

Nurses and Immunization - What You Need To Know!

On an episode of the popular TV show, *ER*, a young physician was stumped for a diagnosis when a child appeared with unusual red blotches on his skin. It was only with the intervention of an older doctor that the diagnosis of this unusual disease was made – measles!

In developed countries, the advent of modern vaccines has almost eliminated many once-common childhood diseases such as measles, mumps and rubella, to the point that many of today's parents, and health care professionals, have never experienced or seen such diseases. Vaccines have wiped out smallpox, and are on the verge of doing the same with polio. Diphtheria, which was one of the main causes of death in children at the turn of the century, is becoming rarer, as is whooping cough.

Vaccines are some of the most cost-effective tools at the disposal of public health organizations today. According to registered nurse Margaret Hilson, past-president of the World Federation of Public Health Associations, every \$555 million spent on childhood vaccines translates into \$2.5 billion in long-term savings.

Immunization programs have had a dramatic influence on disability and death rates around the world, and registered nurses have played a significant role in their delivery.

Unlike some countries, immunization is not mandatory in Canada, although some provinces have legislation or regulations that require proof of immunization for school entrance. In some provinces and territories, immunization programs are delivered through the public health system, usually by nurses in public health roles, while in others, vaccines are normally given in physicians' offices. In areas that have a dual system, the public health system normally serves rural areas, with private practice more common in urban areas.

What's happening? Exploring the myths about immunization

Although there is general support for immunization, and relatively high immunization rates in Canada, and much of the developed world, it is an ongoing challenge to maintain, and improve these rates. The results of a recently released Canadian study¹ of parents of children under the age of

seven found that 74 per cent rate having children immunized as extremely important, 90 per cent believe that all children should have the standard vaccinations, and 59 per cent expressed confidence that vaccines are very beneficial (rating of nine or 10 on scale of zero to 10), with another 25 per cent giving a rating of eight out of 10.

Despite the general support, there has been a growing backlash against immunization, reinforced by dramatic media reports of studies linking vaccines to serious disease conditions. A telephone survey of parents conducted by the U.S.-based National Network for Immunization Information, found that 25 per cent of parents are concerned that immunizations may weaken a child's immune system, 23 per cent believe that children get more immunizations than necessary, and 19 per cent believe that immunizations are not always proven safe before being approved for use.²

What is going on? Should we be questioning the effectiveness of our immunization programs, or are these concerns just myths? The Canadian Immunization Awareness Program (CIAP), a coalition of health care organizations, which includes the Canadian Nurses Association (CNA), the Canadian Nursing Coalition for Immunization and the Canadian Public Health Association (CPHA), has identified common misconceptions about immunization.

Complacency

There is such a thing as too much success, and the fact that immunization programs have been so successful at

preventing serious diseases has led many people, particularly those who have not experienced such diseases, to become complacent. Many people believe that because some vaccine-preventable diseases have been eliminated from Canada, there is no need to vaccinate against them.

However, think back a few years; many nurses can remember the fear and devastation caused by polio epidemics that were a Canadian reality not that long ago.

Think ahead. Imagine if there was a vaccine for childhood cancer, or AIDS. Would we stop vaccinating our children against these diseases, once these illnesses became rare occurrences? If we did, they would soon begin to emerge again, and their consequences would be as frightening as these diseases are today. Infectious diseases know no borders. With increasing numbers of people traveling the globe, diseases can easily be brought into Canada. Without vaccinations, they can quickly spread.

Necessity

Others believe that vaccinations aren't required because, as a result of better hygiene, sanitation and better nutrition, many common diseases had begun to disappear in any case. This common misconception is countered with the evidence of what happens when immunization rates drop. In Great Britain, a drop in pertussis vaccination in 1974 was followed by an epidemic of more than 100,000 cases, including 36 deaths, by 1978. Both Japan and Sweden have had similar experiences. Despite sanitation systems in developed countries, chicken pox still has a high incidence rate.

