Immunization and student health: What every teacher should know

Mary Appleton

One might speculate that the answer posed by the question should a parent be responsible for arranging to immunize a child, or for that matter re immunize themselves would be a no-brainer. Most would say of course. Who can sensibly argue that prevention is preferred to treatment of disease? Yet many are not taking full advantage of the most effective means of preventing illness, disability and death caused by vaccine-preventable diseases.

Immunization or vaccination begins when we are wee infants and continues until old age. Vaccines expose our immune system to a damaged or look-alike virus or bacteria in order to create a memory of the dangerous invader. When we are exposed to the real thing, our immune system is already primed with antibodies to shut down the aggressor and avoid the disease or at least decrease its effects.

Vaccines for children & adolescents

In Canada, we are fortunate to have access to the latest vaccines. The vaccines currently recommended for routine use with children and adolescents are:

- Diphtheria
- Hepatitis B
- Influenza
- Measles

- Meningococcal C conjugate (meningitis, blood infection)
- Mumps
- Pertussis (whooping cough)
- Pneumococcal conjugate (meningitis, blood infection, pneumonia, ear infections)
- Polio
- Rubella
- Tetanus
- Varicella (chicken pox)

Most of these vaccines are administered in infancy and childhood. Some of these "shots", as they are commonly called, require a booster in adolescence and adulthood. Check with your physician or local public health office for the specific schedule and possible costs of the above vaccines.

Legislation

Immunization is a public health measure because it protects populations while also protecting individuals. Protection increases as more people are vaccinated and the circulating virus or bacteria have less chance of multiplying. It makes sense, therefore, that governments encourage the use of vaccines to prevent disease. Ontario's Immunization of School Pupils Act states, "The parent of a pupil shall cause the pupil to complete the prescribed program of immunization in relation to each of the designated diseases." This requires a statement signed by a physician showing that the pupil has completed the pre-

scribed program of immunization, or a statement of medical exemption, or a statement of conscience or religious belief. Students may be excluded from school if there is no proof of immunization or authorized exemption, or in an outbreak of a disease for which they have not been immunized.

Vaccines for adults

Adults who have not already had the vaccine or the disease should check with their physician or public health office about the vaccines they may need. Factors to consider are occupation, hobbies, lifestyle and medical conditions. Teachers should pay particular attention to keeping their vaccinations up-to-date since they are exposed to so many potential carriers of disease. (see table 1)

Doses and timing may vary depending on the vaccine and your medical history.

Questioning vaccines

Vaccines have been so successful in Canada that we rarely see the diseases that use to shut down schools, communities and workplaces. Diseases like polio, measles, and diphtheria are mostly forgotten. Eliminating these diseases is obviously a good thing, but at the same time, it has made many of us complacent. Worse, an increasing number of people are questioning the need for vaccination, the number of vaccines now given to children, and the safety of vaccines.

Diseases have not disappeared

The rubella outbreak in Southern Ontario this year is a ready reminder that diseases we thought were gone can quickly reappear in under-immunized communities. Polio is currently spreading in Af-

rican states that were previously polio free. Natural disasters such as hurricanes can create increased risk of hepatitis. Tetanus is present in soil. Influenza epidemics continue each year, caused by an aggressive and changing virus. It requires constant effort to keep diseases under control, and our most effective tool is immunization.

Too many vaccines

To some people it may seem that children are poked too often with vaccine-filled syringes, but consider the hundreds of thousands of virus and bacteria that children and adults are exposed to every day. The few vaccines that we routinely use are equal to a grain of sand in a huge sandy beach of germs.

Vaccines are safe

Vaccines in Canada are first subjected to rigorous testing by Health Canada experts in biologics. Then, the National Advisory Committee on Immunization, a group of independent experts who advise the Public Health Agency of Canada, examines the science behind each

vaccine before they make a recommendation to use a vaccine. Once in use, front line practitioners and the national Advisory Committee on Causality Assessment continuously monitor vaccines.

Misinformation on the Internet

Misinformation about the safety of vaccines abounds, accusing vaccines of causing ailments such as autism, learning disabilities, even cancer. A popular myth about the flu shot is that it causes influenza. None of this is true. It is important to check the source of information. Health associations and agencies you can trust and which reference their information to reputable organizations such as the National Advisory Committee on Immunization or the World Health Organization sponsor reliable web sites. If a web site's claims seem too good or too bad to be true, they likely are.

Ask an expert

For more information on vaccines for all ages consult your physician, pharmacist or call your lo-

cal public health office. If you are traveling to another country and want to know if there are additional vaccines that can protect your health, call a travel health clinic or public health office.

