

IMMUNIZATION: A CORNERSTONE OF PUBLIC HEALTH

The Ontario Ministry of Health is proud of its universal immunization programs aimed at protecting the entire population against infectious diseases through the purchase, distribution and administration of high quality vaccines. Local public health staff distributes vaccines to physicians and long-term care facilities. Public health nurses provide advice and education, monitor community immunization levels and administer vaccines at clinics, in schools and during mass campaigns. In 1995, Ontario Chief Medical Officer of Health Dr. Richard Schabas identified 3 ways to reduce the incidence of infectious diseases.

1. IMPROVEMENT OF IMMUNIZATION RATES

The success of immunization has resulted in lower incidence of communicable diseases. Indeed, much of the adult population today has no recollection of the impact and morbidity associated with these diseases. We must not become complacent about the dangers posed by these infections.

Infants and children are immunized against nine different diseases. Older adults, high-risk groups and travellers are immunized to protect against disease and even death. Immunization rates for Chatham-Kent children for 1998 were:

Diphtheria Tetanus-Polio for 7 year olds	91.84%
Measles Mumps Rubella for 7 year olds	96.62%
Tetanus diphtheria-Polio for 17 year olds	89.04%
Measles Mumps Rubella for 17 year olds	94.61%

2. INCREASED AWARENESS OF VACCINE SAFETY

People are concerned about possible risks of vaccination. However, misinformation can have a profound impact on immunization coverage and increase the risk of disease and outbreaks. Dr. Schabas reported that vaccines are among the safest tools of medicine and that serious side effects in Canada are rare. He stated that, "The benefits of immunization for the individual vastly outweigh the risks. The risks are much, much smaller than the danger posed by the disease itself" (Schabas, 1995, p. 3). Public health nurses assist community members in accessing and understanding accurate information concerning vaccines. As well, health unit staff can assist the public with filing medical, cultural or religious objections, where appropriate.

To ensure the safety and effectiveness of vaccines, guidelines from the Ministry of Health regulate refrigeration or "cold chain" storage of publicly funded vaccines. Public health staff members are required to annually review facilities where vaccines are maintained to ensure their correct storage and handling. Special thermometers and insulated transport bags with freezer packs are some of the requirements to maintain quality vaccines.

3. CREATION OF NEW INITIATIVES

Since Dr. Schabas' 1995 report, Chatham-Kent has benefited from five key programs.

- ◆ In 1996, a second-dose measles campaign was completed for all school-aged children.
- ◆ Under a provincial Hepatitis B program, public health nurses held clinics to ensure vaccine coverage to all high-school students. A three dose series of hepatitis B vaccine was completed for 1,656 Grade 7 students in 1998-1999.
- ◆ Local public health nurses co-ordinated a three-year promotional campaign to provide pneumococcal vaccine to everyone over 65 and younger people with chronic illnesses like heart disease, diabetes or kidney failure.
- ◆ A campaign to improve the rates of immunization against influenza of health care providers working in long-term care facilities was successfully launched in 1998. The number of health care workers immunized has increased:

1997	28 %
1998	41 %
1999	80.5 %

- ◆ In February 1999, the Board of Health approved the Travelhealth Clinic to provide vaccines for local residents travelling to foreign countries. Special immunizations are required for people visiting countries where typhoid, hepatitis A, cholera, Japanese encephalitis, yellow fever or meningococcal meningitis outbreaks occur. Clients receive individual counseling, materials, resources and safe vaccine administration from public health nurses with enhanced training related to travel health. These services require an appointment and include a fee.

Some Ontario residents face barriers to immunization. With the current shortage of physicians in Chatham-Kent, people may not have a family doctor to facilitate access to vaccines. In 1998, the Public Health Division increased hours for clinic services to assist the public in receiving immunizations. As well, staff members work to overcome other barriers such as social isolation and improved access through outreach clinics.

