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Growing up without tobacco

According to The World Health Organization, approximately 3.1 million people died of tobacco caused diseases in 1995. Of the 3.1 million that died, 1.9 were from industrialized countries and 1.2 million were from developing countries. It is estimated that these figures will increase by 10 million by the year 2020, three million in the industrialized countries and seven million in the developing countries. Individual lifelong smokers have a 50% chance of dying from tobacco; furthermore, 25% of all smokers will die before the age of seventy. Cigarette smoking is an addiction that is the main preventable cause of diseases such as lung cancer, heart diseases, respiratory diseases and low birth weights in newborn babies.

Dealing with the pandemic

The World Health Organization's ten point plan to deal more effectively with the tobacco addiction pandemic:

- protect children from addiction;
- implement fiscal policies to discourage tobacco use;
- allocate a portion of tobacco taxes to finance tobacco control and health promotion activities;
- implement culturally-based health promotion, education and smoking-cessation programs;
- prevent involuntary exposure to tobacco smoke (passive smoking);
- eliminate socioeconomic and other incentives that maintain and promote tobacco use;
- eliminate all tobacco advertising, promotion and sponsorship;
- control tobacco products using health warnings and mandatory reporting of toxic constituents;
- promote economic alternatives to tobacco growing and cigarette manufacture; and
- effectively manage, monitor and evaluate tobacco issues.



This issue of EpiNorth looks at a number of tobacco-related topics including: youth addiction, smoking during pregnancy and risks to children when exposed to environmental tobacco smoke. Other topics include active living, ear infections, assessing hearing loss, breast and cervical health, influenza and much, much more. Enjoy this information-packed issue.

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Youth Addiction:

Adults who are “regular” smokers (that is, individuals who smoke cigarettes every day), often began smoking casually as teenagers and then became addicted. Recent surveys show more youths are starting to smoke at a younger age. In the NWT, the age of smoking initiation is between five and nine years of age. Within this age group there are more “occasional” smokers (those children who smoke but not every day), than there are regular smokers. This is also observed with the 10-14 year old age group. By the time the 15-19 year old age group is reached, there are many more regular smokers than occasional smokers. This is so because by the time a youth reaches 15-19 years of age, he or she has already become addicted to nicotine. So, the younger the youths are when they start smoking, the more likely they are to become very addicted to nicotine.

According to a World Health Organization fact sheet, experts in the field of substance abuse consider tobacco dependency to be as strong or stronger than dependence on such substances as heroin or cocaine. Moreover, because the typical tobacco user receives daily and repeated doses of nicotine, addiction is more common among all tobacco users. Among addictive behaviours, cigarette smoking is most likely to take hold during adolescence. A study found that 42% of young people who smoke as few as three cigarettes become regular smokers.¹

Reasons for youth smoking

Going through adolescence can be a difficult and confusing time for some teenagers. During this period in their lives, teens are trying to fit into their environment (i.e. who to hang out with, how to dress, what to participate in, etc.). To “fit in” and be accepted, teens will pick up behaviours that they think are “cool” and acceptable to them and their peers. Cigarette smoking is one such behaviour and the reasons listed for taking up smoking include:

1. Peer pressure from friends (i.e. to gain acceptance in a group).
2. To project a particular image (i.e. sexy and cool), as seen through the media.
3. To look and feel like an adult; independence.
4. Seeing parents and other family members smoke.
5. Seeing other adults, i.e. politicians, medical professionals, actors and musicians smoke.
6. Live in a community where most of the people smoke.
7. Curiosity.
8. To deal with stress.

9. To rebel; go against those who say not to smoke.²

These factors work together to influence youth smoking. When looking at male and female smoking rates one clearly sees that more girls than boys are lighting up cigarettes. A survey done in the NWT indicated that more girls smoke than boys in both the 10-14 years and 15-19 years age categories.³ So, why are more girls than boys cigarette smokers?

Reasons for adolescent girls to take up smoking

As young girls move through adolescence, they experience dramatic physical changes, social relationships become more complicated, and family relationships can become strained. Many young people have not developed coping skills. When faced with these pressures, adolescent girls may start smoking. Once tobacco becomes part of their routine, physical addiction is usually close behind. With a learned dependence on cigarettes and a physical addiction to nicotine, young girls often continue to smoke well into adulthood.⁴

Some of the reasons why teenage girls start smoking follow. Some girls are:

1. Concerned about their image and identity as mature, attractive, confident, independent young adults.
2. Influenced by what their peers do.
3. Stressed because of things happening at home, school or work.
4. Worried about their relationships with parents, friends and teachers.
5. Facing difficult financial and emotional issues.⁵

Smoking and body image

One other reason young females give for smoking is to control weight. While smoking cigarettes to stay thin is a myth, some teenage girls believe it to be true. Maintaining an ideal weight is just one aspect of a larger issue for young women — body image. Many girls develop a negative body image because they are continually comparing themselves to idealized images of women — images that are promoted by tobacco advertising and through the media.⁶

One study, published in the *Postgraduate Medical Journal*, assessed 3,000 schoolgirls in London and Ottawa between the ages of 10 and 17.⁷ Researchers found that a third of girls they asked gave

Reasons for Youth Smoking

weight gain as a reason not to give up smoking and 25% said it made them less hungry.

