

# COMMUNIQUE

Newsletter of Communicable Disease Control

July 2002 Issue #1



*Memo to Toronto physicians:*

## This newsletter is for you!

**Dear Doctor:**

I am pleased to introduce the first edition of *Communiqué*, a newsletter linking physicians in the community to communicable disease control issues at Toronto Public Health (TPH). The purpose of this newsletter is to provide you with a concise update on communicable disease and emergency response issues of interest to physicians. The plan is to produce this newsletter quarterly.

Toronto has the highest rate of most infectious diseases in Ontario due to the convergence of many unique factors. For example, sixty percent of HIV infections in Ontario occur in Toronto and the rate of tuberculosis is three times the national average.

In 2001, TPH's Communicable Disease Control Service responded to over 37,000 notifications of communicable disease and managed 270 disease outbreaks, including an outbreak of meningitis in men who have sex with men. We immunized over 30,000 individuals against influenza, assessed immunization records of students at 65% of schools and offered hepatitis B vaccine to 28,000 Grade 7 students.

### Infectious Syphilis on the rise in Toronto

For the first time in almost a decade, infectious syphilis appears to be on the rise in Toronto. In the first four months of 2002, 16 cases of infectious syphilis were reported to TPH. Thirteen of these 16 cases were reported among males 30 to 44 years of age. This is greater than the number that would be expected for men in this age group for the entire year. The majority of these cases are in men who have sex with men (MSM), including contact in bathhouses, with the rest being related to immigration from or travel to an endemic area. This increase is similar to trends being seen in other parts of Canada, the United States and Europe.

In 2002, we are implementing infection control inspections in almost 900 day nurseries and 3,500 personal service settings such as tattoo parlours, esthetic salons and piercing establishments

The events after September 11, 2001 led to the creation of the TPH Emergency Services Unit. Staff in the unit have been working with first responders and hospitals to update response protocols for bioterrorist events.

I hope that you find this newsletter to be a useful and informative resource. Any comments on the format or suggestions for the content of the newsletter are welcomed. Please feel free to contact me at 416-392-7405 or Dr. Rita Shahin at 416-338-7924.

Sincerely,

Dr. Barbara Yaffe,  
MD, MHSc, FRCPC  
Director of Communicable Disease Control  
Toronto Public Health



*"The purpose of this newsletter is to provide you with a concise update on communicable disease and emergency response issues of interest to physicians."*

### What's inside

- Infectious Syphilis on the rise
- Invasive Meningococcal Disease update and vaccine info
- West Nile Virus Q's & A's
- New Contact Information

*cont'd on page 4*

# Invasive Meningococcal Disease (IMD) Toronto, 1990-2001

**Invasive Meningococcal Disease (IMD)** is endemic in Toronto, Ontario and Canada. In the eleven years between 1990 and 2001 rates of IMD in Toronto have ranged from a high of 1.8 per 100,000 in 1990 to a low of 0.2 per 100,000 in 1998, with a case fatality rate of 11.6%. Cases of IMD occur year round, but the majority present in the winter months.

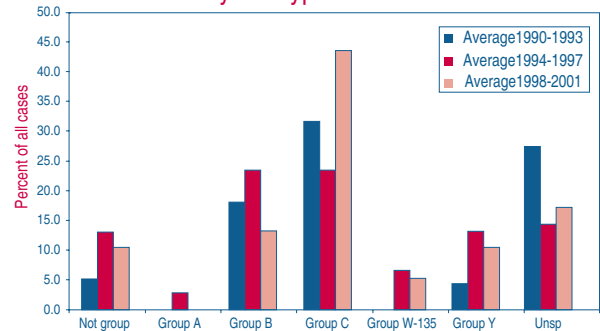
In 2001, 26 cases (1.0 per 100,000) of IMD were reported to Toronto Public Health. 92% of these cases were reported between January and July. Many of these cases were associated with an outbreak between May and July of 2001 among 20-44 year old men who have sex with men.

For the period 1990-2001, the average incidence rate was highest among children under 1 year of age (10.3 per 100,000), followed by 1-4 year olds (3.1 per 100,000) and 15-19 year olds (2.2 per 100,000).

