

On April 4th, Dr. Benninger, Professor of Medical Innovation, Technology & Research designed and delivered a Continuing Medical Education course titled '**Acquiring a Video Assisted Airway Integrating Emerging Technologies with Innovative Teaching Philosophies**'. He brought in the latest video-assisted laryngoscopes to be conducted on current interactive hi-fidelity simulation models including virtual reality, a specially prepared donor cadaver, ultrasound finger probe and hand-held systems while applying andragogical teaching methodologies. The CME course required teamwork of 3 different healthcare entities from the Mid-Willamette area.

1. COMP-Northwest - Medical Anatomy Center, Lebanon, Or
2. Linn Benton Community College Occupational Health Center, Lebanon. Or
3. Samaritan Health Services, Corvallis & Lebanon

The goal was to empower pre-and hospital healthcare providers training and practicing in Oregon to safely and competently operate the latest technology following innovative learning philosophies to acquire an airway operating a video-assisted laryngoscopy (VL). Several stations to teach and learn VL with different mediums were rotated through including a specially prepared cadaver donor, cutting edge hi-fidelity simulation models, interactive imaging anatomy, virtual reality and live ultrasound. VL is rapidly becoming the gold standard of treatment for hospital providers (physicians, PA's, Nurses) and pre-hospital providers (paramedics, EMT's). Unfortunately, too few have training on 1, let alone 2 or more VL systems and there are not training 'set ups' or very few for pre-and hospital healthcare providers to routinely maintain VL skill sets. Dr. Benninger designed an innovative multimodal educational experience which included several educational techniques integrating the latest technology to teach and learn an important life preserving skill of acquiring an airway, especially a difficult airway. He incorporated the world's top hi-fidelity simulation models from 7-Sigma and CAE. He also brought in 4 VL systems (Glidescope, King Vision, Eagle Vision and McGrath). He created stations integrating the VL systems with hi-fidelity simulation, VL systems with a specially prepared donor cadaver and stations teaching important clinical anatomy with Sectra & Tolltech technology, using virtual reality ultrasound (CAE) as well as live ultrasound with an innovative finger probe from Sonivate as well as handheld GE ultrasound systems to assess successful airway intubation.

This was the first type of CME course worldwide for hospital and pre-hospital providers with the technologies and techniques offered. Paramedics from Albany, Lebanon and Corvallis and Physicians and Nurses from Corvallis Samaritan Health Services attended the course. Physicians, Paramedics and Nurses were mixed in groups teaching and learning from each other. The peer to peer teaching and learning was a very successful method to learn techniques and professionalism.

Dr. Benninger wanted to provide a tremendous learning, teaching and professional experience with the latest technology and techniques to more efficiently acquire a skill set to improve patient outcomes. Dr. Benninger has a history of integrating hi-tech mixed simulation while applying his own andragogical educational philosophies when presenting at several prestigious institutions and hospitals in China last year and received the Innovation in Medical Education

Award in China. It pleases me that we are able to conduct edgy learning experiences with the latest technology to our health providers here in the Mid-Willamette valley. We aim to set the standard of a CME course to best teach, learn and maintain VL skillsets. He is also designing a minimalistic training and maintenance course of VL skills to underserved healthcare areas. Dr. Benninger would like to thank Jon Mang and senior Paramedic trainers from Albany Fire & Rescue, Albany Or, Marty Cahill, CEO and the CME office at Samaritan Health Services, Lebanon and Corvallis Or, and Sheryl Caddy, Head of Nursing, Linn Benton Community College Occupational Health Center for their partnerships to enable this important CME to come to fruition.



Family Practice residents and Paramedics discussing and practicing VL with hi-fidelity simulation models pictured in forefront. Ultrasound Sonivate finger probe and GE handheld systems in background assessing successful intubations at COMP-Northwest CME course designed by Dr. Benninger



Hi-fidelity 7-Sigma burn simulation model revealing realistic airway imaging and anatomical architecture internally challenging learners when using VL at COMP-Northwest CME course



Samaritan Healthcare residents and Albany Fire & Rescue Paramedics VL training on hi-fidelity trauma simulator by CAE at the COMP-Northwest CME course.



Albany Fire & Rescue Paramedics and Samaritan Healthcare residents discussing VL training on paediatric simulator with Virtual reality session using Vimedex simulation by CAE in the background at the COMP-Northwest CME course.