



Board Report

Friday October 26, 2018



Medical Officer of Health Report to the Board

Friday, October 26, 2018

Immunization Coverage Report for Grey Bruce

Background

Immunization is one of the greatest successes of Public Health. Immunizations directly save lives and protect the public from diseases that were once very prevalent.

Benefits of Vaccines

- Vaccines are among the safest medical products available. Serious side effects, such as severe allergic reactions, are very rare.
- Immunization is the most effective way to protect against vaccine preventable diseases.
- Vaccines stimulate and strengthen the immune system. They train the immune system to defend rapidly against vaccine preventable infections before illness can occur.
- The risks of vaccine preventable diseases are many times greater than the risk of a serious adverse reaction to a vaccine.
- Before vaccines became available, many Canadian children died from diseases such as diphtheria, measles and polio that are now preventable by immunization.
- Vaccine preventable diseases can occur at any time because the bacteria and viruses that cause these infections have not been eliminated. They can re-appear quickly if immunization coverage drops.
- Unvaccinated individuals have a much greater chance of getting a vaccine preventable disease than people who have been vaccinated, even in countries with high levels of immunization.
- Through herd immunity, immunization against many diseases also prevents the spread of infection in the community and indirectly protects infants who are too young to be vaccinated, people who cannot be vaccinated for medical reasons (e.g., immunosuppressed), and people who may not adequately respond to immunization (e.g., elderly).
- Vaccines may contain additional substances to ensure effectiveness and safety – these substances are safe.
- Vaccines are not linked to chronic diseases like autism, multiple sclerosis (MS), asthma, or sudden infant death syndrome.

- Immunization programs are a cost-saving. Implementing the immunization program is less than the cost of treating the illness or injury that would occur if the program had not been implemented.

Vaccine Hesitancy

Vaccine hesitancy is the refusal or delay in regular immunization schedules due to concerns about immunization.

Vaccines evoke concerns different from other health interventions because they are largely intended for individuals who are healthy. There are many factors contributing to vaccine hesitancy:

- lack of information about the vaccine being given and about immunizations in general
- conflicting information from a variety of sources
- mistrust of the source of information (e.g., perceptions of business and financial motives of the vaccine industry)
- perceived risk of serious adverse events and concerns regarding injections (e.g., pain and anxiety, coincidental events)
- lack of appreciation of the severity and incidence of vaccine-preventable diseases
- sociocultural beliefs

Grey Bruce Immunization Programs

Publicly funded immunization programs in Ontario include universal programs for infants, children, adolescents and adults. Programs also target at risk individuals with particular medical conditions, behavioural risk factors or high-risk exposures. The [publicly funded immunization schedule](#) for Ontario is on the Ministry of Health and Long-Term Care website.

In Ontario, physicians and nurse practitioners routinely administer infant and early childhood vaccines. For those without regular access to a health care provider, infant and early childhood vaccines are available in Grey Bruce through Public Health clinics in Owen Sound and Walkerton.

Public Health administers adolescent vaccines through school-based immunization programs. Grade 7 students (male and female) are offered hepatitis B, meningococcal and human papillomavirus vaccines through school clinics held each fall and spring. Public Health Nurses administer school vaccines in 81 elementary public, private, Catholic and French Catholic schools.

Adolescent boosters of tetanus-diphtheria-acellular pertussis vaccine (Tdap) are offered to 14-16 year olds in 12 secondary school clinics.

The Immunization of School Pupil's Act, requires Health Units to annually review immunization records of all students attending school in their region. Students may face school suspension if proof of immunizations against designated diseases or if documentation of a medical or non-medical exemption are not provided.

Local medical and non-medical exemption rates are extremely low (less 1.7% of the Grey Bruce school-aged population have a valid exemption on file). Parents who wish to obtain a non-medical exemption are required to attend an in-person education session with a Public Health Nurse. Last year 47 education sessions were provided to 53 Grey Bruce parents.

Immunizations are also provided to priority populations. Nurses visit 30 parochial schools (Amish and Mennonite) to offer vaccines and educate students/parents on the benefits of immunization. Immunizations are offered at a local homeless shelter for clients at risk of vaccine preventable diseases due to age, risk or behavioural factors. Public Health is the regional distribution hub for publicly-funded vaccines to doctors, long-term care homes, retirement homes, hospitals, workplaces and nursing agencies. Hundreds of thousands of dollars' worth of vaccine, including the annual influenza vaccines, is received by the Health Unit each year and then distributed to community health care providers and partners. All 108 local sites receiving publically-funded vaccines are inspected annually to ensure vaccine is stored properly to maintain potency and efficacy.