A BBC health survey revealed that:

1. Smoking cigarettes was more prevalent among 15 and 16 year olds.
2. The girls who did smoke were 30% more likely to be overweight and eat too much than girls who did not smoke.
3. Girls were three times more likely to pick up smoking after starting their periods.
4. Girls who drank alcohol were seven times more likely to be smokers.⁸

From this survey, the association between smoking and controlling weight is an idea that some young girls strongly believe. In fact the weight control that they experience is associated with other factors:

Smokers told the researchers they had lost 7 kg (more than 14 lbs) or more since puberty, which they associated with smoking. These girls were also the ones most likely to resort to vomiting to control their weight.⁹

So, for preteen and teenage girls smoking cigarettes is not only due to an addiction to nicotine, but it is seen as a device that they think can help them control their weight. Also, smoking may make them feel in control especially if they are dealing with pressures that they perceive they do not have control over. The control girls may feel when smoking cigarettes comes from the actions of smoking itself because their hands are doing something, such as holding a cigarette, lighting a cigarette and taking a drag from a cigarette.¹⁰

The reasons why boys take up smoking may not be as complex as the reasons why girls take up smoking. For boys, the decision to light up a cigarette may be made because it makes them look cool, rugged or dangerous, along with the reasons for youth smoking outlined earlier.

How a youth thinks

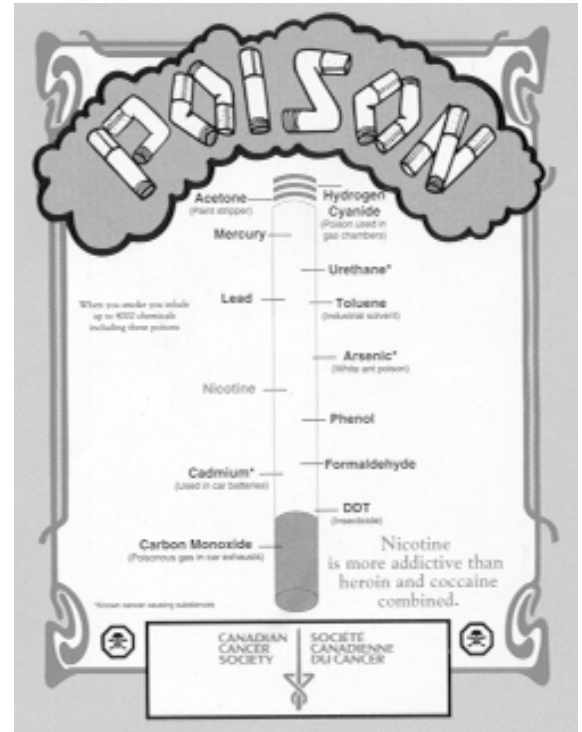
Another issue that should be examined when looking at youth smoking is how preteens and teens think and see themselves. Teenagers think differently than adults. Curiosity and imitation lead preteen and teen thinking. Also, youths see themselves as invincible, able to do anything with little risk of injury to themselves and they will do things that will draw attention to themselves, a popularity issue.

Some of the reasons behind youth smoking that are listed above can help explain why the rate of youth smoking in the NWT is very high. Preteens and

teens in the NWT are exposed to an environment where, as the 1996 Drug and Alcohol Survey states, 50.9% of adults smoke. This means that half the adult population smokes; therefore, there is a very good chance that youths are observing cigarette smoking behaviour. Also, the environment or community in which youths are living in can contribute to how likely a youth will initiate the smoking habit. For example, if a youth is living in an environment or community where most of the population is smoking cigarettes, there is a higher chance of the youth picking up the habit than a youth who is not in such an environment. In NWT communities where smoking is seen as the norm, youths who decide to smoke may feel the need to fit in and show others that they belong.

