

## Lack of pharmacological training causes overuse and misuse of drugs

Keeping up with the latest drugs on the market is no small feat for any doctor at the best of times.

With more than 20 000 drug products on the market in Canada, it can be overwhelming, even for physicians who are determined to remain current with the medical literature on prescription drugs.

And with more than 400 million prescriptions written every year in Canada (at a cost of \$24 billion), there is ample room for error. According to Dr. Jean Gray, professor emeritus of medical education, medicine and pharmacology at Dalhousie University, problems occur “across the board” in part because physicians aren’t getting adequate pharmacological training.

Family physicians and specialists alike get “into trouble” when prescribing drugs, Gray says.

The extent of overuse, underuse or misuse of prescription drugs is, however, difficult to assess. “It exists. But whether it’s getting worse or better is difficult to say,” she adds. “There’s no mechanism to collect that information in Canada.”

Equally problematic, Gray says, is the fact that clinical pharmacology, a discipline that promotes safe and effective use of medicines, is not getting the attention it deserves in medical schools. It’s a concern often-expressed, most recently in a highly-touted November report, *Safe and Sound: Optimizing Prescribing Behaviour*, in which the Health Council of Canada raised flags about prescribing practices in Canada. The report questioned whether doctors had the required training and sufficient exposure to clinical pharmacology to safely prescribe drugs.

“The concern is that people are going out in practice without a comprehensive understanding either of how drugs work or how to use them more rationally in a therapeutic situation,” says Gray.

The result can be dangerous or even deadly.

As a bare minimum, trainees should understand how drugs work,



Just 4 of Canada’s 17 medical schools have a required course in clinical pharmacology.

how to prescribe them, and how to monitor patients and adjust medication when “patients don’t fit the mould,” Gray says.

According to the Royal College of Physicians and Surgeons of Canada, clinical pharmacology is a required course in only 4 of Canada’s 17 medical schools.

However, all students and residents do receive some pharmacology training, says Dr. Deborah Danoff, the director of the college’s Office of Education.

“In residency training, all trainees receive education about therapeutics, including prescription medication,” she says. “Residents are trained in reading the literature so when they go into practice, they can read about new drugs and understand the benefits and disadvantages of new drugs. ... It’s a required component.”

Once in practice, doctors also have to keep up to date to maintain their certification, Danoff adds.

Still, there is room for improvement. The college is in the midst of changing the rules so that residents in 5 primary disciplines — internal medicine, emergency medicine, anesthesiology, pediatrics and psychiatry — will have to take the 2-year clinical pharmacology program as a prerequisite for certification.

They’ll also have to write an exam. Presently, students merely receive an attestation stating they’ve completed the program.

The exam will be gradually phased-

in. In the fall of 2008, residents will have the choice of taking the written exam, or receiving an attestation stating they’ve completed the program.

But this program doesn’t address concerns about physicians already in practice.

There’s no way of knowing if a doctor has kept up with the literature on new drugs once he or she has been in practice for say, a decade, says Dr. Ed Schollenberg, Registrar of the College of Physicians and Surgeons of New Brunswick. Newly trained doctors “rarely come to our attention,” he says. “At our office, experience has shown there is no problem in the first 5 years.”

Problems only surface if there is a patient complaint or a random review at a doctor’s office by the college. “It’s passive. We wait for the phone to ring.”

The Health Council argued that academic detailing programs (*CMAJ* 2007; 176[4]: 429-431) are an excellent means of enhancing a physicians training. Under such programs, physicians get balanced information from an independent source during a one-on-one encounter at the doctor’s office, says Dr. Michael Allen, director of the Dalhousie Academic Detailing Service. “From educational research, the indications are there is an immediate effect of 6% improvement in prescribing behavior or patient outcomes per topic.” — Huguette Young, Ottawa, Ont.

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