Ongoing education is fundamental to the vaccine program. As vaccine preventable diseases are largely unseen in modern times and therefore may not considered a risk by many, it is important to continue to educate people about the benefits of vaccination. Even a small drop in the coverage rates of certain vaccines, can lead to an outbreak with serious consequences to the health of a population.

The process of receiving immunization records from health care providers and entering that into the provincial Panorama database is under review. In the past, immunization records were sent individually by fax and that information had to be inputted manually. A new system being piloted by the GBHU allows for creation of an exportable file from the Electronic Medical Records at a Family Health Team that can be securely transferred to the Health Unit and uploaded in Panorama.

Grey Bruce Immunization Coverage Rates

Grey Bruce has excellent coverage rates for childhood and adolescent vaccines. This is due, in part, to the work of local physicians in promoting immunization with clients. Public Health is also very diligent in ensuring complete immunization records are maintained on all children.

In 2017/18 school year, 743 notices were sent to parents requesting information on their child's vaccination status. Of those, 516 suspension orders were issued to students with incomplete immunization records. Subsequently, 40 children were suspended from school. However by the end of the first week, only eight students remained suspended. The goal is not to suspend children from school but rather to ensure complete immunization records. Access to complete records are important to protect vulnerable populations in the event of a large vaccine preventable disease outbreak.

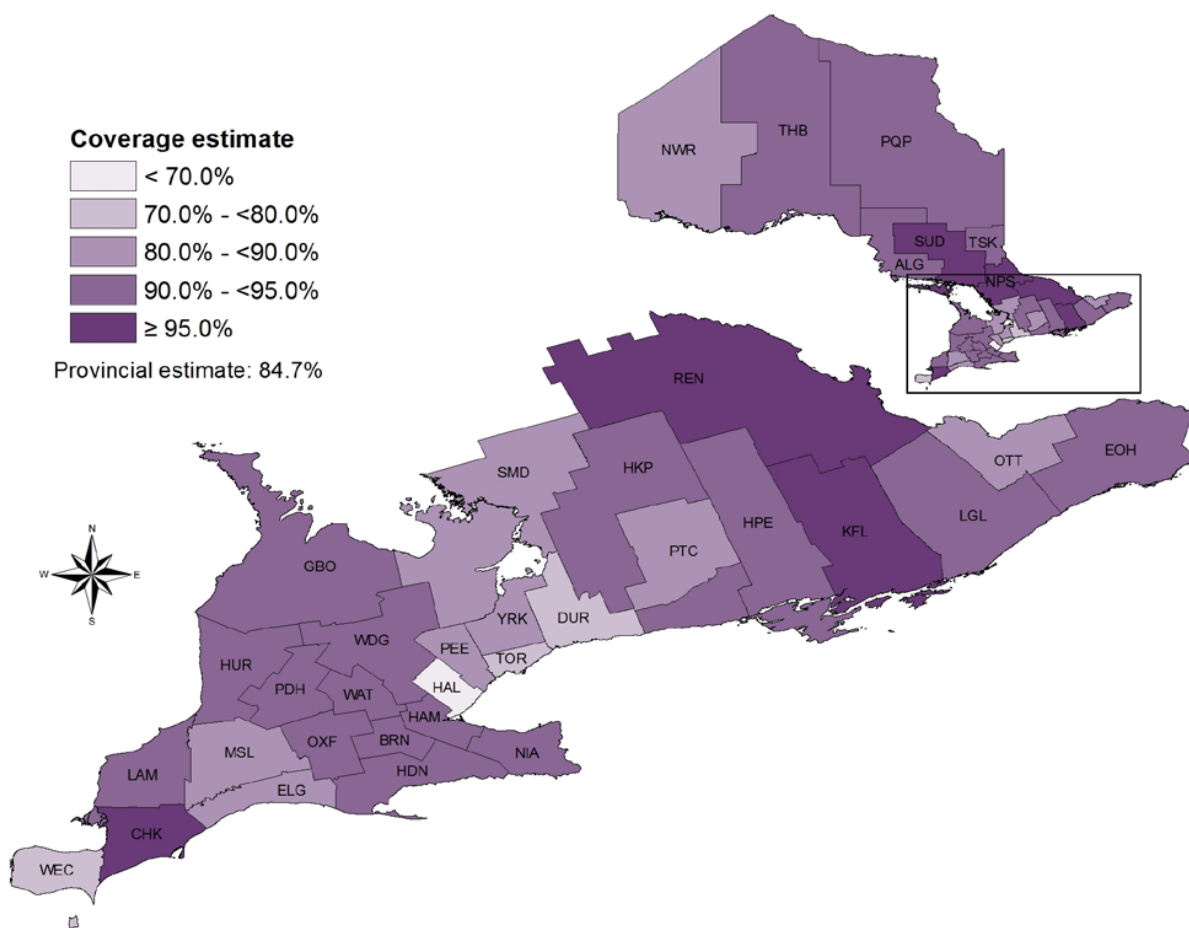
In 2017, Public Health Nurses responded to over 4800 calls, emails and in-person requests for information on immunization from health care providers and the general public.

