

## Use computerized systems to cut adverse drug events: report

Computerized monitoring systems can reduce the number of medication errors and prevent many adverse drug events (ADEs), a new report indicates. In addition, the systems can save hospitals as much as US\$500 000 annually in direct costs, not including liability costs or the cost of injuries to patients.

*Reducing and Preventing Adverse Drug Events to Decrease Hospital Costs*, from the Agency for Healthcare Research and Quality, “pulls together in one place a very, very strong body of evidence that these computer systems can mitigate ADEs and medical errors,” says Dr. Gregg Meyer, director of the department’s Center for Quality Improvement and Patient Safety.



Art explosion

Each year, more than 770 000 Americans are injured or die because of ADEs in hospitals.

## Brain drain? Maybe not

The same number of physicians moved to Canada as moved from it in 1999, the Canadian Institute for Health Information (CIHI) reports. That year 585 physicians, mostly male specialists, left the country — 3% more than in 1998. However, another 586 physicians entered the country: 343 returned after living abroad (up 7% from the previous year) and another 243 became landed immigrants.

Jennifer Zelmer, coauthor of *Health Care in Canada 2001*, says the totals aren’t as black and white as they appear. For instance, foreign-trained physicians enter the country using several methods, including temporary work visas and landed immigration, but the number who are eventually licensed to practise isn’t known. “I wish we could simply stand at the border with a counter, but it’s not that simple,” Zelmer said. Physician migration occurs in cycles: there was a peak in the mid-to-late 1970s, followed by a smaller peak in the mid-1990s.

CIHI data also show that more physicians are moving within Canada. Slightly more than 800 doctors (excluding residents) moved from one province to another during 1999. Quebec had the highest net loss of physicians (78) while Ontario had the largest gain (119).

The data indicate that physicians are the third largest group of regulated health professionals after registered nurses and licensed practical nurses. In 1999, 56 900 nonmilitary physicians were in clinical and nonclinical practice in Canada. — *Barbara Sibbald, CMAJ*

Patients who experience an ADE are hospitalized, on average, 8 to 12 additional days at an extra per-patient cost of US\$16 000 to US\$24 000. The total cost of ADEs is as high as US\$5.6 million annually per hospital.

“I’ve been using this [computerized system] for 8 years now and it has prevented me from making mistakes,” says Meyer, a physician at the Walter Reed Army Medical Center in Washington. “It has added value to my ability to practise.”

All US military and veterans’ hospitals and 5% of civilian hospitals now use computerized monitoring systems. The challenge “is to get the other 95% on board,” says Meyer, but cost is a major deterrent: a 200-bed hospital could spend up to US\$2-million on a start-up system. Their scope varies from systems that allow direct entry of prescriptions into a computer to an all-encompassing system that uses bar codes on patient wrist bands and warns of drug interactions and other potential problems.

ADE incidence ranges from 2% to 7% of admissions, and 1 study estimated that 9.7% of ADEs cause permanent disability (*Medical Care* 2000;38:261-71). The most commonly documented errors that cause ADEs involve dosage problems (58%), failure to recognize known

allergies (13%) and giving the wrong drug or treating the wrong patient (5%).

The report says that entering prescriptions into a computer instead of writing them out can prevent up to 84% of dosage errors. Dr. Patrick Croskerry, Halifax’s regional head of emergency medicine, is unaware of any computerized monitoring systems in use in Canada, but agrees that “There’s no question that these systems would reduce error.” He is organizing an international symposium on recent developments in correcting medical error, to be held at Dalhousie University Aug. 11–12 ([xcerry@access.cable.net](mailto:xcerry@access.cable.net)). — *Barbara Sibbald, CMAJ*

## Nurse practitioners may reduce FP burden in Nova Scotia

Nova Scotia has opened the door for nurse practitioners to assume wider responsibilities: its Registered Nurses Act now allows certified nurse practitioners to see patients, make diagnoses and write some prescriptions. Health Minister Jamie Muir says the result will be improved health care and greater efficiency. “Nurse practitioners can help tremendously in rural areas by working with family physicians to address a range of health concerns of patients, providing continuing care and sharing the patient load,” he said. “This will leave doctors free to use their special skills where they are most needed.”

The Medical Society of Nova Scotia has given qualified support to the legislation. In theory, the use of nurse practitioners will benefit physicians and patients. But the details — including funding — have yet to be fleshed out, said society President Louise Cloutier. She stressed that the nurse-practitioner concept framed in the legislation is team based. “This is not nurses going into stand-alone practice. We all agree we can’t replace doctors with nurses — our roles are complementary.”

At present, 19 specialty nurse practitioners are working in 2 Halifax hospitals and 4 primary health care nurse practitioners are involved in pilot projects around the province. — *Donalee Moulton, Halifax*