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March/April 2005 Volume 15 (2)

## DEAR COLLEAGUES,

### Outbreaks in LTC Facilities

After a very quiet and healthy fall and early winter, February and March have kept our communicable disease team busy with outbreak control. Outbreaks are listed and updated frequently on our web connection for doctors. See [www.publichealthgreybruce.on.ca/gbdoctors](http://www.publichealthgreybruce.on.ca/gbdoctors).

If you have forgotten the password please send me an e-mail and I will supply the password.

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### Study Released: MMR Vaccine NOT Cause of Autism

Opponents to the MMR vaccine have claimed that this vaccine is responsible for the observed increase in incidence of autism in the developed world. This fear caused a decrease in immunization rates in some countries and resulting measles outbreaks.

A Japanese study looking at incidence rates of autism was just released. (Note: The MMR vaccine was withdrawn in Japan in 1993 for unrelated reasons.)

Hideo Honda of the Yokohama Rehabilitation Center and colleagues Yasuo Shimizu and Michael Rutter of the Institute of Psychiatry in London, UK reviewed records of 31,426 children born in Yokohama between 1988 and 1996. The researchers counted children diagnosed as autistic by age 7.

They found that **cases continued to multiply after the vaccine withdrawal**. The incidence rate ranged from 48-86 cases per 10,000 children before withdrawal to 97-161 per 10,000 afterwards. The same pattern was seen with the less common form of autism in which children appear to develop normally and then suddenly regress.

### Deaths From Measles Plummets Worldwide

An international vaccination campaign was launched in 2001 to curb the disease of measles. Since that time global deaths from measles plummeted 39%. Canada is one of the project partners in this UN-led effort. The goal is to reduce the death rate to 50% by the end of this year. The inexpensive and very stable vaccine has closed measles wards across developing countries and allowed scarce resources to be directed toward other health needs.

### Meningococcal Conjunctivitis

A recent case of invasive meningococcal disease following contact with a primary meningococcal conjunctivitis (PMC) led to a review of cases. The risk of invasive disease following PMC is higher among patients who are treated with only topical therapy compared with those treated with systemic antibiotics. Also the risk of secondary invasive meningococcal disease in household contacts is higher in contacts of those treated only with topical therapy. Further guidelines will be coming but the Public Health Agency of Canada recommends that patients with PMC be treated with systemic antibiotic therapy and appropriate chemoprophylaxis to eradicate nasopharyngeal carriage of *N. meningitidis*. PMC is not presently a reportable disease but Public Health is willing to follow up and do the contact tracing for this rather uncommon cause of conjunctivitis if

the primary care practitioner does report it. The full review is available at [www.phac-aspc.gc.ca/publicat/ccdr-rmtc/01vol27/dr2702ea.html](http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/01vol27/dr2702ea.html).

### Intradermal Administration of Tetanus Toxoid

There have been several Canadian reports of inadvertent intradermal administration of tetanus toxoid vaccine instead of tuberculosis skin tests. The intradermal administration of tetanus toxoid can lead to a skin reaction that would be interpreted as a positive TB skin test.

The similarity of packaging of PPD and Td may have contributed to this error. The products are in different colored boxes with different colored tops but both are multi-dose vials and require refrigeration. The graphics on the boxes are similar. We suggest physical separation of the two products, careful visual inspection, and reading of labels before administration. The Grey-Bruce area has not reported any similar incidents.

Yours truly,

Hazel Lynn, MD, CCFP, FCFP, MHSc  
Medical Officer of Health

### Vacs Facts

Corrie Marshall, Public Health Nurse  
Vaccine Preventable Diseases Program

### Is it Safe to Inject Multiple Vaccines at the Same Time?



Young infants (2-6 months) are fully capable of generating protective humoral and cellular immune responses to multiple vaccines simultaneously. Scientists estimate the immune system can recognize and respond to hundreds of thousands, if not millions, of different organisms.<sup>1</sup> Advances in chemistry, namely the replacement of whole-cell with acellular pertussis

vaccine, have significantly reduced children's exposure to antigens.<sup>2</sup> Although we now give children more vaccines, the actual number of antigens they receive has declined. The vaccines recommended today contain less than 4% of the antigens in 1980.<sup>2</sup>

Reduction of Proteins in Recommended Vaccines	
11 vaccines recommended today	< 130 proteins
7 vaccines recommended in 1980	> 3,000 proteins

The New Ontario Childhood Immunization Schedule is recommended by Health Canada and the Canadian Paediatric Society.<sup>1,3</sup> Following the routine schedule protects children from diseases sooner and from consequent secondary bacterial infections occasionally caused by natural infections.

