



# ASPAN

American Society of PeriAnesthesia Nurses

## Message from the President

### Energizing Generations: The Race to Distinction! Emerging Technology and the Nurse of the Future

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I was recently asked by a member of the younger generation, “Where do you think technology will take nursing?” This is an interesting question. We know technology is all around us, and it is continually changing healthcare, particularly in how we practice nursing. I mentioned in my inaugural speech about technology moving faster than the speed of light.<sup>1</sup> Most of us are aware and amazed at how fast technology is advancing. However, when I meet the newer generations in my travels across the country, they are not surprised at all by these advances. I believe it is because the millennial generation has always been exposed to innovations that have impacted their lives. I think, what technological advances will impact the nurse of the future?

#### **Opportunities for Robotic Nursing**

I recently came across several articles on the use of robots in medicine and nursing. Robotics is a rapidly emerging field in healthcare, and, I believe, robotics will greatly impact how nursing care is delivered in the future. Growth in the industry of robotics is expected due to workforce shortages, a growing elder population and a call for higher quality of care not subject to human limitations.<sup>1</sup> Think about it: robotic nurses that will help administer care and support to people in hospitals, care facilities and homes. Robotics can play a role in assisting nurses to complete their daily tasks. Robots can do our heavy lifting, among many other tasks. But where do we draw the line?

#### **Other Healthcare Opportunities for Robotics**

Robotic surgery has been around for many years and has changed the way surgery is performed. I have to wonder, how did surgeons feel about this technology when it was first introduced? I have learned that actual robots have been in use to treat patients with mental illness and comfort the elderly since 2003.<sup>2</sup> Toyota has built a nursing aide named Robina—modeled after Rosie, the cartoon robot nanny and housekeeper in *The Jetsons*.<sup>3</sup> There is also new technology in the works, a kind of robot intelligence known as “kansei,” which literally means “emotion or feeling.” These robots monitor human expressions, gestures, and body language and also listen to people.<sup>4</sup>

#### **Robotics in Clinical Education**

As educators, we have seen the rapid advancement of robotic simulation. Simulation has gone very high-tech, making it an effective tool for training. Hi-fidelity simulation labs can be quite sophisticated. The newest simulation robots sweat, cry, turn cyanotic, give birth, have seizures, bleed and speak. By 2020, simulation will be so highly developed that most students’ clinical learning can, and will, be done in a simulation laboratory. Simulation is a wonderful learning tool, but I believe the simulation experience should be used to supplement actual clinical nursing experiences. And, I must tell you, I have been a preceptor to new graduate nurses who have had most of their clinical “hands on” experience at a simulation lab.

Robotic simulation is also mentioned specifically by the Institute of Medicine’s (IOM) *Future of Nursing* report as a strategy for preparing higher numbers of nurses.<sup>5</sup> We all know robotic simulation would certainly be safer for patients and could eliminate the scramble to find enough clinical facilities.<sup>1</sup> The question remains though, to what degree is real human interaction needed for students to develop the art of professional nursing?

## **Robots, Human Interaction and New Generations**

I am sure many of us would express our concern about the lack of emotion in robots. I trust many, if not most of us, may feel robots and artificial intelligence will never replace human caregivers. Science is trying very hard to do just that.

As I engage and energize the generations as an ASPAN leader, I am very aware that the younger generations have always been exposed to rapidly advancing technology and they have embraced it. We need to consider there has never been a day in millennials' lives where they have not been exposed to technology, including personal computers and phones, hybrid vehicles, Doppler radar, and Global Positioning Systems. They also have had the privilege of talking with a chatterbot (a computer program, which conducts a conversation via auditory or textual methods),<sup>6</sup> used virtual reality software, fitness trackers and Apple watches. They are ready, and they will be the determining factor on how far technology can take art of nursing.

## **The Role of Emerging Technology in Our Future**

As I travel around the country speaking on my theme "Energizing the Generations," I have come to realize there will always be controversy and discussion surrounding new advances in medicine. Is it right or wrong? Only the future will tell. The IOM report, *The Future of Nursing*, suggested that it is nurses who will be called up to fill expanding roles and to master technological tools and information systems while collaborating and coordinating care across teams of health professionals.<sup>5</sup> We must begin thinking now about how emerging technologies will change the practice of nursing. It will be the younger generations of nurses who will be at the forefront in planning for and preparing for these challenges.

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