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Smoking During Pregnancy:

Smoking rates among pregnant women

According to the *Health Canada Survey on Smoking*, 28% of Canadian women smoke. One-third of women 20-24 years of age smoke. Among current women smokers, 58% smoked during their last pregnancy.¹ Other studies confirm that between 30-40% of women smoke prenatally and about 20-35% continue to smoke during pregnancy.² One Ontario study found that, overall, 25% of women continued to smoke during pregnancy, however, among adolescents, single women and women having less than a Grade 11 education, smoking rates were as high as 50%.³

Disadvantaged women and their families are more likely to smoke than well-educated parents. Reasons for continuing to smoke include addiction, using smoking as a way to cope with stress and a lack of support for quitting.²

In the NWT, smoking rates during pregnancy are higher than the national average. Fifty-nine percent of women in the NWT reported smoking during pregnancy. Seventy-eight percent of Inuit, 63% of Metis, 60% of Dene and 25% of non-Aboriginal women reported smoking during pregnancy (Table 1).

Table 1: Smoking Among Pregnant Women in the NWT⁴

Ethnicity	Smoking Rates
Inuit	78%
Metis	63%
Dene	60%
Non-Aboriginal	25%
Average	59%

Smoking rates also varied by age, with women under 25 smoking more than older women. In the under 18 age group, smoking rates actually increased slightly during pregnancy.⁴

Aboriginal smokers are more likely than non-Aboriginals to smoke as much as usual *during pregnancy*. They composed 73.9% of the smokers that continued to smoke as much as usual. However, more women either cut down or quit smoking entirely during their pregnancy (41.3%) than did their spouses (20.9%). Of the smokers that continued to smoke as usual during their or their spouse's pregnancy, almost half (45.0%) were in the 45 or over age group.⁵

Smoking at a young age in the NWT is also a cause for concern, especially among girls. *The Tobacco Use Study in the NWT* found that in the total school population 33% of students aged 10-19 smoked (either regularly or occasionally). Girls (38%) were more likely to smoke than boys. Current smoking rates were greatest among Inuit youth. By age 19, 69% of Inuit youth were smokers, compared to 60% of Dene/Metis and 30% of non-Aboriginal youth. Within each ethnic group, girls smoked more than boys.⁶

Exposure to second-hand smoke

Only 9.8% of NWT smokers stopped smoking during their or their spouse's pregnancy, with the Western NWT rate being 11.2% and Nunavut being 7.5%. Nationally, 24.5% of spouses quit smoking during their spouse's pregnancy. Almost nine out of ten (88.7%) residents of Nunavut and eight out of ten (80.6%) in the Western NWT report that they had a parent that smoked when they were a child.⁵

The harmful effects of smoking

A pregnant smoker has about twice the risk of delivering a low-birthweight baby compared to a non-smoker. Exposure of a pregnant woman who does *not* smoke to second-hand or environmental tobacco smoke (ETS), can also affect the growth and development of the fetus.

The harmful effects of smoking during pregnancy on mother and fetus are well-known. These effects include an increased risk of cardiovascular and pulmonary diseases and cancer in the mother. Low-birthweight, being small for gestational age, premature birth, congenital defects, abruptio placentae, spontaneous abortion, ectopic pregnancy and perinatal mortality are all also linked to prenatal smoking.

Nicotine and carbon monoxide — the two main toxins in cigarettes — have specific effects on the fetus. Nicotine impairs circulation between the uterus and placenta, causing narrowing of the blood vessels. Carbon monoxide binds with fetal hemoglobin, reducing the amount of oxygen to the fetus. Combined, there is inadequate oxygen and nutrient flow to the fetus, increasing the risk of retarded fetal growth.

Other effects attributed to smoking during pregnancy include higher mortality rates in the first year of life and long term morbidity in the form of decreased physical growth and poor cognitive performance. Exposure to ETS is a risk factor for Sudden Infant Death Syndrome. In addition, smoking alters the sense of taste. Smokers are less likely to eat vegetables or fruit. Smokers may be

A Risk Factor in Healthy Birth Outcomes



at higher risk for nutrient deficiencies, especially of B vitamins, vitamin C, folate, beta carotene and selenium.⁷

Smoking cessation in the first two trimesters has been shown to eliminate many of the harmful effects of smoking.²

Smoking cessation among pregnant women

Most pregnant women continue to smoke during and after their pregnancy. About one-quarter to one-half of smokers who don't smoke during their pregnancy return to smoking within 6 weeks after the birth of their babies.⁷

Health promotion programs aimed at tobacco harm reduction can help women in their child-bearing years, as well as prenatal women and their partners, achieve healthier birth outcomes in the NWT.