<sup>1</sup> Canadian Immunization Guide Sixth Edition. Health Canada. 2002.

<sup>2</sup> Offit PA, et al. Addressing Parents' Concerns: Do Multiple Vaccines Overwhelm or Weaken the Infant's Immune System? Paediatrics. 2002;109:124-129.

<sup>1,3</sup> Canadian Paediatric Society. Routine Immunization Schedule: update 2004. Paediatric Child Health. 2004;9:17-19.



Linda Yenssen and Marguerite Thomas, Public Health Nurses  
Injury Prevention Program

### Injuries: The Silent Epidemic:

"No more accidents! Call it what it is" is a campaign inspired by Dr. Robert Conn, CEO of Smartrisk, the national injury prevention organization. Dr. Conn states that 90% of all injuries are not "accidents" or acts of fate - they are predictable and preventable. Injuries cost Canadians \$8.7 billion annually.

The Public Health Unit spearheaded a campaign last year aimed at encouraging more accurate descriptions of injuries. Public Health staff contacted partners in the community and asked them to "call it what it is", by replacing the word "accident" with words like injury, collision, incident or crash.

Language is very powerful. Attitude comes before action. Thinking and saying that injuries are preventable rather than unavoidable accidents can help lead to safer behaviour.

On March 21, at the Ontario Injury Prevention Conference in London Ontario, the South West Injury Prevention Network announced that it would be launching its own version of this campaign. Each member of the network will be adapting Grey-Bruce "No More Accident" resources for their own areas by working with media and health care professionals.

How can you help? Change doesn't come easily but you can get started by avoiding use of the word "accident" when documenting patient charts. When you talk to your patients, give public presentations or interview with the media, please make a conscious effort to use the words that describe the situation, like injury, collision, incident or crash.

Please visit our website at [www.publichealthgreybruce.on.ca](http://www.publichealthgreybruce.on.ca), click on "Injuries", and follow the links under "Injuries: The Silent Epidemic" to learn more about this campaign.

## Influenza Update

*Debby Minielly, Public Health Nurse  
Infectious Diseases Team*

The influenza season had a slow start this year with only one local case in December as compared to 54 in December of 2003. Provincially, overall activity is lower than the previous season but is still increasing at this time.

To date, Grey-Bruce has received reports of 32 lab-confirmed community cases of influenza. Of these, 26 have been influenza A and the other 6, influenza B. Fourteen of these 32 cases (47%) were immunized.

We received confirmation that 4 of our early January cases were sub-type A/Fujian/411/02-like and therefore a good match to this year's vaccine. This vaccine covered A Fujian/411/2002(H3N2)-like, A/New Caledonia/20/99(H1N1)-like and B/Shanghai/361-like strains. However, we expect that sub-type A California/7/04-like may account for many of our other cases. The National Microbiology Lab recently confirmed the circulation of this new strain of the H3N2

virus in specimens submitted from several regions in Ontario. This strain is related to A/Fujian/411/02-like and therefore this year's vaccine is expected to provide some level of protection against this new variant. The WHO recommended that the vaccine for the 2005-2006 Northern Hemisphere season contain the A/California/7/04-like virus.

Grey-Bruce experienced outbreaks of influenza in five long-term care facilities (LTCF) so far, the first occurring in a facility reporting only 48% of staff being immunized. According to national surveillance indicators, the impact of influenza on LTCF appears to be more severe this season as the number of reported outbreaks per week is higher than last year and continues to increase. In light of the prevalence of the A/California strain, the MOHLTC recently made recommendations regarding prophylaxis for all staff in LTCF regardless of immunization status with significant illness in more than two vaccinated staff.



All declared respiratory and enteric outbreaks are posted on the Health Unit's secure web site for physicians.

## Influenza Vaccine Coverage for Staff of Nursing Homes, Homes for the Aged, Retirement Homes and Hospitals

*Debby Minielly, Public Health Nurse  
Infectious Diseases Team*

Every year the Public Health Unit encourages long-term care facilities and hospitals to meet and exceed the minimum standard of having 70% of staff of these facilities immunized against influenza. This standard is necessary to achieve "group immunity" and therefore reduce the risks and resultant consequences of influenza outbreaks. The optimum situation is 100% immunization.



The vast majority of our long-term care facilities regularly meet and exceed this standard but only one hospital, Hanover District Hospital, met this standard this year and, indeed, achieved 81%; Lion's Head is close at 69%. Please refer to the chart on the next page.