Resources for teachers

Teachers can help students understand the important role immunization plays in controlling and eliminating diseases. Focus on the diseases that can be prevented and the good health we enjoy because of vaccines, not the needle. The year 2005, marked the 50th anniversary of the polio vaccine. It is a good opportunity to show photos from the Canadian epidemic in the 1950s and the marching mothers who collected dimes for polio research (March of Dimes). You will find many resources and links at www.immunize.cpha.ca that explain vaccine preventable diseases, the history of influenza pandemics, downloadable posters, a colouring book and other activities for students of many ages. This web site is the product

Vaccine	Age		
	19-49 years	50-64 years	65+ years
<i>Tetanus</i>	everyone, every 10 years		
<i>Diphtheria</i>	everyone, every 10 years		
<i>Pertussis</i>	everyone, once in adulthood		
<i>Influenza</i>	annually for people at high risk of complications from influenza and anyone who wants protection from influenza		
<i>Pneumococcal</i>	people with specific medical conditions		everyone
<i>Hepatitis B</i>	people with medical, occupational or lifestyle risks and anyone who wants protection from Hepatitis B		
<i>Hepatitis A</i>	people with medical, occupational or lifestyle risks and anyone who wants protection from Hepatitis A		
<i>Meningococcal</i>	people with specific medical conditions and people living in residential accommodation including students and military personnel		
<i>Measles</i>	people who have not had the vaccine of the disease		
<i>Mumps</i>	people who have not had the vaccine of the disease		
<i>Rubella</i>	people who have not had the vaccine of the disease		
<i>Varicella</i>	people who have not had the vaccine of the disease		
<i>Travel Vaccines</i>	varies by destination – consult a travel health clinic, your doctor, local public health office or www.travelhealth.gc.ca		

Table 1 - Vaccines for adults

of the Canadian Coalition for Immunization Awareness & Promotion, which includes 20 national organizations, and the Public Health Agency of Canada, all committed to immunization.

Grade 6 students across the country are invited to participate in a national poster contest in conjunction with the Canadian Immunization Conference, held every other year in even numbered years. Winners from each province and territory receive prizes and their posters are displayed at the conference and at www.immunize.cpha.ca. The national winner receives prizes and an expense paid trip to the con-

ference to be recognized in the opening session. Instructions for entries, sample lesson plans and a word puzzle are easily downloaded from the web site, www.immunize.cpha.ca

Recommended reading:

Your Child's Best Shot published by the Canadian Pediatric Society and available in most libraries or from www.caringforkids.cps.ca.

The Canadian Immunization Guide available from the Public Health Agency of Canada www.phac-aspc.gc.ca.

Mary Appleton, has 30 years experience in program management, program development, marketing, communications and association management. As Senior Manager of the Secretariat for the Canadian Coalition for Immunization Awareness & Promotion (CCIAP), she has coordinated National Immunization Awareness Week and the National Influenza Immunization Awareness Campaign since 1999, working with numerous NGO partners, governments, private sector sponsors and the media.

Call for Submissions Volume 3, issues 2 and 3

Volume 3, Issue 2, Leadership in Education:

The next issue of *Teaching and Learning* will focus on Leadership in Education. While articles about becoming a principal, or administrator are important we are equally interested in articles that share with our readers leadership that involves innovations, project development and implementation, new curricula, team building, student and teacher adventures in leadership, parent involvement, volunteerism and alike. What we want to publish are articles about how teachers, students, parents and administrators, college and university faculty take up the challenges and tasks that involve leadership and how these task/projects changed the school /community environment. What exactly does it mean to be a leader in a school community? What are the skills? What are the steps? What can be celebrated, learned and implemented by others based on past experiences?

Deadline: Spring/Summer Issue, March 31, 2006.

Volume 3, Issue 3, Stress in Schools and School Communities:

The following issue of *Teaching and Learning* will focus on the kinds of stress teachers, administrators, students and parents experience in school communities; what is being done or not, and what can be done. The concerns range from violence and drugs to a lack of supplies and resources, overcrowding, health issues, understaffing, lack of leadership, workload and communication issues. The important thing to remember when submitting articles for this issue is that information about the problem must be accurate and informative. We need to know what can be done to help those in stress and how communities can change when overwhelming stressors found in school communities are addressed.

Deadline: Fall Issue, June 30, 2006.

This publication is dedicated to providing current, informative, and useful professional development information to a diverse education community. Upcoming topics are described in previous issues. Papers should not exceed 2000 words, including references. Begin with a brief introduction. Explain the problem, argument or point of view. Provide helpful information. Summarize your thoughts and ideas concisely and always think about what educators will read and use. Submit papers as an email attachment (Microsoft Word 2003 is preferred). Before the paper is submitted, proof read several times, employ a grammar and spell check (Canadian version preferred). After a review process, and upon acceptance, a short bio and picture of the author(s) is required. Papers will be edited to meet style, format and space requirements. Papers are acknowledged as they are received. Outlines or queries not accepted. *Teaching and Learning* is a copyright protected publication. All rights are reserved.