The need for trained health care professionals is great and the capacity to produce them is limited. Learning environments based on high performance networks will have a very important role in education and training of the physician, the nurse, the community worker, and other health care professionals. We will present four key learning technologies: digital repositories; collaboration tools; simulation and visualization; and 3D virtual spaces. In each of these, a continuum of technologies and accessibility determine the actual capabilities that are available. Even the simplest of these capabilities can provide opportunities for learning and work that are not in wide use yet, and that can transform the current learning environment. Multi-person, networked, virtual worlds can integrate many of these technologies to provide realistic spaces that mimic authentic work environments and promote learning through role playing and practice. Scenarios in emergency medicine will be presented to show learning and retention of common procedures as well as practice of rare but critical emergencies.

Parvati Dev completed her doctoral degree in Electrical Engineering on computer models of the brain at Stanford University, and is a graduate of the Indian Institute of Technology. She has worked as a member of both the research staff and teaching staff at M.I.T., Boston University, and Stanford. Dr. Dev also led product development for three-dimensional imaging at CEMAX, a medical imaging company. From 1990 to 2007, she directed the SUMMIT Research Laboratory for Learning Technologies at Stanford University, where her research included studies on simulation and game-based learning. She now leads a new company, Innovation in Learning Inc., to further develop new online learning environments. She believes that virtual hospitals and homes, with virtual patients and families, will become standard in medical education as well as in patient education and medical marketing. This, together with high-resolution video, for immersive face-to-face interaction, will create a future learning environment that will erase geographic barriers and bring local knowledge to serve global needs.