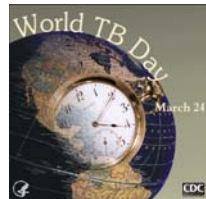
		2003/ 04	2004/ 05
Long Term Care Facilities	Number below 70% standard	4	3
	Number meeting or exceeding 70% standard	31	34
	Percentage of all staff immunized	83	83
	Percentage of residents immunized	93	95
Hospitals	Number below 70% standard	11	11
	Number meeting or exceeding 70% standard	1	1
	Percentage of all staff immunized	59%	59%

The staff of the Public Health Unit plays a key role in all aspects of influenza prevention, immunization and supports to outbreak management. Practising what they preach, the staff achieved 96% vaccine coverage this year!

### World TB Day

**March 24, 2005**

*Debby Minielly, Public Health Nurse  
Infectious Diseases Team*



The World Health Organization declared March 24th World TB Day, commemorating the day in 1882 when Dr. Robert Koch announced his discovery of the cause of tuberculosis (TB): the TB bacillus. World TB Day serves to remind us that TB remains an epidemic out of control in much of the world.

It is estimated that one third of the world's population is infected with the TB bacillus. There were an estimated 8.4 million new cases of tuberculosis in 1999. Despite the fact that effective cures have been available for decades, TB remains the world's leading infectious disease killer, taking up to three million lives each year.

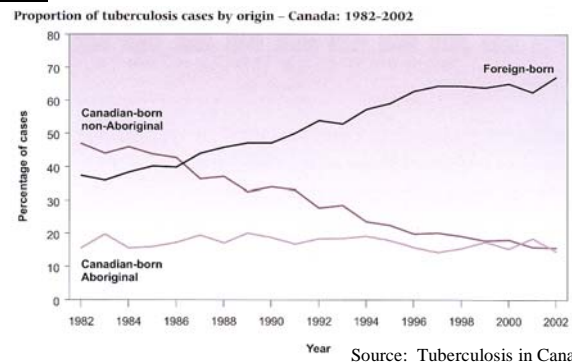
In Canada, after several decades of decline, the annual incidence rate of TB has remained essentially stable for the last decade, with approximately 1,700 new cases reported annually. Canada continues to have certain population groups that are at increased risk of

developing disease. These groups include foreign-born individuals from countries with a high prevalence of TB, aboriginal peoples, HIV infected individuals, those who have spent time in a correctional facility, and those who are homeless or use shelters.

In response to the global epidemic and the changing epidemiology of TB in Canada, Tuberculosis Prevention and Control (TBPC) has strengthened its leadership role in TB policy and program initiatives through the co-ordination of several key activities including various surveillance activities (e.g. multi-drug resistance, TB in correctional facilities) and targeted research such as TB and HIV co-infection.

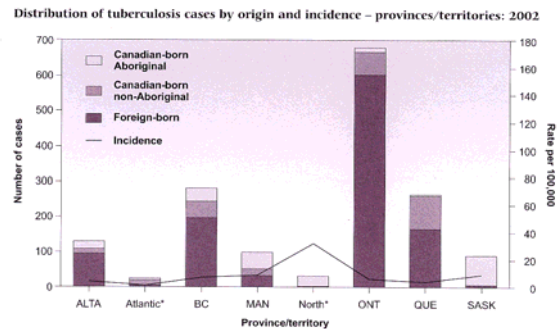
There has been a steady increase in the proportion of reported TB cases among the foreign-born population, a decline among Canadian born non-aboriginal people and a relatively constant proportion among Canadian-born aboriginal people. Please see Figure 1.

**Figure 1**



The distribution of TB cases by origin shows the provinces of Ontario and Alberta reporting the highest proportions of foreign-born cases (87% and 73% respectively). Please see Figure 2. We also know that more than half of the 250,000 immigrants coming into Canada yearly come to Ontario and about 80% of these come to Toronto.

**Figure 2**



Here in Grey-Bruce, in 2004, the Public Health Unit was involved in approximately 25 TB investigations and 2 active cases.

There are many excellent resources available for clinicians and other health care professionals. The following are just a few:

Canadian Lung Association: <http://www.lung.ca>  
 CDC TB News and Updates: <http://www.cdc.gov/nchstp/tb/>  
 CDC Self Study Module for TB: <http://www.phppo.cdc.gov/PHTN/tbmodules/default.htm>  
 Public Health Agency of Canada Tuberculosis Prevention and Control (TBPC) Surveillance and Other Reports: <http://www.phac-aspc.gc.ca/tbpc-latb/index.html>

Clinicians, please watch for a handy TB skin testing pocket guide in your vaccine bag during the month of April. We still have copies available of the 2003 (3rd) edition of “Tuberculosis: Information for Health Care Providers” from the Lung Association. Please call the Public Health Unit at 376-9420, ext. 257, if you need one.

