Seeking efficiencies in immunization programs in British Columbia

Most physicians in British Columbia know immunization as a primary care service. Some are aware of the renewed focus on improving immunization programs in the province. This was initially stimulated by the National Immunization Strategy[1] in 2004, and federal funding for provincial and territorial immunization programs. The initial allotment of $400 million over 3 years has now ended, but assisted with launching varicella, pneumococcal, meningococcal C conjugate, and adolescent pertussis vaccine programs around the country. The renewed funding of $300 million announced earlier this year is earmarked for human papillomavirus vaccine. The total cost of vaccines to support BC immunization programs is projected to rise from $14 million in 2001–2002 to about $53 million in 2008–2009. Increased cost requires better management and efficiencies.

The cost of vaccines to support BC immunizations is projected to be $53 million in 2008–2009.

A number of process improvement initiatives are gaining ground on the backdrop of *Immunize BC: A Strategic Framework for Immunization in BC*.[2] This framework was announced in April by the Honourable George Abbott, Minister of Health. It highlights six priority actions:

- Promote the immunization program to the public and health care professionals.
- Improve access to immunization services.
- Ensure an adequate supply of knowledgeable, trained service providers.
- Create an integrated immunization registry.
- Improve the vaccine inventory management system.
- Establish an immunization research agenda that includes the socioculturral aspects of vaccine delivery and uptake.

The coordination of actions in each of these areas is with the BC Immunization Subcommittee, a subcommittee of the Communicable Disease Policy Committee. It has representation from regional health authorities, the Ministry of Health, BC Centre for Disease Control, First Nations, and physicians (Dr Simon Dobson from pediatrics and Dr Michelle Linekin from family medicine).

There are two new initiatives in 2007 that physicians need to know about: vaccine-specific billing codes and better vaccine inventory management.

Vaccine-specific billing codes

The Medical Services Plan (MSP) now requires that vaccines given to those under 19 years old be billed using one of 17 vaccine-specific billing codes.[3] The codes include all publicly funded vaccines and will be amended if vaccines are added. Two tools are available to make recording easier. One is an immunization schedule for the patient chart. As each vaccine is given, the date, site of injection, and vaccine lot number are recorded. The schedule becomes a permanent record of immunization for the chart, from which the codes can be transcribed for electronic entry. The second tool is a pocket-sized card with the vaccine codes. Over the next 2 years, new information systems will flow these billing data into immunization registries. This is now done manually through submission of line-listed data to public health in most parts of BC where doctors immunize children. Data capture through billing codes has been done successfully for many years in Manitoba, allowing for both immunization coverage assessment and recognition of population vulnerabilities.[4-6]

Better vaccine inventory management

Vaccines are biologicals with short shelf lives and cold storage requirements. About $2 million is wasted each year in BC, from a total budget of around $35 million. Most of this 6% waste is preventable. Regional health authorities and BCCDC are improving cold chain during transport and storage. Physicians can help by posting the vaccine storage and handling guidelines and ensuring that office staff have read them—available at BCCDC's web site at www.bccdc.org/content.php?item=214. One staff member should be given primary responsibility for vaccine management. Vaccine refrigerators should be monitored with maximum-minimum thermometers, and temperatures should be checked and logged twice daily. Call your health department if you need advice on how to handle exposed vaccine. Store vaccine with the shortest expiry date at the front of the refrigerator so that it will be used first. Never store vaccine on fridge door shelves. Pack vaccines in cold chain carry bags with ice packs for transport

Continued on page 481

vs. incentives and penalties

A hard lesson that ICBC and international transportation safety agencies have learned is that awareness of individual risk factors and exposure to the dire consequences of risky driving may not be enough to change driving behavior.[7] As with other health-compromising behaviors, patient education is necessary but may not be sufficient to modify behavior. Incentives and penalties such as strategically designed risk-based insurance products and police enforcement are also needed. Nevertheless, public campaigns and patient education is essential in the overall prevention program mix because education can amplify the positive impact of complementary measures such as enforcement and engineering.