NEW VACCINES

- 1997: In Ontario, the combination vaccine **Pentacel** replaced the PENTA vaccine; **Quadracel** replaced the DPT-Polio combination. These vaccines reduce side effects while providing protection against pertussis, diphtheria, tetanus, and polio, and in Pentacel, Haemophilus influenzae type b disease.
- 1998: Health Canada licensed a new vaccine **Varivax** to prevent chickenpox. Chickenpox is one of the last childhood diseases for which a vaccine has been developed. The vaccine is licensed for use in healthy susceptible persons age one year and older and for susceptible high-risk adults, most women of childbearing age and health care workers. Since this is not part of the immunization schedule mandated by the Province, this vaccine is not publicly funded.
- 1999: Health Canada licensed a new combination vaccine called **Adacel** containing tetanus toxoid, diphtheria toxoid and a 5-component (acellular) pertussis vaccine (TdcP) for use in people 12 to 54 years of age. Prior to this time, pertussis vaccines were not licensed for people over 7 years of age due to unacceptably high rates of local reaction in that population. This vaccine is not part of the publicly funded immunization program.
- 1999: The Ministry of Health licensed the vaccine **Lymerix** for the prevention of Lyme Disease. The Ministry is not advocating Lymerix vaccine for the general public and suggests they use common sense and preventive measures; the vaccine is recommended for high-risk groups such as wildlife biologists and Ministry of Natural Resources or Municipal employees at risk.

2000 AND BEYOND

In 1998, Dr. Colin D'Cunha the newly appointed Chief Medical Officer of Health for Ontario, stated that the commitment to immunization against infectious diseases would remain a cornerstone of public health. Some issues for future consideration include:

1. A health promotion plan to improve adult immunization rates.
2. Planning for new vaccines and developing criteria for new publicly funded vaccine programs. The Public Health Branch is considering making the Varicella vaccine part of the routine immunization schedule. Pneumococcal immunization is now being incorporated into the routine immunization program in Ontario for those who are becoming 65 years of age or those less than 65 years of age who develop relevant high-risk medical conditions.

3. Policies for mandatory immunization against influenza for groups such as staff of long-term care facilities. Strategies being implemented for the 1999/2000 and 2000/2001 influenza season include expansion of publicly funded immunization programs to cover all health care and emergency service workers, both those who are institution-based and those who work in the community.
4. The use of acellular pertussis vaccine for adolescents since the National Advisory Council on Immunization is recommending elimination of the Polio component of the adolescent Td booster.

REFERENCES

Schabas, R. (1995). Opportunities for health: The next steps. Report of the Chief Medical Officer of Health. Toronto: Ontario Ministry of Health.

APPENDIX A

Routine Immunization Schedule for Infants and Children

Age at vaccination	DtaP	Inactivated polio vaccine	Hib	MMR	Td	Hep B (3 doses)
Birth						
2 months	X	X	X			Infancy
4 months	X	X	X			
6 months	X	(X)	X			Or
12 months				X		
18 months	X	X	X	(X) or (X)		
4-6 years	X	X		(X)		Pre- adolescence
14-16 years					X	(9-13 years)
DtaP	Diphtheria, tetanus, pertussis (acellular) vaccine					
Hib	Haemophilus influenza type b conjugate vaccine					
MMR	Measles, mumps and rubella vaccine					
Td	Tetanus and diphtheria toxoid, "adult type"					
Hep B	Hepatitis B vaccine					

APPENDIX B

The Institute for Medicine recommends the following resources:

Books for Parents

Canadian Paediatric Society. (1997). Your child's best shot: A parent's guide to vaccination. Ottawa: The Society. (Available in French).

Offit, P.A., Bell, L.M. (Eds.). (1998). What every parent should know about vaccines. New York: Macmillan.

Internet Resources

Global Program for Vaccination (GPV) - World Health Organization
<http://www.who.ch/gpv-safety>

Division of Immunization, Laboratory Centre for Disease Control - Canada
<http://www.hc-sc.gc.ca/hpb/lcdc/bid/di>

Immunization Action Coalition
<http://www.immunize.org>



Public Health Division

**Health and Social Services
Municipality of Chatham-Kent**

435 Grand Avenue West
P.O. Box 1136
Chatham, Ontario
N7M 5L8

519-352-7270

519-352-2166 (fax)

<http://www.city.chatham-kent.on.ca/healthunit>
ckhu@city.chatham-kent.on.ca