**References**

Tuberculosis Prevention and Control: World TB Day [Internet]. Canada: Public Health Agency of Canada; 2004 December 16; Available from: [http://www.phac-aspc.gc.ca/tbpc-latb/wtbd\\_e.html](http://www.phac-aspc.gc.ca/tbpc-latb/wtbd_e.html)

Ellis, E.; Phypers, M.; Sauvé, L.; Sheardown, C.; Allegakone, M. Tuberculosis in Canada 2002. Ottawa, ON: Public Health Agency of Canada; 2002. 88p.

Tannenbaum, Dr. Terry-Nan. Urban TB Issues. Proceedings of a Conference: Tuberculosis Conference 2004 held at the Crowne Plaza Toronto; 2004 Nov 15-16; Toronto, ON.

**How Do Your Patients Measure Up?**

Sharon Dinsmore, RD  
 Chronic Disease Program

Public Health Unit staff is continuing to spread the message of the importance of healthy weights and healthy eating. In 2004, new guidelines were released for body weight classification in adults.

**Defining Healthy Weights**

For adults, Health Canada uses an international body weight classification system that takes into account two key health-related risk factors:

1. How much people weigh for their height (Body Mass Index or BMI)
2. Where they carry their excess fat (Waist Circumference or WC)

**Table 1: Health Risk Classification According to Body Mass Index**

Classification	BMI Category (kg/m <sup>2</sup> )	Risk of Developing Health Problems
Underweight	< 18.5	Increased
Normal Weight	18.5 – 24.9	Least
Overweight	25.0 – 29.9	Increased
Obese		
Class I	30.0 – 34.9	High
Class II	35.0 – 39.9	Very high
Class III	> 40.0	Extremely high
Note: For persons 65 years and older the “normal” range may be a BMI of 20 to 27.		

*Adapted from WHO (2000) Obesity: Preventing and Managing the Global Epidemic: Report of a WHO Consultation on Obesity*

The risk of developing health conditions associated with overweight and obesity is greater for people who carry most of their excess fat around the abdomen than it is for people who carry their excess fat around the hips and thighs. Waist circumference is a quick and practical indicator of the health risk associated with excess abdominal fat. People who have a high BMI and carry most of their weight around their abdomen are at the highest risk for health problems. See Table 2.

**Table 2: Health Risk Classification According to Body Mass Index and Waist Circumference**

		BMI		
		NORMAL	OVERWEIGHT	OBESE
WC	<102 cm (Males)	Least Risk	Increased Risk	High Risk
	< 88 cm (Females)			
	> 102 cm (Males)	Increased Risk	High Risk	Very High Risk
	> 88 cm (Females)			

*Adapted from: National Institute of Health (1998) Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report*

BMI and WC are for adults age 18 and older and not for pregnant or breastfeeding women. The Canadian Guidelines for Body Weight Classification can be found online at [www.healthcanada.ca/nutrition](http://www.healthcanada.ca/nutrition).

For children and adolescents, the US Centre for Disease Control (CDC) BMI-for-Age charts are recommended. These charts have been endorsed by four health professional organizations in a collaborative statement released in 2004. The growth charts for the 2- to 20-year-olds can be found online at [www.cdc.gov/growthcharts](http://www.cdc.gov/growthcharts).

People need to realize that even a small amount of weight loss can have a positive impact on blood sugar, blood pressure and cholesterol levels. Losses as little as 4.5 kg have been shown to increase longevity in obese individuals.

Research has proven that fad diets are ineffectual for long-term weight control, as 95% of fad dieters regain their weight. Repeated cycles of weight loss and weight gain increase the health risks more than being overweight.



### Healthy Eating Tips

The top three recommendations to mention to your patients are:

1. Eat breakfast. The National Weight Registry found that individuals who regularly consume breakfast are more successful in maintaining their weight.
2. Emphasize higher fibre foods. Fibre-rich foods such as whole grain breads, cereals and pastas are more filling than white. Vegetables and fruit bulk up meals with nutrients and taste for only a few calories. Limit fruit juice to 8 oz/day.
3. Watch the portion size. Commercially prepared foods have almost doubled over the past 20 years. Research shows that the bigger the serving put in front of us, the more we eat. Keep in touch with appetite, eat slowly and only when hungry.

