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author={B. Lok and J. H. Chuah and A. Robb and A. Cordar and S. Lampotang and A. Wendling and C. White},   
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abstract={Researchers have created mixed-reality humans (MRHs) and applied them to critical team training. MRHs are embodied conversational agents with virtual and physical components that inhabit the user's space. In this research, MRHs role-played members of an operating-room team. Studies examined how MRH components affected social presence (the user's sense of "being there" with an embodied conversational agent) and the training of communication skills for medical teams.},   
keywords={biomedical education;computer based training;medical computing;surgery;team working;virtual reality;MRH;communication skills training;critical team training;embodied conversational agents;medical teams;mixed-reality humans;operating-room team;physical components;social presence;virtual components;Animatronics;Avatars;Man machine systems;Safety;Teamwork;Training;Animatronics;Avatars;Man machine systems;Safety;Teamwork;Training;computer graphics;embodied conversational agents;graphics;healthcare;mixed reality;social presence;spatial interfaces;team training;virtual humans;virtual reality},   
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**Bibliography**

This is a paper on how a mixed reality Human can perform a team training operation. Team training is considered as a necessity for safe and effective healthcare. In the medical field we keep seeing that there will be some failures even though there're best doctors/staff available. This happens due to the lack of team training. This might be due to the communication failures, poor coordination, and fragmented care. These problems result in medication errors, death, and many other patient safety issues.

Now, some days we can see that Medical and health professions schools often use simulations. This would result in preparing students to work on interdisciplinary teams. We all know that, bringing team members together for training in busy healthcare systems is extremely difficult now.

As we can see, an example of how a team collaboration is required to perform a cardiac-arrest diagnosis is mentioned in this paper. Intraoperative-cardiac-arrest practice requires an anesthesiologist, a midlevel anesthesia provider (a nurse anesthesiologist, an anesthesia assistant, or an anesthesiology resident), a surgeon, a midlevel surgical provider (a surgical resident or physician assistant), two nurses, and a surgical technician. It's very hard to find all the people at the same time. They are rarely available for training at the same time at a suitable location. Without all the team members, things won't fall in place. The result of limited, inconsistent, and unreliable team training is that implementing best-practice protocols is much more difficult. This affects patient safety, despite knowledge of effective solutions. To address these issues, a proposal is made on mixed-reality humans (MRHs) — virtual humans that inhabit the users’ physical space. MRHs combine the dynamic visuals of virtual humans with the physicality of mannequin patient simulators. This would result in assuming the roles of unavailable human team members, essentially allowing on-demand team training.

**References:**

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* UML Library guides

"This is entirely my own work, except as disclosed in the documentation. I gave help to the following persons:   
None  
Signed Kiran C Shettar"