From 1990 to 2001 serogroups C, B and Y were the most predominant in Toronto. Since 1998 there has been a resurgence in serogroup C disease. Between 1998-2001 serogroup C made up 41% of all IMD cases reported to Toronto Public

Health. This resurgence of serogroup C disease has occurred throughout much of Canada. Localised outbreaks, including the one in Toronto in the spring and summer of 2001, have been reported in five provinces (Ontario, Alberta, British Columbia, Manitoba and Quebec).

**Invasive Meningococcal Disease in Toronto by serotype 1990 - 2001**



Source: Reportable Disease Information System (RDIS), Toronto Public Health, Communicable Disease Surveillance Unit. Statistics Canada Population Estimates and Population Projections used to calculate rates. Rates for Ontario and Canada obtained from Canada Communicable Disease Report, Notifiable Diseases Annual Summary, 1999. Date: May 8, 2002

## Questions & Answers on new Conjugate Group C Vaccines for IMD

The National Advisory Committee on Immunization (NACI) recently released a statement on new vaccines for serogroup C *Neisseria meningitidis* (Nm). The following information is adapted from the statement.

### 1. What are the new vaccines?

Menjugate™ and NeisVac-C™ are two examples of new inactivated conjugate vaccines containing a carrier protein (modified diphtheria or tetanus toxin) linked to serogroup C Nm surface polysaccharides. This creates a T-cell dependent immune response increasing immunogenicity in children and an antibody booster response to multiple vaccine doses.

### 2. How effective are conjugate vaccines in preventing disease?

Preliminary data from the U.K. suggests the vaccines are 92% effective in toddlers and 97% effective in adolescents in preventing serogroup C Nm.

### 3. Who should get these new vaccines?

NACI recommends routine use for all children less than five years of age, adolescents and young adults 15 to 19 years of age; all individuals who are contacts (unimmunized household and intimate social contacts such as kissing, sharing utensils etc.) of a confirmed case of serogroup C Nm; high risk individuals (in addition to the quadrivalent polysaccharide vaccine, Menomune™) with functional or anatomical asplenia

and those with immunodeficiencies (including complement, properdin deficiencies and factor D deficiencies).

NACI indicates that these vaccines may be offered to selected laboratory workers (in addition to quadrivalent polysaccharide vaccine) and considered for students living in residence or dormitories. NACI's American counterpart has suggested that universities/colleges discuss providing vaccination against Nm but has not recommended vaccinating college students.

### 4. What is the dose and schedule for these vaccines?

They are both given as 0.5 ml IM injections. The anterolateral thigh is the appropriate site in infants less than one year of age. The deltoid should be used in older children unless the muscle is too small.

Age (for children without previous vaccination)	Series
Infants less than 4 months at first dose*	3 doses given at 2, 4 and 6 months of age
4 to 11 months**	2 doses usually given 2 months apart
12 months and above	1 dose

\* a minimum interval of 4 weeks between doses

\*\* For NeisVac-C™ 3 doses at least 4 weeks apart are needed for this age group

## 5. What are the contraindications for these vaccines?

They should not be given to those with an allergy to any component of the vaccine. These vaccines have not been studied in pregnant or breastfeeding women so their use should be determined by weighing the risks and benefits. However, these are inactivated vaccines so the risk to the fetus/newborn is likely to be low.

## 6. What are the side effects of these vaccines?

Side effects include local reactions (redness, tenderness, swelling at injection site), irritability and fever but at lower rates than with other childhood vaccines. In older children and adults, less than 10% of vaccinees experienced headaches and malaise. Severe reactions including anaphylaxis, bronchospasms, facial edema and angioedema, arthralgia, neurological disturbances (convulsions, dizziness, fainting etc.), nausea and vomiting were rarely seen (less than 1 per 10,000 vaccinated). No deaths have been reported.

## 7. Can NeisVac-C™ and Menjugate™ be given with other vaccines?

Yes. No interference with the normal immune response to PENTACEL™ (DTaP/Hib/IPV), MMR (Measles, Mumps and Rubella vaccine) and OPV (oral polio vaccine) has been seen when co-administered with these vaccines at different sites and with different syringes. There is no information on administration of these vaccines with Prevnar™, Hepatitis B vaccine or Varicella vaccine.

## 8. When should these vaccines be given to premature infants?

Premature infants should be vaccinated at the recommended chronological age.

## 9. Is there a need for revaccination with these vaccines?

There is insufficient data to predict persistence of immunologic memory beyond five years.

