn’t even ask me if I was all right. He just took off.” A woman aproached and offered to help, but the man remained visibly upset.

“My car got totaled. It hit a pole,” he told the woman. “This lady says she’s a nurse,” he said into the phone. “I’m gonna get checked out.”

With that, the man, Wayne Carrington, walked toward University of Colorado Hospital’s WELLS (Work, Education and Lifelong Learning Simulation) Center near the Anschutz Medical Campus. Neither the blood on his face nor the infant he carried were real.

Carrington, a lay clinical educator with the University of Colorado’s CAPE (Center for Advancing Professional Education), had played the role of a patient, interacting with Jean Marso, a real-life nurse who is the WELLS Center’s simulation clinical coordinator.

The two were part of a “Medical Simulation Immersion Tour” hosted by the WELLS Center Sept. 19 for 25 representatives of the Washington, D.C.-based National Governors Association (NGA). The visitors from Colorado and other states were treated during the next two hours to striking demonstrations of sophisticated equipment and technology used to simulate real-life medical situations.

Hospitals like UCH and other health care organizations are increasingly using these techniques to train and educate providers before they enter the cauldron of operating rooms, emergency departments, clinics and other health care settings.

Making it real. The visitors first listened to brief presentations by leaders from the WELLS Center and CAPE as well as the CU School of Medicine’s Center for Surgical Innovation (CSI) and Touch of Life Technologies (ToL Tech), both of which develop simulated training for medical procedures. ToL Tech also created the Visible Human Dissector, which displays three-dimensional images of the body’s entire anatomical structure. The WELLS Center uses the VH Dissector as an anatomical instruction tool.

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A demonstration of the VH Dissector by Vic Spitzer, PhD, Tol Tech co-founder and director of CU’s Center for Human Simulation, was one of several close-up looks at simulation that followed. Standing in a darkened room, Spitzer used the program to show his audience the body’s roadmap of nerves, the location of lymph nodes, and the size and positioning of the stomach and pancreas—all of it re-created with precision from some 1,800 cross-sectional digital photographs of a human male. He also displayed the pelvic floor of a visible female re-created through the same process.

In the next room, Carrington sat on the edge of a bed, pleading with a nurse for help with his “baby,” bringing to life the emotional turmoil and confusion that play out every day for providers in real-life health care settings.

Down the hall, WELLS Center Director Allen Wentworth, RRT, MEd, showed a group one of the organization’s 11 high-fidelity mannequins. Human-looking on the outside, tangles of technology on the inside, the mannequins can simulate breathing, blood pressure, dilation or contraction of the pupils and other signals to help providers practice their clinical and communication skills in critical care situations.

“The mannequins can help providers practice responding to rare, high-risk events,” Wentworth said. “It’s a way to expose them to it before it occurs.”

The life-size models also offer an improved way to certify individuals in skills like advanced cardiac life support, Wentworth said. Because the mannequins can simulate bodily responses, students don’t have to wait for an instructor to prompt them, he explained.

As Wentworth answered questions, CSI Executive Director Sarah Massena, MBA, looked on as visitors used joysticks and screens to simulate what surgeons see and do when they cut and sew tissue laparoscopically. At CSI, Massena said, students, techs, and surgeons from around the world train on the latest surgical techniques. The only program of its kind between Chicago and Los Angeles, Massena said, CSI has trained some 8,000 surgeons since 2008.

After trying her hand at surgical sewing, Mary Jo Waits of the NGA’s Economic, Human Services and Workforce Division, said she was “intrigued by the hands-on training” she’d seen during the tour.

“It’s what the workforce needs in health care,” she said. “I’m also impressed by the multidisciplinary approach. We’re learning more and more that solving medical problems with a team is key.”

George Taratsas, resource administrator for the Virginia Community
College System, said the tour had given him an opportunity to see new ideas in workforce development.

“This is an incredible facility in terms of what it provides for training,” he said. “There is huge value in that.”

After the WELLS Center tour, the visitors headed to AIP 2, where they were greeted by UCH President and CEO John Harney. A panel discussion, “Partnering with the Community for Workforce Opportunities,” that followed featured participants from UCH, Children’s Hospital Colorado, the University of Colorado and Greater Metro Denver Healthcare Partnerships.