Français à la page suivante

A patchwork policy: vaccination in Canada

In 1796, when Edward Jenner induced immunity to smallpox in 8-year-old James Phipps, he recognized in his discovery "the hope of it becoming essentially beneficial to mankind."[1] Although his experiment would fail ethical scrutiny today, it was one of the most productive moments of the Enlightenment. Further enlightenment on this front has been both glorious and fitful. The second vaccine, for rabies, was not developed until 1885, followed by one for the plague in 1897 and then — all before World War II — vaccines against diphtheria, pertussis, tetanus and yellow fever. Recently, the pace of development has accelerated, adding vaccines against *Haemophilus influenzae* type b, hepatitis A and B, influenza, pneumococcal and meningococcal infection and varicella to well-established vaccines for polio, measles, mumps and rubella. (The pace of vaccine development and delivery in the developing world is, of course, another matter.)

With scientific gains come new complexities. Earlier vaccines combated common diseases that often had severe consequences. More recent vaccines prevent less common infections, such as pneumococcus and meningococcus, that nonetheless can be fatal or severe, or common ones, such as chickenpox, that only rarely have grave effects.[2]

A further complexity is that the near-complete immunization of whole populations in childhood has led, decades later, to whole populations of adults with waning immunity to some childhood diseases.[3,4] Pertussis, for example, is now as common among adults as among children, creating important questions about the need to revaccinate adolescents and adults.

Although expert groups such as the National Advisory Committee on Immunization make national recommendations, implementation is up to the provinces. Faced with the variable cost-effectiveness of a growing number of new vaccines, the provinces have hesitated to expand immunization programs. The result is a patchwork of policies (see News, page 598). In Newfoundland and Labrador, for example, children do not routinely receive pneumococcal vaccination; in Alberta, they do. In Quebec, all children are vaccinated against meningococcus; in Ontario, they are not.

A young girl in Ottawa died recently from meningococcal meningitis; it is sad to consider how things might have been had she lived a mile away, in Gatineau, where meningococcal vaccination is routine. Those of us who live near the US border might also ponder why 75% of American children are now vaccinated against chickenpox, while few Canadian children are. Even more alarmingly, there is such a lack of national leadership that Canada does not even track varicella vaccine use or rates of varicella disease. Regional deficiencies will only become more complex as new vaccines come on the market. When a vaccine for human papillomavirus becomes available,[5] will girls in Newfoundland and Ontario be denied this protection?

As memory fades of the scourges of the past, and as more vaccines are recommended, the anti-immunization lobby will become more worrisome.[6,7] Unless a large proportion (usually over 95%) of the population is vaccinated, herd immunity will not result and outbreaks will recur. A rational policy can only be comprehensive and consistent. Even setting aside the advantages of herd immunity, Canada's current policy of recommending vaccines but not supporting their delivery in national programs makes little sense. The costs of purchasing and administering a single dose of vaccine can be prohibitive for an individual. For example, pneumococcus vaccine for a child in Ontario costs $370. If this vaccine were made a staple of childhood immunization, its cost would plummet and the cost–benefit ratio would become more favourable.

Roy Romanow has recommended a national vaccination strategy in Canada.[8] This must be more than an advisory committee. Although such an expert group is indispensible, we also need national leadership, national promotion, and national funding. We support Monika Naus and David Scheifele's open letter to Health Minister Anne McLellan in this issue (see page 567), and urge the creation of a National Office for Immunization. — *CMAJ*

References

1. Jenner E. *An inquiry into the causes and effects of the variolae vaccinae, or cowpox*. London: 1798.
2. Law BJ. Chickenpox vaccination, not chickenpox, should be routine for Canadian children [editorial]. *CMAJ* 2001;164(10):1454-5.
3. Hoey J. Varicella vaccine update: Need for a booster? *CMAJ* 2003;168(5): 589.
4. Shapiro H, Weir E. Measles in your office [published erratum appears in *CMAJ* 2002;166(8):1015]. *CMAJ* 2001;164(11):1614.
5. Koutsky LA, Ault KA, Wheeler CM, Brown DR, Barr E, Alvarez FB, et al. A controlled trial of a human papillomavirus type 16 vaccine. *N Engl J Med* 2002;347(21):1645-51.
6. Pless R, Hibbs B. Chiropractic students' attitudes about vaccination: A cause for concern? [editorial]. *CMAJ* 2002;166(12):1544-5.
7. Vaccination: refuting the refusals [editorial]. *CMAJ* 2000;163(7):801.
8. Romanow RJ. *Building on values: the future of health care in Canada*. Saskatoon: Commission on the Future of Health Care in Canada; 2002. p. 134.