Effectiveness

The fact that some people who have been immunized still get the disease is often put forward as proof that the vaccine doesn't work. Most routine childhood vaccinations have a success rate of 85 to 90 per cent. While the remaining 10 to 15 per cent are

still susceptible to getting the diseases, this is not proof that vaccines do not work.

Safety

Safety of childhood vaccines is the greatest concern of parents today. Some may believe that they are risking having their child exposed to harmful side-effects, or to serious illnesses. Web sites linking vaccinations to a host of other diseases and conditions have fueled such concerns. Parents and some health care professionals have formed organizations that publicly question the need and safety of vaccines, and are quick to attract attention to their cause. There has been reluctance to adopt new vaccines, for example, the chickenpox vaccine, although this disease still kills or handicaps a significant number of children each year.

Solid scientific evidence has proven that severe adverse reactions to vaccines are extremely rare, occurring on the order of one per million doses,³ and that the number of illnesses and deaths would be much higher without vaccines. For example, the hypothetical link between MMR vaccines and autism has been researched by Health Canada, the Centers for Disease Control in Atlanta, the National Network for Immunization Information in the U.S., the Institute for Vaccine Safety at Johns Hopkins University, and, the Institute of Medicine in the U.S. The consensus of the findings of these organizations rejects a causal relationship at the population level between MMR vaccines and autistic spectrum disorders.⁴

Other concerns stem from the practice of giving combinations of vaccines at the same time. Parents have expressed concern that this may overload the immune system, or cause harmful side-effects. Studies have shown, however, that giving combinations of vaccines at the same time is safe and effective. It is also very practical, saving time, money and stress on the child and the parent.

Key messages about vaccine safety in Canada

- The vaccines used in Canada are extremely effective and extremely safe.
- Vaccine safety is taken very seriously by health authorities worldwide. Expert committees in Canada investigate every report of a serious adverse event.
- Serious adverse reactions are rare. The dangers of vaccine-preventable diseases are many times greater than the risks of a serious reaction to the vaccine.
- Vaccines do not cause serious diseases or conditions. Alleged links have been disproved by rigorous scientific study.

Alternative therapies

In the past few years there has been a marked interest in complementary and alternatives therapies. The perceived limitations of western medicine have led many people to explore the benefits of homeopathy and other forms of holistic health care. Some may view giving a healthy child shots of the virus or bacteria in the vaccination as unnatural and unnecessary. Unfortunately, a strong natural immune system, or one boosted with vitamins, or herbal treatments, does not protect against the diseases that kill and disable children. While breastfeeding offers protection against some infections, it cannot protect against vaccine-preventable diseases.

Individual choice or common good?

Our society has evolved to one where personal choice and individual rights are considered paramount. As governments have withdrawn supports, and society has rejected paternalistic approaches, our modern culture applauds those who "take care of themselves." A strong population health model, however, depends on society to take a broader perspective and to consider the common good. The minimal risk and inconvenience of vaccination for the individual, is more than offset by the benefits to society as a whole. Vaccines are 85-90 per cent effective, and there are a small number of people who cannot receive vaccines.

If the majority of the population is protected, they protect those around them who are vulnerable to disease.

Nurses and immunization – More research required

Nurses play a key role in promoting and delivering immunization programs across Canada, indeed, across the world. Many registered nurses working in public health organizations are responsible for managing and delivering immunization programs to entire populations. Others are responsible for family immunization as part of health care teams in general practice or pediatric settings.

While the expectation is that most nurses are highly supportive of immunization, a recent study of vaccinators in Québec provides some startling results. The purpose of the 1998 study⁵ was to document vaccinators' (nurses, general practitioners and pediatricians) attitudes, knowledge and practices related to vaccination. The study revealed that while vaccinators generally believe in the security, efficacy and usefulness of vaccines given to young children, 41 per cent of nurses do not fully agree with these opinions. Only 60 per cent of nurses disagreed that "certain practices (homeopathy, good eating habits and a healthy lifestyle) can eliminate the need for vaccination," compared with 85 per cent of general practitioners. In addition, only 57 per cent of nurses were in complete agreement with the usefulness of vaccinating against diphtheria, compared to 90 per cent of pediatricians, and 86 per cent of general practitioners. This study also confirmed that in the opinion of these professionals, the main obstacles to vaccination were client fear of side-effects, missing appointments, lack of follow-up mechanisms and the existence of respiratory ailments at the time of the vaccination appointment.