Public Health Ontario Immunization Coverage Report for School Pupils in Ontario 2016–17 School Year

Grey Bruce was above the provincial average for all 11 vaccines covered by school immunization programs, and of those, six exceeded national goals

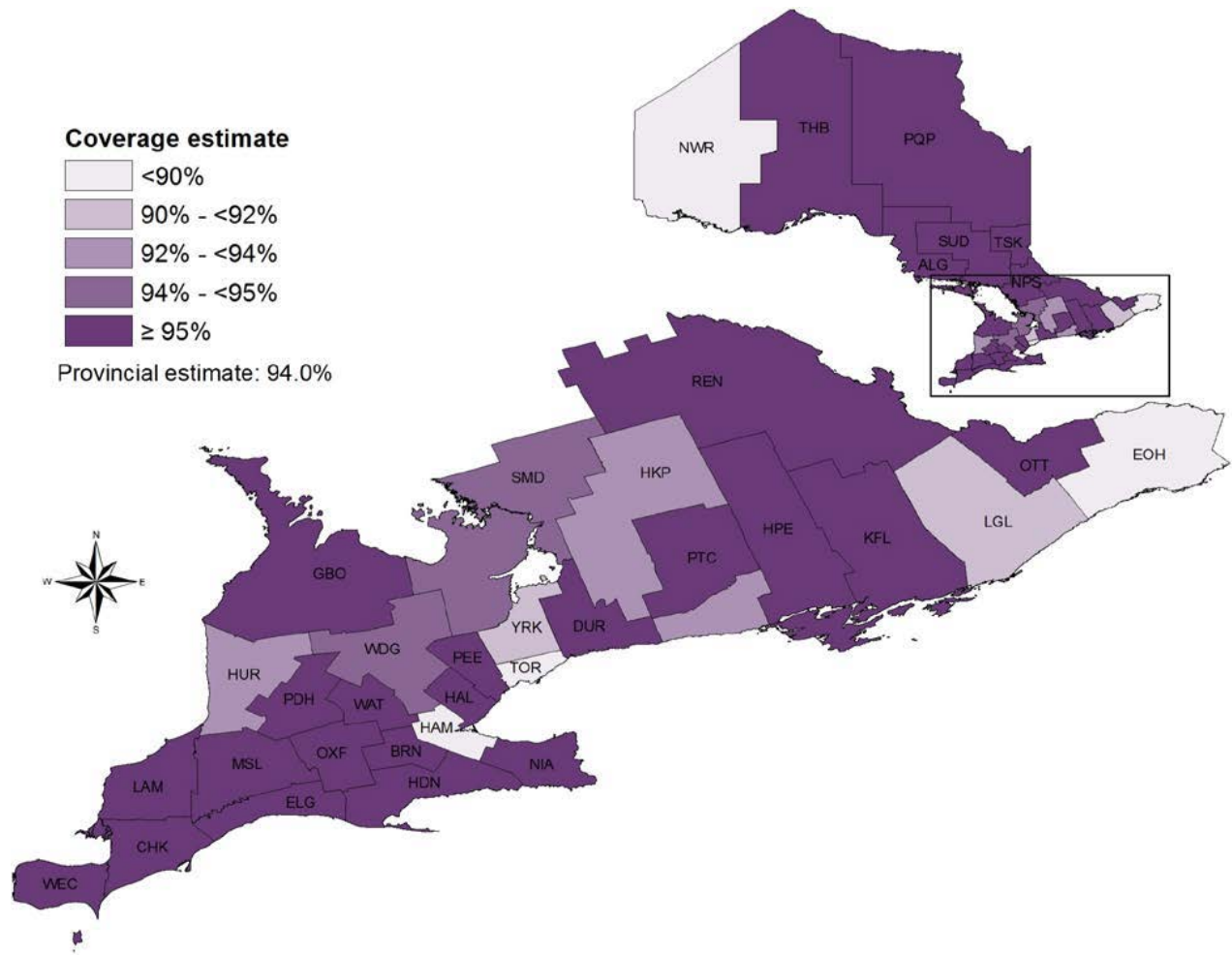
The maps in the [PHO report](#) (below) illustrates how GBHU compares to health units across the province.