Some communities are addressing smoking cessation through Community Wellness funding initiatives, such as through Brighter Futures or the Canada Prenatal Nutrition Program (CPNP) Funding.⁸ Some examples include:

- The Baker Lake Prenatal Nutrition Program has adopted a "no smoking" policy during their education and cooking sessions and during their breaks.
- Other CPNP programs are either aware of the need to address smoking among pregnant women or are helping to address it in their prenatal programs. For example, seven CPNP programs developed objectives related to providing information and education about the dangers of smoking during pregnancy and five projects provided information on the harmful effects of tobacco during pregnancy.⁹
- Aklavik addressed smoking during National Addictions Awareness Week.
- A behaviour modification workshop held in Fort Good Hope included smoking cessation for students.
- The Inuvik youth coordinator worked with the

Canadian Cancer Society to develop a video about smoking and teens.

- The Tobacco Demand Reduction Strategy provided funding to the Canadian Cancer Society to work with youth to address the issue of tobacco use and sales to youth.

Specific ways to help *pregnatal women* quit or decrease the risk from smoking or ETS could include:

- non-smoking environments where prenatal women can meet, for example, at prenatal nutrition programs or in non-smoking homes;
- encouraging spouses to quit smoking when their partners are pregnant; and
- creating appropriate and successful smoking cessation programs for prenatal women.

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Study Confirms That Maternal Smoking is Strongly Related to Intrauterine Growth Retardation and Sudden Infant Death Syndrome

A study conducted in Liverpool, England demonstrates the risk of SIDS is 4.85 times greater for infants born to smoking mothers. Infants of smokers also showed asymmetrical growth retardation, as determined by the occipitofrontal circumference ratio divided by the birthweight ratio. (Source: *Int J Epidemiol* 1998;27:238-241)



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Environmental Tobacco Smoke and the Risk of Adverse Respiratory Events on Children Receiving General Anesthesia

There is a growing body of knowledge on the health effects of second-hand or environmental tobacco smoke (ETS). The recent study by Skolnick, et al., published in the May 1998 issue of *Anesthesiology* (see article summary below), adds to the evidence that environmental tobacco smoke is a major health risk for children. The clear linkage demonstrated between the amount of environmental tobacco smoke exposure and the increasing risk of significant adverse respiratory events under general anesthesia is alarming. Even more alarming is the high rate, almost 50%, of adverse respiratory events experienced by children exposed to the smoke of 30 cigarettes per day, and the fact that these respiratory complications are completely avoidable.

Exposure to environmental tobacco smoke has previously been conclusively linked to detrimental changes in children's lungs. Decreased lung growth and a diminution in the expected rate of increase in forced expiratory volume (FEV 1) and forced vital capacity (FVC) have been demonstrated in children exposed to second-hand tobacco smoke. Linkages have also been established between the severity of asthma and airway hyper-reactivity and exposure to environmental tobacco smoke. The rate and severity of lower respiratory tract infections in infants (bronchiolitis), and upper airway cellular and mucociliary dysfunction have also been linked to exposure to environmental tobacco smoke, leading to higher rates of otitis media in children exposed to second-hand smoke. Passive smoke exposure must now be considered to be a major risk factor for children receiving general anesthetics and children should be routinely screened for exposure to environmental tobacco smoke as part of their routine pre-operative assessment.

After accounting for all the other variables affecting the nearly 500 children studied, Skolnick, et al.

found other significant linkages between exposure to environmental tobacco smoke and the rate of adverse respiratory events. The rates of respiratory complications from general anesthetics were higher for girls, a previously documented gender-based difference in response to tobacco smoke exposure, and for children whose mothers had less than 12 years of education. This last linkage was not studied further and is open to numerous possible explanations, including substandard housing, poor sanitation, crowding and poor nutrition, all of which are known to be determinants of health status.

Although there is a growing awareness of the need to protect children from second-hand smoke in the home, and many parents state that they "only smoke outside," there is a tendency to underestimate the amount of environmental tobacco smoke to which children are exposed. This was evidenced by unreliable correlations between children's tobacco smoke exposure, as reported by parents, and the amount of measured urinary cotinine, an objective indicator of nicotine exposure, in Skolnick's test subjects.

As health professionals, we have a responsibility to inform and educate our patients and our communities about health hazards. The Northwest Territories and Nunavut have the highest rates of smoking in Canada and new young smokers continue to take up the habit at an alarming rate. We have a young population and a low rate of high school completion. A significant number of Northern children receive general anesthetics at some time in their childhood due to the high rate of dental caries. The implications of this study are, therefore, significant for the health and safety of Northern children.

