Correspondence

Anaesthesia simulators (1)

To the Editor:

We read the editorial entitled "The Virtual Anesthesiology™ Training Simulation System" with interest.¹ We acquired such a device in January 1995 and would like to offer some additional observations.

The training device described in the editorial is one of two such devices commercially available in North America. Each has its own particular advantages and disadvantages. Those intending to purchase anaesthesia simulation systems would be advised to review carefully both products in order to determine which best suits individual educational requirements.

Among the various applications of simulator-based education in health care, the most developed educational role for anaesthesia simulators is the Anaesthesia Crises Resource Management (ACRM) Workshop.² ACRM is a concept derived from training cockpit crews and adapted to anaesthesia by Dr. Gaba and his group at the Veteran Administration Hospital in Palo Alto. Those concepts were incorporated into a one-day course for up to six clinicians at the Boston Simulation Centre at Harvard Medical School by Dr. Cooper and his group. The goals of the ACRM workshop are to develop decision-making, communication, leadership and stress management skills. Several hundred anaesthetists in North America have completed workshops offered at Stanford University, Harvard School of Medicine and Sunnybrook Health Science Centre, University of Toronto.

To achieve the realism demanded by these courses a simulation device is only the beginning of what is needed. Other items required include an "operating room," anaesthetic machine, patient monitors, drug cart, operating room table, intravenous stand, extensive audiovisual equipment and personnel for role playing. In our experience the capital costs are just the beginning. Maintenance, operating and upgrade costs as well as stipends for instructors requires ongoing funding. These additional costs will likely exceed the initial capital outlay.

Having had the experience of setting up a medical simulation facility we are willing to offer our knowledge and experience to other centers wishing to acquire such a device or train instructors in ACRM.

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REFERENCES

- 1 Doyle DJ, Arellano R. The Virtual Anesthesiology™ Training Simulation System (Editorial). *Can J Anaesth* 1995; 42: 267-73.
- 2 Howard SK, Gaba DM, Fish KJ, Yang G, Sarnquist FH. Anesthesia crisis resource management training: teaching anesthesiologists to handle critical incidents. *Aviat Space Environ Med* 1992; 63: 763-70.

REPLY (1)

Dr. Devitt is to be commended for his department's efforts in setting up a Canadian Anaesthesia Simulator Program at the Sunnybrook Health Science Centre. I have no doubt that his efforts and those of his colleagues will ultimately improve the quality of anaesthesia services in Canada, as well as provide new research results in the area of crisis management in the operating room.

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Anaesthesia simulators (2)

To the Editor:

I wish to clarify certain issues discussed in the editorial by Doyle and Arellano (Doyle DJ, Arellano R. The Virtual Anesthesiology™ Training Simulation System. *Can J Anaesth* 1995, 42: 267-73). In this editorial the authors state: "We acquired a prototype form of simulation technology from Dr. Gaba and Dr. Williams of Stanford University, with contributions (mostly pharmacokinetic and pharmacodynamic models) from Dr. Schwid of the University of Washington." To the best of my knowledge we have never sent the authors any prototype simulator technology. As they state, however, they were able to evaluate the CAE-Link simulator device at the factory in Binghamton, New York. This system is based in part on technologies licensed to CAE-Link by the aforementioned Drs. Gaba, Williams, and Schwid, as well as CAE-Link proprietary technologies. I am honoured