Canada needs a national immunization program: an open letter to the Honourable Anne McLellan, federal minister of health

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Vaccines have proven to be our most cost-effective health care intervention, preventing millions of children and adults from contracting debilitating, disabling and sometimes fatal infectious diseases. Most children in Canada are routinely immunized against 9 of these diseases under programs offered and paid for by provincial governments. However, for 4 additional vaccines — those against meningococcal infection, pneumococcal infection, varicella and adolescent/adult pertussis — there is no uniform approach: these vaccines are offered in some provinces but not others (see News, page 598[1]), despite their potential to prevent diseases and their sometimes permanent complications, to avert hospital admissions and to save lives.[2]

To those of us working in health care professions geared to optimize the well-being of children, the strides made in the last several decades in providing access to vaccines seem to have been replaced by paralysis. In most provinces and territories today, parents of newborn children must decide whether to pay from their own pockets for the newer vaccines, or to let their children run the risk of contracting preventable diseases. In some provinces this can amount to $600 per child, an amount that many families would find prohibitive.

Canada stands apart from the United States, the United Kingdom and Australia in having a fractured immunization program by which each province and territory defines the list of publicly funded vaccines and immunization schedules. Even the much-maligned US health care system provides varicella and conjugate pneumococcal vaccines to the majority of children through the federally funded Vaccines for Children Program or private health insurance schemes. At the 5th Canadian National Immunization Conference, in December 2002, experts and policy-makers from across the country recommended that immunization be a national priority, anchored in a workable federal/provincial/territorial collaboration with strong federal leadership.[2] There are several obvious reasons for this, the most important of which is that infectious diseases do not respect provincial or national boundaries. Only by immunizing a very large proportion of people — a feat that cannot be accomplished in a parent-funded immunization program — will we reap the full benefits of vaccination. Second, although new vaccines are not cheap, a national program of vaccine procurement and distribution would dramatically reduce per-unit costs and the security of supply. Vaccines are cost-effective compared with other health care interventions, but their economics are most favourable when they are delivered through organized, large-scale programs.

We recognize that, in Canada, health care is primarily a provincial or territorial responsibility and that some provinces have resisted federal involvement in health-related areas. In addition, until December 1998, when varicella vaccine was licensed for use in Canada, the provinces and territories were doing a good job of introducing newly licensed vaccines to prevent childhood morbidity and mortality, and of making sure their populations were immunized. Federal support has been limited to regulating vaccine licensure and lot-by-lot release, supporting the National Advisory Committee on Immunization and maintaining a small staff and budget to assist provinces and territories in coordinating limited activities.

But, during the 1990s — a time of cutbacks in health care budgets and a gradual weakening of public health in Canada[3,4] — provinces and territories began to delay adopting new programs such as vaccination against *Haemophilus influenzae* type b disease and hepatitis B, which eventually were implemented in all provinces and territories. But provincial and territorial disparities have grown since the licensure of vaccines to prevent varicella, meningococcal group C infection, pneumococcal disease, and pertussis in adolescents: in most provinces and territories, none or few of these vaccines are publicly funded. These disparities are likely to widen as even more new vaccines reach the Canadian market. The not-too-distant future holds the promise of a variety of new vaccines against influenza, human papillomavirus, herpes simplex, HIV, chlamydia, gonorrhea, group A and B streptococci, rotavirus, herpes zoster, respiratory syncytial virus, parainfluenza, hepatitis C and a variety of other infectious and noninfectious diseases. We need a national strategy, national leadership and national funding.

Canadians have long cherished our universal health care program. We strive to make sure that all adults get treatment for diseases such as hypertension and even for risk factors such as hypercholesterolemia. But when it comes to

protecting children and susceptible adults against much clearer threats to health, we as a nation have faltered. At present, only the rich can afford these effective vaccines. Underprivileged children, who are most at risk of a severe complication of infection and would benefit most from new vaccines, are least likely to receive them.[5]

The National Immunization Strategy[2] is a masterpiece of collaborative planning and a model for federal/provincial /territorial cooperation toward improved health. As an early step in current health care reforms, it offers an opportunity for the federal government to demonstrate its leadership in a role that will be deemed by most Canadians to be appropriate. Decision-makers might fear that it would result in a never-ending demand for funding of new and increasingly expensive vaccines. But this can be dealt with by agreeing on criteria — including economic considerations — for the assessment of new technology.

We must end the current provincial vaccination hodgepodge that results in treating some children (and adolescents and adults) as more precious than others. We urge you to act quickly to put into place a national coordinated system of planning, procurement, implementation, monitoring and evaluation. The status quo is a sure recipe for chaos.

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References

1. Sibbald B. One country, 13 immunization programs. *CMAJ* 2003;168(5):598.
2. Canada's national immunization strategy: from vision to action. *Proceedings of the fifth Canadian National Immunization Conference*; 2002 Dec 1–3; Victoria, BC.
3. Schabas R. Public health: What is to be done? [editorial]. *CMAJ* 2002;166 (10):1282-3.
4. A patchwork policy: vaccination in Canada [editorial]. *CMAJ* 2003;168(5):533.
5. Pastor P, Medley F, Murphy TV. Invasive pneumococcal disease in Dallas County, Texas: results from population-based surveillance in 1995. *Clin Infect Dis* 1998;26:590-5.

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Ramipril use in Canada: HOPE or HYPE?

Louise Pilote

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Angiotensin-converting-enzyme (ACE) inhibitors were developed for the treatment of hypertension. Subsequently they became indicated for several cardiovascular and renal conditions. ACE inhibitors play several roles: they alter the balance between the vasoconstrictive, salt-retentive and hypertrophic properties of angiotensin II, and they interfere with the vasodilatory and natriuretic effects of bradykinin and with the metabolism of other vasoactive substances.

ACE inhibitors have different chemical structures. As a result, they differ in potency, bioavailability, plasma half-life, route of elimination, distribution and affinity for tissue-bound ACE. Thus, their structural heterogeneity may reflect their functional heterogeneity.

In this issue (page 553), Tu and colleagues[1] report that after release of the results of the Heart Outcomes Prevention Evaluation (HOPE)[2] the monthly rate of new prescriptions for the ACE inhibitor ramipril filled by elderly (aged 65 and over) residents of Ontario rose more than 400%. Similar patterns were seen in most Canadian provinces (Cynthia Jackevicius, Institute for Clinical Evaluative Sciences, Toronto, Ont.): personal communication, 2002). The monthly number of new prescriptions for all ACE inhibitors rose from 382/100 000 before the first formal release of the HOPE findings to 551/100 000 9 months later. The technique of time-series analysis took into account baseline temporal changes.

These striking results raise two important issues. First, is the extensive use of ramipril over other ACE inhibitors appropriate? Second, what factors led to the increase in ramipril prescription?

ACE inhibitors have been shown to be effective in treating essential hypertension,[3] renal disease[4] and congestive heart failure,[5] as well as in improving survival after acute myocardial infarction.[6] Although beneficial effects may occur with all drugs in this class, the extent to which they occur may vary.

In most trials of ACE inhibitor therapy for patients with congestive heart failure, acute myocardial infarction or diabetes mellitus, ramipril was not the main ACE inhibitor stud-