Immunization coverage (%) in Ontario for diphtheria among children 7 years old by public health unit: 2016–17 school year*

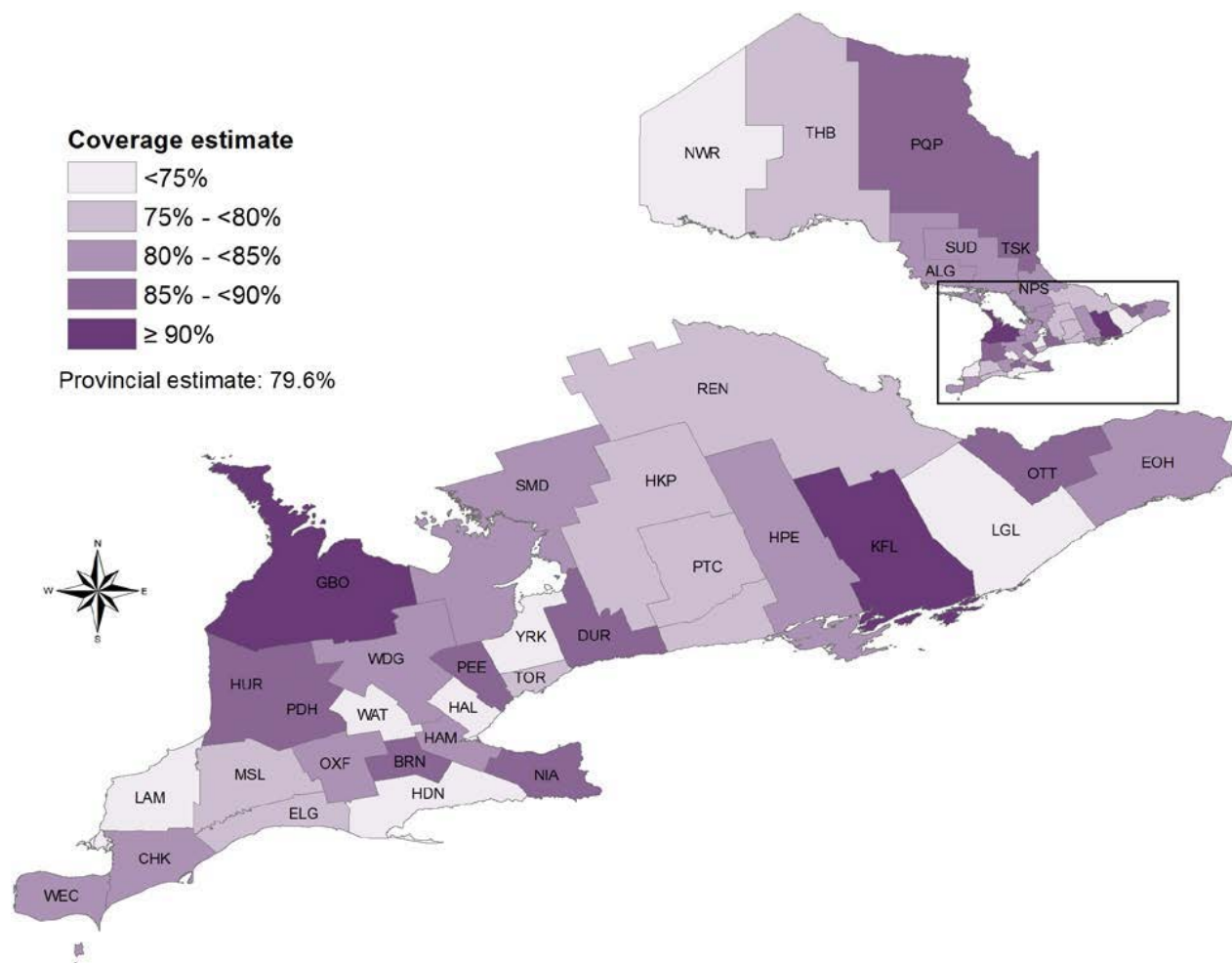


- Wide range of coverage among PHUs based on different ways PHUs capture the data.