## 10. Are these vaccines covered by the Ministry of Health & Long Term Care?

Not yet although some health insurance carriers will pay for the cost. Close contacts of confirmed cases of Nm will be provided free vaccine appropriate for the serogroup detected.

## 11. When should the polysaccharide vaccines Menomune™ and MenAC™ be used?

Polysaccharide vaccines do not stimulate a long lasting immune response in infants and young children. They are useful when the risk of infection is from non-C Nm serogroups. Immunodeficient individuals who are at continuing risk of Nm infection should be given both a conjugate vaccine and a polysaccharide vaccine. Two weeks should elapse after giving a conjugate vaccine before giving the polysaccharide vaccine. Six months should elapse after a polysaccharide vaccine is given before giving a conjugate vaccine. It is recommended that children with immunodeficiencies be given a conjugate vaccine as an infant and then Menomune™ (a polysaccharide vaccine) at two years of age.

Vaccination is also now recommended for close contacts (household contacts and intimate social contacts such as kissing, sharing utensils etc.) of confirmed cases of serogroups A, C, Y and W-135. For confirmed serogroup C cases, conjugate vaccine is best used, for confirmed cases of A, Y and W-135 a polysaccharide vaccine is recommended.

## Physician Q's & A's West Nile Virus

### What is West Nile Virus (WNV)?

WNV is an arthropod-borne virus that mainly circulates in mosquitoes and birds (in particular Corvids, which include crows and blue jays). People are infected from the bite of a mosquito carrying the virus. WNV was first detected in the Western Hemisphere in 1999 in New York City. Since then, there have been 149 human cases and 18 deaths in 27 US states. In 2001, WNV was first detected in birds and mosquitoes in Ontario, with 41 positive birds found in Toronto. While there have been no human cases detected in Canada, it is likely WNV will be detected in Ontario again this summer.

### What are the signs and symptoms of illness related to WNV?

The majority of those infected with WNV will not require medical attention and will have no symptoms. Some infected individuals will experience a self-limited flu-like illness. Less than 1% of those infected will develop severe illness, i.e. encephalitis or meningitis. Those at increased risk of severe illness are individuals over 50 years of age and the immunocompromised. Symptoms of WNV encephalitis include headache, stiff neck, nausea and vomiting, and altered level of consciousness and mental state. There is no specific therapy for WNV encephalitis, although in severe cases intensive supportive therapy is indicated.

### What should I do if I suspect that my patient has a WNV encephalitis?

Please report suspected cases of viral encephalitis as soon as possible to Toronto Public Health at 416-392-7411 (after hours at 416-690-2142). Specimens should be sent directly to the Central Public Health Lab.

### What are the appropriate laboratory tests to order if I suspect WNV encephalitis in my patient?

Encephalitis due to WNV can not be clinically distinguished from other etiologic causes of encephalitis. If a diagnosis of WNV encephalitis is suspected, there are a number of diagnostic specimens that can be collected and sent to the Central Public Health Laboratory. Paired acute and convalescent sera should be drawn. Cerebrospinal fluid (CSF) samples and brain biopsies may also be useful in testing for the presence of WNV. For more information on the taking and handling of samples for WNV laboratory tests, contact the Central Public Health Lab, Main Virology Office, at 416-235-5725. Evenings and weekends you can contact the after hours duty officer at 416-605-3113.

### What is Toronto Public Health doing about WNV?

Toronto Public Health (TPH) has a multifaceted strategy to address WNV that includes: enhanced passive human surveillance; active mosquito and bird surveillance; the sharing of information with health professionals and the public at large; and the ongoing study of the distribution of the virus in our region. TPH is working in cooperation with the Ontario Ministry of Health and Long Term Care, Health Canada, and other local health units.

### What should I tell my well patients who are concerned about WNV?

Remind your patients that it is rare for WNV to cause illness in humans. Advise your patients to eliminate mosquito breeding grounds around their homes by getting rid of standing water and take personal precautions to reduce their exposure to mosquito bites. For more information contact the Toronto Health Connection at 416-392-7600 or the Toronto Public Health website at [www.city.toronto.on.ca/health](http://www.city.toronto.on.ca/health)

# Infectious Syphilis

cont'd from page 1

## 1. What is Syphilis?

Syphilis is a complex sexually transmitted disease caused by the bacteria *Treponema pallidum*. The primary stage of syphilis is usually marked by the appearance of a painless genital ulcer or chancre, on average 21 days after infection. This chancre lasts 3-6 weeks and usually resolves on its own. Secondary syphilis is characterized by a diffuse rash appearing 4-10 weeks after the chancre. These symptoms will also resolve on their own. Late or tertiary syphilis appears 10 to 20 years later and is characterized by serious heart, brain and bone disease. A person with untreated syphilis is most infectious in the first year. HIV infected persons who have early syphilis may be at increased risk for neurologic complications.

