Would a national pharmaceuticals strategy be bad for the cardiovascular health of Canadians?

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Pharmaceutical medicines play a very important role in the management of patients with cardiovascular disease. Common cardiovascular conditions, such as coronary artery disease, heart failure and hypertension, often require treatment with medications in addition to lifestyle changes. The types of drugs that have been developed vary from older and less expensive medications such as acetylsalicylic acid and beta-blockers, to newer and more expensive medications such as clopidogrel and angiotensin II receptor blockers. Large, randomized clinical trials involving thousands of patients have demonstrated that many of these medications save lives and prevent morbidity associated with cardiovascular disease. The impressive decline in cardiovascular mortality rates in Canada over the past 50 years is undoubtedly due, in part, to advances in the medical treatment of patients with cardiac risk factors and overt cardiac disease (1). Given their demonstrated value in helping to extend the lives of millions of patients around the world, why is there such concern about increasing the use of these medications, and why is there increasing discussion about the need for a 'national pharmaceuticals strategy' in Canada (2)?

Several factors contribute to this phenomenon, but it is the rapidly increasing cost of drug therapy that has policy makers across Canada most concerned. Drug expenditures are the fastest rising aspect of spending in the health care system in Canada, with large annual increases over the past two decades (3). In Canada, the total amount spent on cardiovascular drugs is estimated to have doubled in only six years – from approximately \$1.7 billion in 1996 to \$3.3 billion in 2001 (4). While there have undoubtedly been clinical benefits from this massive increase in expenditures, it is also clear that a doubling of per-capita pharmaceutical expenditures every few years is not sustainable indefinitely. Policy makers are anxiously searching for solutions to the dilemma of how to control drug costs and simultaneously optimize the health status and outcomes of their citizens.

Total drug spending by provincial governments is a reflection of prescription costs multiplied by prescribing volume. Experience has shown that it is very difficult for governments to control prescribing volumes and, thus, most policy approaches have focused on attempts to control prescription costs and drug availability. In Canada, there are significant differences in drug-funding policies across various provincial drug formularies (3). British Columbia has among the most restrictive policies and is well known for its reference-based pricing scheme, whereby coverage is based on the cost of the reference drug(s) in a therapeutic category. This is the drug

considered to be the most cost-effective in its category. Despite early warnings that this system would compromise the health of British Columbians, there has been no compelling evidence published yet that the citizens of this province have suffered because of it (5,6). Studies (4,7,8) have shown that British Columbians actually have the longest life expectancy in Canada, despite spending less on drugs, and this is likely a reflection of their healthier lifestyles.

In this issue of *The Canadian Journal of Cardiology* (pages 711-718), Drs LeLorier and Rawson report an interesting study that explored temporal trends in drug spending and cardiovascular patient outcomes in three countries (Australia, Canada and New Zealand) that have adopted differing policies regarding the availability of cardiovascular drugs. New Zealand has among the most restrictive drug policies of any country in the Organisation for Economic Co-operation and Development (OECD), with a fixed global budget for drugs and a reference-based substitution pricing system, whereby only one or two drugs within each therapeutic class are available for physicians to prescribe from the national formulary. Using the OECD health data, LeLorier and Rawson showed that drug spending on cardiovascular drugs dropped in New Zealand between 1994 and 2004, and simultaneously, some cardiovascular outcomes actually worsened compared with Australia or Canada. Although this is a cross-sectional study and among the weakest from an epidemiological perspective, a causal relationship is conceivable.

However, before reaching this conclusion, more data are needed to make a truly compelling case. Did patients who suffered a heart attack in New Zealand have lower rates of use of thrombolytics, acetylsalicylic acid, beta-blockers, angiotensin-converting enzyme inhibitors and statins because of its national drug policy? Did hypertensive patients have uncontrolled hypertension because of a lack of drug access compared with similar patients in the other countries? Available data suggest that most cardiovascular drugs within a given therapeutic class have similar effects on patient outcomes, given equivalent dosing, and thus it seems unlikely that reference-based prescribing alone was responsible for the major outcome differences (9-11). New Zealand also has greater restrictions on the availability of invasive cardiac procedures and cardiology specialists, and has a larger Aboriginal population compared with Canada; these other factors also might have contributed to the findings observed (12,13). Nevertheless, the idea that an overly restrictive drug policy in New Zealand can harm patient outcomes is plausible. Other studies (14,15) have

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shown that certain drug cost-containment policies save on drug costs, but at the expense of worsening patient outcomes.

Despite the findings from this study, I believe that concluding that a national pharmaceuticals strategy would be bad for the health of Canadians is an overinterpretation of the data. Many OECD countries have some form of national pharmaceuticals strategy that parallels their national health care systems. Canada is relatively unique in having a very decentralized health system, in which most health policies are determined at a provincial level as opposed to a national level. A national drug strategy may offer many potential benefits, including greater bargaining power on the part of the government with drug companies over drug prices, development of a national drug formulary to replace duplicate provincial formularies and promotion of greater equity in access to cardiovascular drugs for all Canadians (12). It is important to remember that the population of Ontario (approximately 11 million) and Quebec (approximately seven million) are both greater than the whole country of New Zealand (approximately four million); however, there are few who would argue for the abolishment of the provincial drug formularies in these provinces, which have allowed senior citizens and poor citizens the opportunity to have fairly good access to most needed medications without undue financial hardship or ruin. It is unlikely that the adoption of a national pharmaceuticals strategy in Canada would ever lead to the levels of drug restrictiveness seen in New Zealand, but it may promote some much-needed

interprovincial collaboration that can lead to better use of public tax dollars and health benefits for all Canadians.

The recently announced plan to develop the Canadian Heart Health Strategy represents a unique opportunity for the Canadian cardiovascular community to come together to improve the cardiovascular health of Canadians (16). Although access to cardiac drugs is not a specific focus of the strategy, a discussion of a national approach to improving cardiovascular health will undoubtedly need to address the importance of all Canadians having access to beneficial cardiovascular drugs at an affordable cost. Exactly how this can best be achieved may be contentious, but it is hard to see how greater interprovincial collaboration on drug policies, data sharing and drug surveillance could result in net harm to the cardiovascular health of Canadians. There is a need to promote more interprovincial and international comparative studies of alternative drug policies, costs and resulting patient outcomes, so that we can learn which policy approaches are the best and which may be potentially harmful to the cardiovascular health of Canadians. Policy experiments should be rigorously studied by independent academic investigators who are free of government or industry influence. The idea of a national approach to pharmaceutical policy is, in theory, a good one, but it is important that any such policy be constructed using the best available scientific evidence and that it take into account the lessons learned from other jurisdictions in terms of what works well in drug policy and what does not.

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