Immunization coverage (%) in Ontario for measles among children 17 years old by public health unit: 2016–17 school year*



Immunization coverage (%) in Ontario for quadrivalent meningococcal conjugate (MCV4) among children 12 years old by public health unit: 2016–17 school year*



Note: GBHU one of two Health Units in Ontario meeting target

Dr. Ian Arra

References:

Canadian Immunization Guide. <https://www.canada.ca/en/public-health/services/publications/healthy-living/canadian-immunization-guide-part-1-key-immunization-information/page-3-benefits-immunization.html>

Working with vaccine-hesitant parent. <https://www.cps.ca/en/documents/position/working-with-vaccine-hesitant-parents>

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Immunization coverage report for school pupils in Ontario: 2016–17 school year. Toronto, ON: Queen’s Printer for Ontario; 2018.

Public Health Ontario. Immunization Coverage Report for School Pupils in Ontario. 2016–17 School Year. <https://www.publichealthontario.ca/en/eRepository/immunization-coverage-report-2016-17.pdf>



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Working with the Grey Bruce communities to protect and promote health

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Beach Management Program

The Grey Bruce Health Unit beach management program monitors water quality by testing for the indicator organism *E. coli* as well as identifying safety hazards that could cause bather injury. Prior to the beach season, an assessment at each beach identifies any potential pollution sources and safety hazards.

New in 2018, monthly sampling at 12 beaches replaced bi-weekly sampling at eight locations. Sampling occurred May 28 until August 30.

Globes Grove (Port Elgin)	Sarawak Family Park (Owen Sound)
Lion's Head Beach	Sauble Beach
Little River Park (Thornbury)	Singing Sands (Northern Bruce Peninsula)
Memorial Park (Meaford)	Southampton Beach (South Bruce Peninsula)
Northwinds (Blue Mountains)	Station Beach (Kincardine)
Point Clark (Amberley)	
Port Elgin Main Beach	

The *Operational Approaches to Recreational Water Guideline 2018* permits routine sampling once per month where historical data and environmental surveys indicate that water quality has been consistently within limits for an entire bathing season.

Long-term data shows that heavy rains, high winds and waves primarily affect beach water quality in our region. For this reason, elevated levels of *E. coli* are common after these events and the public are advised not to swim for 48 hours.

The beach management program includes a communication strategy to educate the public to use their own judgement when deciding whether it is safe to swim. All monitored beaches have permanent signs with information about conditions that may increase bacteria levels and caution bathers to avoid swimming during these times.

A beach is posted when water samples are above acceptable limits or from other environmental factors that cause the water to be unsafe. Posting a beach includes website updates, notifying the municipal partners and posting unsafe to swim signs at the beach. The posting remains until re-samples indicate the bacterial levels are acceptable. During the 2018 season, Lion's Head Beach and Southampton Beach were posted unsafe for swimming.

Immunization Coverage Rates for School Year 2016/2017

Public Health Ontario released immunization coverage rates for the school year 2016/2017 for vaccines required under the Immunization of School Pupils Act. All students in Ontario must be immunized for 9 diseases: measles, mumps, rubella, tetanus, diphtheria, polio, pertussis, varicella and meningitis. In Ontario, physicians give most infant and childhood vaccines. Adolescent vaccines for hepatitis B, meningococcal and HPV are administered through Public Health school based program to Grade 7's.

Grey Bruce has some of the highest immunization coverage rates in the province for most diseases.

Disease	Year of Birth	Grey Bruce Health Unit	Ontario	National Goal
Measles	2009	95.3	91.2	95.0
	1999	95.6	94.0	95.0
Mumps	2009	95.3	91.1	95.0
	1999	95.6	93.5	95.0
Rubella	2009	97.0	96.2	95.0
	1999	96.9	95.8	95.0
Diphtheria	2009	94.6	84.7	95.0
	1999	86.8	68.6	95.0
Tetanus	2009	94.6	84.7	95.0
	1999	86.8	68.6	95.0
Pertussis	2009	94.5	84.6	95.0
	1999	81.3	63.2	95.0
Polio	2009	95.3	85.0	95.0
	1999	95.1	92.5	95.0
Meningococcal C-Strain	2009	95.8	94.2	95.0
Meningococcal ACYW Strains	2004	91.6	79.6	90.0
Hepatitis B	2004	71.3	68.6	90.0
Human Papillomavirus	2004 (first age cohort that HPV is offered to boys and girls)	Females – 61.9 Males – 59.9	Females – 59.4 Males – 53.4	90.0 90.0
	2003 – Females only	65.5	59.6	90.0

**Coverage for school-based immunization* programs among children 12 years old:
2016-2017 school year**

	Meningococcal	Hepatitis B	Human Papillomavirus
Grey Bruce Health Unit	91.6	71.3	61.9 female 59.9 male
Ontario	79.6	68.6	59.4 female 53.4 male

*Note: School-based vaccines are administered by Public Health Nurses in schools.