

Patients fail to fill prescriptions finds study

More than 30% of prescriptions given to primary care patients in Quebec were not filled, according to a large study published in the *Annals of Internal Medicine*, with serious consequences for the patients' health. Rates of nonadherence were even higher for prescribed drugs for thyroid, heart disease, hypertension and high cholesterol.

"I really was surprised" by the high rate of nonadherence, says principal investigator Dr. Robyn Tamblyn, a medical scientist at the McGill University Health Centre Research Institute in Montréal. The study (*Ann Intern Med* 2014;160:441–50) followed more than 37 000 prescriptions for almost 16 000 patients between 2006 and 2009, and found the low rates nine months after the prescriptions were written, meaning the scripts were unlikely ever to be filled.

"The public health implications are substantial," says Tamblyn. "For conditions for which there is effective treatment, the complications [of nonadherence] are disabling and costly, in terms of productivity, quality of life and cost to the system."

"This is a major quality problem in our health care system today, particularly with chronic diseases being more important than they were many years ago," agrees Dr. Irfan Dhalla, interim vice-president, health system performance at Health Quality Ontario in Toronto. He points out that outcomes in conditions such as hypertension and asthma depend on adherence.

Dhalla coauthored another study, published in *CMAJ*, that found almost 1 in 10 respondents to the Canada Community Health Survey in 2007 had not filled prescriptions for cost reasons (*CMAJ* 2012;184:297–302).

Drug costs are a factor that Tamblyn says are "significant but not huge." The study found the odds a prescription would not be filled rose with the cost of the prescription (compared with the bottom quartile of drug cost, odds of non-adherence increased by 4% in the second quartile, 6% in the third quartile and 11% in the upper quartile).

Insurance coverage also affected adherence. Quebec has universal drug coverage (combination of private and

A solution tried in other countries is a "value-added formulary" in which critical drugs are covered for everyone, Tamblyn says.

Tamblyn's study also found that patients who tended to see the same doctor (proportion of visits to the prescribing physician) were more likely to fill their prescriptions. "You're better off if you have a continuous provider who gets to know you. Our thinking about that is supported by what we're seeing in the study."

Dhalla agrees. "The bottom line is that if you are seeing the same physician you are more likely to take the medications that the physician has prescribed. Patients trust their primary care physician."

He believes that continuity of care is also key to determining why patients do not take their drugs, as a proportion of the nonadherence found in this study could not be pegged to a characteristic of the drug, patient or physician. Dhalla thinks there is a plethora of reasons, and he mentions potential side effects, frequency of dosing, pill size and taste, even impressions from family, friends and the

media. "What this tells us as prescribers is that we need to ask our patients, in a welcoming and nonjudgemental manner, if they are taking their medications and ask them why."

"Patient beliefs clearly are a factor," says Tamblyn, although that aspect could not be explored in this study. "That's really what may be driving part of this. How effective is the discussion with individuals about starting treatment? What could be done to provide a better experience?" — Carolyn Brown, Ottawa



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Nonadherence is a major problem in Canada's health care system.

public), including free prescriptions for social assistance recipients and other low-income residents. These patients were more likely to fill their prescriptions, the study found (63% reduction in nonadherence compared with those with maximum copayments).

"Quebec said, 'We will make all medications free for the very poor.' That's the group who are vulnerable, more likely to have conditions and complications, and cannot afford treatment. It did actually produce the desired effect of that these people are more likely to fill prescriptions," says Tamblyn.

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