Stern (1998)

Stern, L. S. (1998). The future of medical education on the internet.*Drug Information Journal, 32*(4), 997. Retrieved from https://search-proquest-com.erl.lib.byu.edu/docview/275147518?accountid=4488

~~Stern (1998) stated that typically surgical learning has student watch professional multiple time before being given their own trail under supervision. With virtual reality, students can practice multiple time before getting familiar with different instruments and procedures. It will also help identify weak areas the potential surgeon can improve upon. A variety of circumstance and unexpected events can be programed into the system to help training surgeons become more prepared. Stern (1998) has researched many simulators that accomplish this task but are currently too expensive.~~

Carroll and Messenger (2008)

Carroll, J. D., & Messenger, J. C. (2008). MEDICAL SIMULATION: The new tool for training and skill assessment.*Perspectives in Biology and Medicine, 51*(1), 47-60. Retrieved from https://search-proquest-com.erl.lib.byu.edu/docview/233168169?accountid=4488

~~Carroll and Messenger (2008) stated that virtual reality can be used to train an assess medical personnel. It allows them to be tested and trained on such skill as pre-assessments, decision-making, hand skill, following procedure, and managing unexpected events.~~

~~Carroll and Messenger (2008) explained that they’ve found many company that make such simulators and most of these simulators are now FDA approved.~~

~~Carroll and Messenger (2008) observed that virtual reality simulations can allow surgeons to practice newly discovered treatments, so they are ready when they need to apply one to a patient.~~

~~Carroll and Messenger (2008) said that the main challenge preventing virtual simulation technology to be present in the medical field is the acceptance of the medical community. Hospital and medical school need to see the advantages of these simulations in order to invest their money into funding simulation programs.~~

Dyer et al. (2018)

Dyer, Elizabeth,M.L.I.S., A.H.I.P., Swartzlander, Barbara J,M.S.Ed, M.L.S., & Gugliucci, Marilyn R,M.A., PhD. (2018). Using virtual reality in medical education to teach empathy.*Journal of the Medical Library Association, 106*(4), 498-500. doi:http://dx.doi.org.erl.lib.byu.edu/10.5195/jmla.2018.518

~~Dyer et al. (2018) created a virtual reality simulation that gave the user the feeling of being a person with age related problems. They hoped this would help user develop empathy towards those with these disabilities. Participants experience conditions such as bad vision and hearing loss. Results showed that participants felt more empathy towards older people with these symptoms by the end of the experiment. They concluded that virtual reality can be used to increase patient care by help participants develop empathy for different disabilities.~~

Scerbo et al. (2006)

Scerbo, M. W., Bliss, J. P., Schmidt, E. A., & Thompson, S. N. (2006). The efficacy of a medical virtual reality simulator for training phlebotomy.*Human Factors, 48*(1), 72-84. Retrieved from https://search-proquest-com.erl.lib.byu.edu/docview/216444039?accountid=4488

~~Scerbo et al. (2006) agree with many of the researcher in this article that medical training is out of date and better training can be found through virtual reality.~~

~~Scerbo et al. (2006) found in their research that the first virtual reality medical simulator was completed in the 1990s. Soon after, virtual system were able to simulate specific operations such as knee, eye, and sinus surgery.~~

Scerbo et al. (2006) notice a big advancement in medical virtual reality was haptic interfaces. ~~Haptic interfaces provided the ability for users to feel objects in the virtual world because of force feedback devices. Haptic devices provide more realistic training for virtual reality.~~

~~Scerbo et al. (2006) test a virtual system for practicing drawing blood with a needle(phlebotomy) called CathSim. The CathSim system uses haptic sensors to produce the force feedback needed to simulate sticking a needle into an arm. The system also provides users with multiple circumstances as well as immediate feedback on their performance. There is no current standard of skill tested for phlebotomy which has led to many injuries. Test were performed between the traditional method of practicing on plastic simulated limbs and the virtual method. However, those that trained on the plastic limb had a higher skill rating than those that used the virtual model. However, this could be due to both groups being tested on simulated plastic limbs which would give the group that work with the plastic limbs and advantage. The research still believe virtual reality could bring great benefits as fidelity increases.~~

Choi et al. (2015)

Choi, K., He, X., Chiang, V. C., & Deng, Z. (2015). A virtual reality based simulator for learning nasogastric tube placement.*Computers in Biology and Medicine, 57*, 103-115. doi:http://dx.doi.org.erl.lib.byu.edu/10.1016/j.compbiomed.2014.12.006

Choi et al. (2015) explained Nasogastric tube placement or inserting a plastic tube into the body for feeding or drainage, is an important medical skill. So, they created a virtual training to help teach this skill. Professional nurses assessed the training and found it realistic.

Holland et al. (2004)

Holland, K. L., Williams,Robert L.,,II, Conatser,Robert R.,,Jr, Howell, J. N., & Cade, D. L. (2004). The implementation and evaluation of a virtual haptic back.*Virtual Reality, 7*(2), 94-94+. doi:http://dx.doi.org.erl.lib.byu.edu/10.1007/s10055-003-0118-5

Holland et al. (2004) explained haptic technology allows users to feel objects in the virtual world because of force feedback sensors. They used this to create an artificial back to see if they could have it produce the forces similar to a real back for diagnostic training purposes. Palpation is the process of diagnosing a patient through touch, this model would help teach students this skill.