Weight loss is about balancing everyday choices, not cutting our favourite foods or going to extremes.

For more nutrition information call the Public Health Unit or visit <http://www.dietitians.ca>

## Cervical Cancer and HPV Vaccine

*Karen Croker, Reg.N., M.Ed.*

*Public Health Nurse, Cancer Prevention Program*

High-risk human papillomaviruses (HPVs) are now recognized as the etiologic agents of invasive cervical cancer. A single HPV type (type 16) is responsible for about 50% of these cancers. If combined with the second most common HPV type (type 18), this incidence increases to 80%. (Taman, S. 2005, University of Toronto) The major capsid protein of papillomaviruses, L1, when expressed by recombinant DNA technology, has the intrinsic ability to assemble into virus-like particles (VLPs). In a recent study, a vaccine based on HPV 16 VLPs was tested in a placebo-controlled trial in young women in the United States. The vaccine was found to prevent 100% of incident persistent HPV 16 infections and HPV 16 associated cervical intraepithelial neoplasia. (Gravitt and Shah. Current Infectious Disease Reports 2005, 7: 125-131.)

These results indicate that cervical cancer can be prevented by an HPV based vaccine. The phase III trials for women have been completed. Studies with men and HIV-infected individuals are in progress.

The WHO stresses the importance of maintaining existing cervical screening programs while long-term studies are conducted. Thus, early detection of cervical cancer by screening and treatment will remain the most important measures for controlling cervical cancer in the next few years. (Pagliusi and Aguado, Vaccine. 2004 Dec 16; 23 (5): 569-78)

The Canadian Cervical Screening Program relies largely on the health professionals who collect the Pap smears to inform women of the screening program. Family doctors, and other health professionals, are key to educating women about reducing their risk of HPV and cervical cancer.

Reducing the risk of HPV and cervical cancer involves:

- delaying sexual activity until late teens
- limiting number of sexual partners
- avoiding tobacco smoke
- screening Pap test regularly
- eating 5-10 vegetables and fruits per day
- using condoms to protect against other sexually transmitted infections such as chlamydia and gonorrhea
- exercising 30 – 60 minutes per day

### Reference

Cancer Care Ontario, 2005.

## New Ontario Childhood Immunization Schedule

Corrie Marshall, Public Health Nurse  
Vaccine Preventable Disease Program

As of January 1, 2005, three new vaccines have been added to the recommended schedule of routine childhood immunizations. They include the pneumococcal conjugate, meningococcal C conjugate and varicella vaccines. There are also changes to the scheduling of vaccines. The immunization schedule for children beginning immunization in early infancy is as follows:

### Immunization Schedule For Publicly Funded Vaccines

Age at Vaccination	DTaP – IPV Hib	Pneumococcal (conjugate)	MMR	Meningococcal-C	Varicella	Hep B	dTap	Td	Flu	Pneumococcal (polysaccharide)
2 months	XX	X								
4 months	XX	X								
6 months	XX	X								
12 months			X	X (or)						
15 months		X			X					
18 months	XX		X							
4-6 years	X									
12 years				X (or)		X				
14-16 years							X			
15-19 years				X (or)						
Adult								X		
Every year									X	
Seniors										X

#### Note the following changes and additions:

- Change in the recommended time for the administration of the second MMR (measles, mumps, and rubella) dose to 18 months of age, from 4 to 6 years of age.
- Change in the recommended time for the administration of the varicella vaccine to 15 months of age, from 12 months of age.
- Pneumococcal conjugate vaccine is available as a routine immunization to all children born on or after January 1, 2004, who are under 2 years old. Scheduling and number of doses of vaccine depends on the age of the child. It is also available for high-risk children who are currently under 2 years of age and for those 24 to 59 months of age.
- Meningococcal C conjugate vaccine is available as a routine immunization for all:
  - 1-year-old children born on or after September 1, 2003 who are under 2 years old, or
  - children 12 years of age, or
  - 15-19-year-olds, and
  - high-risk persons of all ages
- Varicella vaccine is available as a routine immunization for all:
  - 1-year-old children born on or after September 1, 2003
  - 5-year-olds who have not had the varicella disease
  - high-risk persons of all ages

Publicly Funded Immunization Schedules for Ontario (Schedules) have been sent out to physicians' offices. Additional copies are available from the Ontario Government Pharmaceutical and Medical Supply Service (OGPMSS).