## 2. How is Syphilis diagnosed?

Darkfield examinations and direct fluorescent antibody tests of lesion exudate or tissue are the definitive methods for diagnosing early syphilis. A presumptive diagnosis is possible with the use of two types of serologic tests: a) nontreponemal tests – VDRL or RPR, and b) treponemal tests – FTA-ABS and MHA-TP. The non-treponemal tests are used to screen individuals at risk but must be followed by treponemal tests for confirmation of diagnosis because false-positive nontreponemal results may occur.

It is recommended that individuals at increased risk due to multiple or high risk sexual contacts (including men who have sex with men, commercial sex work and street involvement) be screened every three to six months with VDRL or RPR. In persons with symptoms suggestive of primary or secondary syphilis, both nontreponemal and treponemal tests should be ordered for diagnostic purposes.

Interpretation of syphilis serology is often difficult; advice should be sought from the STD Program at TPH or a colleague experienced in this area.

## 3. How is Syphilis Treated?

Primary, secondary and early latent syphilis is treated with Benzathine penicillin G, 2.4 million units IM in a single dose. Doxycycline, 100 mg. BID for 14 days can be used to treat patients with penicillin allergy, however, these patients should be closely followed as data to support alternate therapy is limited. Late latent syphilis should be treated with Benzathine penicillin G, 2.4 million units IM, three doses at weekly intervals. Some experts recommend treating HIV-positive patients with primary, secondary or early latent syphilis with additional treatments (eg. Benzathine penicillin G administered at one week intervals for three weeks as for late latent disease). HIV-positive patients with late latent syphilis or syphilis of unknown duration should have a CSF examination prior to treatment.

## 4. Management of Sexual Partners

All sexual partners of infected persons within the following time periods should be identified and tested:

Primary Syphilis:	3 months before onset of symptoms
Secondary Syphilis:	6 months before onset of symptoms
Early Latent:	1 year before diagnosis
Late Latent:	Assess long term sexual partners and children if appropriate

Contacts who have been exposed to early syphilis within the past 90 days should be treated presumptively regardless of their test results. Blood tests should still be done on these patients prior to administering treatment.

**For more information**, please call the Sexually Transmitted Disease Program at 416-338-2373.

**A syphilis update flyer** for distribution or posting in your office is available on-line at [www.city.toronto.on.ca/health](http://www.city.toronto.on.ca/health).

### References:

Health Canada, Canadian STD Guidelines, 1998 Edition [www.hc-sc.gc.ca/hpb/lcdc/bah](http://www.hc-sc.gc.ca/hpb/lcdc/bah)

Centers for Disease Control, STD Treatment Guidelines, 2002 <http://www.cdc.gov/mmwr/PDF/RR/RR5106.pdf>

## New Contact Information

**Reportable communicable diseases** for all areas of Toronto (including the former East York, Scarborough, Etobicoke, North York, York, and Toronto) should now be reported to our central Communicable Disease Surveillance Unit at:

CDSU, 277 Victoria St., 4th Floor

Toronto, ON M5B 1W2

Phone: 416-392-7411 After hours: 416-690-2142

Fax: 416-392-0047

**To order Hepatitis B Vaccine**, please call:

North Region – 416-338-8400 South Region – 416-338-7790

East Region – 416-3387492 West Region – 416-338-1521

**For questions relating to suspicious packages or bioterror agents** including any suspected illness, please call the Public Health Emergency Services hotline: 416-338-0069 (for healthcare workers only, this is not a public inquiry line)

**To report vaccine adverse events**, please call the Vaccine Preventable Disease Immunization Information Line 416-392-1250.

**For information about STDs** or to order medications for treatment of STD's, please call the STD Program at 416-338-2373.

**For information about TB** or to order medications for treatment of TB, please call the TB Program at 416-392-7420.

## Communiqué

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