Results also revealed that nurses were less informed about changes in vaccinations, than their pediatrician colleagues, and less at ease in responding to questions from parents.

While this study was done in only one province, the results should cause all nurses to reflect on their knowledge and attitudes toward immunization. Why are these nurses not totally supportive of the benefits of immunization? This is an issue that needs further research. The fact that the nurses in this study did not feel knowledgeable about changes, and not at ease in discussing immunization issues with parents, is an important consideration given the crucial role that nurses play in immunization delivery and in providing information to parents, patients and other health care professionals.

Professional issues

Immunizations are a way of exercising our immune systems, triggering what is already there to fight against disease. Within the primary health care approach to nursing, nurses know that disease prevention practices offer the best route to a healthy population. Nurses consistently practice standard precautions within their practice. Immunization can be considered one more precaution, a tool that allows nurses to help protect their clients against serious disease.

Registered nurse Joanne Yarwood, Immunization Manager for the United Kingdom's health promotion program believes that registered nurses have three key responsibilities with respect to immunization:

- to be scientifically informed;
- to provide your own informed opinion and strong support for immunization; and
- to promote immunization as the most important of all health care interventions.⁶

There are many resources available to nurses to stay up-to-date on the latest scientific information available about immunization. See the **RESOURCES TO LEARN MORE ABOUT IMMUNIZATION** section at the end of this issue.

Communicating the message

The advice of a health care provider is often an important factor affecting whether a person is immunized or not. Experience has also taught us what types of communications work best to explain immunization. Scott Halperin, MD, Dalhousie University, Halifax, offers an eight-step approach⁷:

Eight-Step Approach to Explain Immunization

1. Listen, evaluate and categorize
2. Recognize legitimate concerns
3. Provide context
4. Refute misinformation
5. Provide valid information
6. Recognize that it is the parent's decision
7. Educate about potential consequences
8. Make a clear recommendation.

Personal issues

Are your immunizations up-to-date? What is the status of your own family's immunizations? Have you had your flu shot? A survey conducted by Health Canada⁸ showed that a slim majority of health care workers received their flu shot in 2000. Reasons stated for not getting flu shots are that it is not necessary, they didn't think about it or know about it, they don't think it works, or they are afraid of the side-effects. These comments further support the idea that nurses are experiencing the same complacency, concerns, and lack of information as the general public.

The most recent statement issued by the National Advisory Committee on Immunization (NACI) states that, "Health care workers and their employers have a duty to actively promote, implement and comply with influenza immunization recommendations in order to decrease the risk of infection and complications in the vulnerable populations they care for."⁹ The report also suggests that employers consider excluding health care workers from direct care, if they are unvaccinated, or have presumed or confirmed influenza.

Flu shots, as with other vaccinations, offer nurses a way to protect themselves

and vulnerable clients from illness. Nurses have a responsibility to maintain their own health, and follow the recommendations of public health departments and their own health care provider with respect to immunizations.

Responsible decision-making

Everyday, nurses face difficult ethical dilemmas involving conflicts between their own values and beliefs and those of patients, other professionals and institutional policies. If, after examining the evidence, a nurse remains opposed to immunization, she/he should discuss their conflict with their supervisor, and/or consult with their licensing body. The CNA *Code of Ethics for Registered Nurses* should be consulted for guidance in dealing with responsible decision-making.

