Adult immunization

Last on the list

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In January 2006, *Canadian Family Physician* published a guide for family doctors that detailed male and female preventive health care checklists.[1] These recently updated checklists[2] are comprehensive and include notations to help busy practitioners remember to ask about various issues, ranging from flossing to noise control programs and from seat-belt use to nonflammable sleepwear. All well and good.

However, given the vast number of issues, maneuvers, and demands on the list, it is possible (and perhaps even likely) that the issues at the bottom of the list might not get much attention. After discussing smoking and drinking and diet and gum disease, as well as doing a full physical assessment and deciding on laboratory tests, bone density testing, sigmoidoscopy, and so on, what is the very last thing on the list? Immunizations. While we can appreciate the importance of the many health care maneuvers in family practice, in the past 100 years (with the exception of clean, safe drinking water) no treatment has rivaled immunization in reducing morbidity and mortality rates worldwide.

Yet immunization comes last. And that is just how Canadians are being treated—or in this case, undertreated. For whatever the immunization—whether given by public health staff or family physicians, whether a simple tetanus shot or a more complex varicella zoster or human papillomavirus vaccine—Canadian adults are underimmunized. The data on immunization are sobering: the Canadian Adult National Immunization Coverage Survey in 2006[3] found that less than 47% of adults were properly immunized for tetanus, a vaccine covered in every province and territory. Worse still is the track record for pneumococcal vaccine, recommended for those older than 65 years of age and those with chronic underlying conditions. Physician use of this vaccine has an abysmal record, with fewer than 39% of those older than 65 and about 17% of those with chronic diseases other than asthma receiving it.

What can we conclude from this? Adult Canadians are not being immunized routinely for vaccine-preventable diseases. In a recent Canadian publication by Parkins et al, we are reminded that despite providing excellent vaccination for the pediatric population, we neglect adult immunization—and as a result a high burden of vaccine-preventable disease and death is now seen within the adult population.[4] In some ways, we are victims of our previous successes. As noted in a white paper spearheaded by BIOTECanada, which provides a composite overview of the Canadian vaccine landscape, vaccines continue to be (mistakenly) undervalued and underused throughout the world.[5] In industrialized countries, the underuse of vaccines is caused in part by underestimating the seriousness of vaccine-preventable diseases, underestimating the benefits of vaccination, and concerns about the side effects of vaccines. Those who witnessed the dreadful disabilities and deaths caused by smallpox and polio often viewed vaccines against these diseases as nothing short of miracles. However, much of today's population has never experienced the devastation caused by these and other vaccine-preventable diseases—thanks to immunization programs. In addition, when there is no longer an imminent fear of contracting a disease, the public tends to forget about the limitations of cures and can become apathetic toward available prevention strategies, including vaccination.[5]

Paying the price

In 2008, we witnessed an outbreak of mumps, which started in the eastern provinces but quickly spread across the country as students returned home after the college semester ended.[6] There have been several deaths from tetanus in western Canada, as elderly, unimmunized people tended to their gardens; and although we now have the ability to make inroads in decreasing cervical cancer for our young women, again, the vaccine remains on the shelf for a large number of eligible women. On average each year in Canada, approximately 4000 and 3000 deaths have been reported from influenza and pneumococcal pneumonia, respectively—astounding numbers considering the availability, safety, and low cost of these vaccines.[7,8]

Furthermore, recent research has shown that those who have had pneumococcal immunization are at lower risk of acute myocardial infarction compared with those who have not been immunized—more potential gains lost.[9] For those skeptics among you who see vaccine-preventable infections even in your immunized patients, it is important to understand that, owing to immunosenescence, older adults do not respond as well as children do to immunization. Although immunization might not prevent clinical illness in adults, it is clear from the literature that, in this population, it leads to decreased severity of illness and fewer deaths.

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Team sport

As family physicians we are in a unique position. We have the trust of our patients and the advantage of our ongoing relationships. We are the specialists in adult immunization! Whether we are discussing the diphtheria-tetanus-pertussis series for adults, particularly those with infants at home, or the new shingles vaccine for older Canadians, it is our role to educate and to inform so that our patients can make good decisions for themselves. In Canada, immunization is a team sport. Whether vaccination is taking place in public health clinics, school-based programs, pharmacies, patients' workplaces, or in our offices, the responsibility of education remains in our hands. Our patients need to have our recommendations, and we can share the burden of implementation with the many players in our system. A 2006 survey conducted by the Public Health Agency of Canada found that physician recommendation had a huge effect on patient acceptance of vaccines.[10]

We have the National Advisory Committee on Immunization guidelines that give us a very clear mandate for what we should be doing, but we do not have the time to get through that Preventive Care Checklist Form as it is currently designed. We can never, at least not in real-life practice, accomplish all those maneuvers in a given checkup. If we did, as noted by Yarnall and colleagues, commenting on US Preventative Services Task Force guidelines, it would take more than 7.5 hours per day or 1773 hours annually just to follow the suggested recommendations in an average-sized practice[11]—and that would mean no chronic care management, no acute care intervention, just prevention.

It is abundantly clear why immunization gets such little attention.

Doing better

In my opinion we can begin to do a better job. One important opportunity would be to move immunization from its current position in the chart to the part of the record that includes allergies and medications. As doctors, we always look at medications to give us a very quick overview of issues, diseases, and likely problems. If we start to evaluate health by including immune status, we will be in a position to make better decisions, to order appropriate tests, and to have more complete preventive assessments. We need to know if our diabetic patient has received the pneumococcal vaccine or not. Measurable outcomes depend on us and our efficiency. We need every patient, not just children, to be up to date and immunized for vaccine-preventable diseases. If we are going to change the focus from treating acute illness to a more long-term preventive strategy, we need a more aggressive approach, ensuring that vaccine-preventable diseases are indeed prevented. Our role as trusted family physicians includes the important task of education. Patients have the right to accept or decline vaccination; our job is to make sure that they understand the effects of that decision. Whether by attending continuing medical education events or through local incentives, such as Ontario's addition of the pneumococcal vaccination to the compensated Diabetes Patient Care Flow Sheet, we need to look at novel ways of including immunization in our daily conversation.

In 2012 and beyond we have an exciting opportunity to have a huge effect on our patients' lives. We have the tools to do primary prevention—medicine at its best. We have safe and effective vaccines with measurable outcomes. We have national guidelines and clear reasons to follow them. We have centre stage as primary care providers to influence the course of health care spending to evolve from the treatment paradigm to the prevention model. We can start by changing our day-to-day practice and by paying attention to this very important lifesaving issue and moving immunization up from the bottom of the heap.

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Competing interests

None declared

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