Improving patient safety and efficiency of medication reconciliation through the development and adoption of a computer-assisted tool with automated electronic integration of population-based community drug data: the RightRx project

Tscholl DW, Handschin L, Neubauer P, Weiss M, Seifert B, Spahn DR, Noethiger CB

Using an animated patient avatar to improve perception of vital sign information by anaesthesia professionals

Br J Anaesth 2018 Sep;121(3):662-71

Situation awareness enables healthcare providers to correctly diagnose patient condition and make informed clinical decisions. This might help care providers avoid errors and improve patient safety. The authors developed a novel technology designed to improve perception of vital sign informa-
tion. To optimize the information gained from checking a monitor, they developed an animated patient avatar to create an interface that transmits the current status of vital signs to care providers as quickly as possible and with minimal cognitive effort, which has been described as the goal for successful situation awareness design.

The study completed a comprehensive iterative development process of the avatar and afterwards compared the final version with conventional monitoring. The study provides some first empirical evidence that when anesthesia providers scan patient monitors in real-life patient care, the avatar technology almost doubled the number of perceived vital signs, improved care provider confidence, and reduced perceived workload. Participants achieved these results after only watching an educational video explaining the avatar, which suggests quick learnability and potential for real-life usability.