

Simulation an effective way to train health-care professionals

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An analysis led by Mayo Clinic researchers found that simulation-based training is an effective way to teach physicians, nurses, dentists, emergency medical technicians and other health professionals. The team reviewed more than 600 studies evaluating the use of technologies such as virtual reality computers, mannequins and training models to teach skills and procedures including surgery, trauma management, obstetrics and team communication. Their conclusions were published Sept. 7 in the *Journal of the American Medical Association*.

Lead author David Cook, M.D., of Mayo Clinic's Department of General Internal Medicine, worked with researchers from Mayo, the University of Ottawa, the University of British Columbia and the University of Toronto (www.utoronto.ca/). They concluded that [training](#) with simulation is consistently better than no instruction, as measured in controlled settings and in practice with actual patients.

"We reviewed hundreds of articles, and, with extremely rare exceptions, we found improved outcomes for those who trained with simulation," Dr. Cook says. "This held true across a wide variety of learners, learning contexts and clinical topics."

However, "we need more effective, more efficient, and safer ways to learn," Dr. Cook says, citing the increasing volume of [medical knowledge](#), rapidly changing practice environments and evolving physician-patient relationships. "[Simulation-based instruction](#) has unique advantages, including the opportunity to practice without harming

patients, repeat training to become more proficient and structure training for more effective learning."

The study also found a lot of variation in the quality and results of the simulation activities. "Not all training was equally effective," Dr. Cook says. "Now that we know that [simulation](#) works, the next step is to understand how to use simulation-based instruction effectively and efficiently." He and the others on his team are currently researching how to use simulation-based teaching most cost-effectively.

More information: <http://jama.ama-assn.org/>

Provided by Mayo Clinic

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