Risk-taking behavior and recovery

The good news is that a risk-taking orientation may be a protective factor in recovery from the injuries it caused in the first place. When ICBC interviewed young risk takers about their post-crash experiences they reported feeling impatient during their recovery and felt motivated to quickly get back to their pre-crash status.[8] Whether this translates into an earlier return to work is still an open question, but studies of recovering injured athletes indicate a similar pattern of enhanced readiness to resume a normal routine for the higher risk takers.[9]

This is consistent with the view that sensation seekers tend to have a higher tolerance for emotional arousal, greater openness to new experiences, and more optimistic cognitive style—all factors that are generally associated with better health outcomes.

ICBC's work with risky drivers also revealed that they may have a more adaptive explanatory style. They tend to view their injuries as specific rather than global in terms of daily functioning, and perceive their injury symptoms as transitory rather than chronic. They also may be less vulnerable to secondary injury reactions such as depression. Therefore, what appears to get risk takers in trouble also helps them recover faster. Better understanding of risky behaviours may inform not only prevention but also the treatment of injuries sustained in motor vehicle crashes.

If you have suggestions for ICBC about future article topics, or questions relating to the care of patients injured in motor vehicle collisions, please contact medinquiries@icbc.com.

—John Vavrik, PhD,
Registered Psychologist
Manager Strategic Applications,
ICBC

References

1. BC Injury Research and Prevention Unit. Motor vehicle crashes among young drivers. 2005.
2. Vavrik J. Road safety speaker program evaluation, ICBC Internal Research Report, 2007.
3. Vavrik J. Young driver behaviour. ICBC Internal Research Report, 2004.
4. McKenna FP, Horswill MS. Hazard perception and its relevance for drivers. J Int Assoc Traffic Safety Sciences 1999; 23:26-41.
5. Barkley RA, Murphy KR, Kwasnik D. Motor vehicle driving competencies and risks in young adults with attention deficit hyperactivity disorder. Pediatrics 1996; 98(6 pt 1):1089-1095.
6. Zuckerman M. Behavioral expressions and biosocial bases of sensation seeking. Cambridge University Press. 1994.
7. Foss R. Addressing behavioral elements in traffic safety: A recommended approach. AAA Foundation for Traffic Safety. 2007.
8. Vavrik J. High and low risk driver interviews. ICBC Internal Research Report, 2003.
9. Smith RE, Ptacek JT, Smoll F. Sensation seeking, stress, and adolescent injuries: A test of stress-buffering, risk-taking, and coping skills hypotheses. J Pers Soc Psychol 1992;62:1016-1024.

Continued from page 478

to the office from the health unit. Return unused vaccine to your local health department—do not discard it. Some returned vaccines may have monetary value under contract credit policies, so throwing them away is literally throwing money in the trash.

For more news, check our web site periodically at www.bccdc.org.

—Monika Naus, MD, MHSc
BC Centre for Disease Control

References

1. Final Report: National Immunization Strategy. A Report from the F/P/T Advisory Committee on Population Health and Health Security (ACPHHS) to the Conference of F/P/T Deputy Ministers of Health. 2004. www.phac-aspc.gc.ca/publicat/nat_immunization_03/index.html (accessed 25 September 2007).
2. Immunize BC: A Strategic Framework for Immunization in BC Ministry of Health. February 2007. www.health.gov.bc.ca/prevent/pdf/immunizebc.pdf (accessed 25 September 2007).
3. Tools to assist with the new vaccine codes. Medical Services Plan, British Columbia. www.health.gov.bc.ca/msp/infoprac/physbilling/new_vaccine_codes.html (accessed 25 September 2007).
4. Communicable Disease Control Unit, Public Health Branch, Manitoba Health. Manitoba Immunization Report. Manitoba Immunization Monitoring System (MIMS). Annual Report 2004. www.gov.mb.ca/health/publichealth/cdc/surveillance/mims04.pdf (accessed 25 September 2007).
5. Roberts JD, Poffenroth LA, Roos LL, et al. Monitoring childhood immunizations: A Canadian approach. Am J Public Health 1994;84:1666-1668.
6. Gupta S, Roos LL, Walld R, et al. Delivering equitable care: Comparing preventive services in Manitoba. Am J Public Health. 2003;93:2086-2092.