Spreading facts not fear – The Canadian Immunization Awareness Program

In the face of conflicting media reports, parents and professionals are understandably confused, and counteracting these myths is an ongoing challenge for health care professionals and governments. The Canadian Immunization Awareness Program and the Canadian Coalition for Influenza Immunization are two independent coalitions made up of health care organizations, government,

the private sector and consumer groups. These coalitions have played a key role in promoting the benefits of immunization for childhood diseases and for preventing flu. With a secretariat located within the CPHA, members of the coalition, including CNA, have carried out a wide range of public communications activities to support immunization. With an extensive web site (see RESOURCES below), celebrity spokespersons, posters, displays, media relations, and a National Immunization Awareness Week, held every May, the group hopes to counter the myths and contribute to increased immunization rates.

RESOURCES TO LEARN MORE ABOUT IMMUNIZATION

- ✔ Talk to other nurses who are directly involved in immunization programs. Ask them about their experiences, and find out how you can support immunization through your practice.
- ✔ The Canadian Nursing Coalition for Immunization is a group of nurses whose purpose, among others, is to collaborate with other groups to develop and implement national standards and programs for health care workers who provide immunization. Contact the coalition through the CNA web site at www.cna-nurses.ca.
- ✔ Speak to your public health department about immunization education programs in your area.
- ✔ Discuss your immunization status with your health care provider. Make sure your immunizations are up-to-date, including having a flu shot before the winter season.
- ✔ Discuss the issue within your own institution, and organize a workshop with immunization experts to ensure everyone has the latest information about immunizations.
- ✔ The Canadian Immunization Awareness Program acts as a one-stop-shop for immunization information, research and communications materials. The CIAP can be reached via its web site at www.immunize.cpha.ca. Through this web site you will be able to link to other organizations such as Health Canada and the U.S.-based National Network for Immunization Information. The coalition can also be reached at 400-1565 Carling Avenue, Ottawa, ON, K1Z 8R1, or by fax at (613) 725-9826.
- ✔ The Canadian Coalition for Influenza Immunization has its own web site (www.influenza.cpha.ca). Download the flu shot poster directed specifically to nurses.

- ¹ The Canadian Immunization Survey: Attitudes Toward Childhood Vaccinations, an Ispos-Reid survey, commissioned by Wyeth Ayerst Canada, 2001.
- ² Gellin, et al. (2000). Do parents understand immunizations? A national telephone survey. *Pediatrics*, 106, 1097-1102.
- ³ Canadian Immunization Awareness Program. Myths and facts about immunization. Ottawa: Canadian Public Health Association. www.immunize.cpha.ca
- ⁴ Taylor, B., Miller, E., Farrington, C.P., et al. (1999). Autism and measles, mumps, and rubella vaccine: No epidemiological evidence for a causal association. *Lancet*, 353, 2026-9.
- ⁵ Dionne, Marc, MD, MPH. (2000). Manque de conviction face à la vaccination chez les vaccinoteurs québécois. *Canadian Journal of Public Health*, 92(2).
- ⁶ Yarwood, Joanne. (2001). Best practices in immunization communication with the public – The UK experience, Presentation to the National Immunization Strategy, Ottawa.
- ⁷ Halpern, S., MD, from Addressing doubts about immunization, Canadian Immunization Awareness Program, Canadian Public Health Association, www.immunize.cpha.ca
- ⁸ Health Canada, Population and Public Health Branch. (2000). Progress towards Canadian target coverage rates for influenza and pneumococcal immunizations. *Canada Communicable Disease Report*, 27(10).
- ⁹ Health Canada. (2000). Statement on influenza vaccination for the 2001-2002 season. *Canada Communicable Disease Report*, 27-ACS-4.

Nursing Now is a series of short papers that explore issues and trends in Canadian Nursing. This is the 12th in the series.

Nursing Now is published by the Nursing Policy Division of the Canadian Nurses Association (CNA).

Free copies are available to all CNA members. For additional information and/or additional copies contact CNA Publications.

This publication is also available on CNA's web site at www.cna-nurses.ca

ISSN 1206-3878

CANADIAN NURSES ASSOCIATION, 50 DRIVEWAY, OTTAWA ON K2P 1E2

TEL: (613) 237-2133 1-800-361-8404 FAX: (613) 237-3520 www.cna-nurses.ca E-MAIL: pr@cna-nurses.ca