Recent initiatives to limit exposure to environmental tobacco smoke, such as the proposed City of Yellowknife bylaw changes that would prohibit smoking in public places, are a step in the right direction. However, I believe that we must be leaders by example. As health professionals we should eliminate the use of tobacco products in hospitals, clinics, health centres and in our own homes. We must continue to educate our patients about the harmful effects of tobacco smoke exposure, not only to the smoker, but also to those around them. We must also promote and support healthy public policies that aim to eliminate exposure to environmental tobacco smoke. Most importantly, we must redouble our efforts to help our patients to quit smoking and to prevent a new generation of young Northerners from starting to smoke.

Exposure to Secondhand Tobacco Smoke Increases the Anesthesia Risk of Children

A study published recently in the journal *Anesthesiology* (1998;88:1144-53) highlights the increased risk of complications from general anesthesia experienced by children who are exposed to tobacco smoke in their home. Those exposed to the smoke of 30 cigarettes a day had twice the risk of complications as unexposed children. Dr. C. Everett Koop, former US Surgeon General, in the accompanying editorial comments that "(w)hen all the detrimental effects of environmental tobacco smoke on children are considered,... smoking in households where there are children may well become the next issue in child abuse."

Active Living for a Healthier, Happier Lifestyle



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A full two-thirds of all Canadians are risking their health and quality of life because of lifestyles deemed “too inactive for good health,” according to the **1997 Physical Activity Benchmarks**, released in January 1998 by the Canadian Fitness and Lifestyle Research Institute.¹

This report shows that only 35% of the study group (older adults, youth and people with a disability) are physically active enough to be considered healthy. Based on these statistics, it could be reasonable to assume that many NWT residents are also inactive. Inactive adults are considered to be at serious risk for developing coronary heart disease, adult-onset diabetes, colon cancer, osteoporosis and depression (Table One).

The costs of inactivity

If sustaining one’s health isn’t reason enough to lead an active life, the economic relief to Canada’s burdened health-care system should be. Research by the Canadian Fitness and Lifestyle Research Institute showed that a 16 % increase in the number of physically active Canadians from 1981 to 1995 translated into savings of \$9 billion because of health care, health insurance, sick leave, disability coverage and group life insurance. The good news here is that even a moderate investment in physical activity has been shown to make a significant difference in savings to health care.

Barriers to becoming physically active

- Lack of time, energy and motivation (identified by over 50% of the population).
- Feeling uncomfortable, lack of skills and fear of injury (identified by one quarter of the population).²

The percentage of people who are at risk could be greatly reduced. Some people have the misconception that physical activity and living an active life must involve serious exertion, to the point of breaking a heavy sweat. Physical activity can actually be the most relaxing part of the day.

Early promotion is key

Today’s children face many challenges to preserving their health. At home, with parents out working, children are often left to their own resources after school and on weekends. A lot of their time is then spent watching television or playing video games. This, combined with less time spent on quality physical activity in schools, mean’s children grow up with insufficient physical activity.

If unchecked, inactive children grow into inactive adults.

Parents and educators need to work together by being good role models and helping children choose physical activity over more sedentary options. By showing how much fun active living can be, adults can demonstrate activity as a more attractive option than simply watching television or a computer screen.

Children can be encouraged to ride a bike or take part in a game of hide-and-go-seek. Such activities can promote fun and participation and stay clear of too much emphasis on competition. Lifelong pursuits such as swimming, cross-country skiing, skating or hunting can instill a joy of activity that can be carried throughout life.

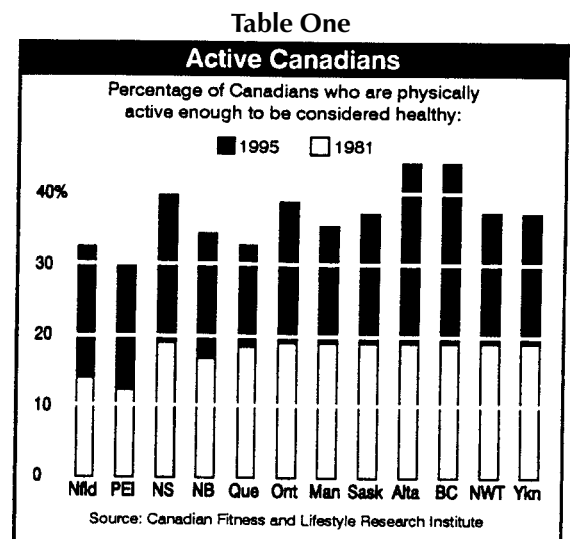
Active living must be promoted early and throughout childhood to give youth the best chance for an active healthy life. *Promote active living to our youth.*

NWT success stories

According to *Community Wellness in Action: 1996-1997*,³ all NWT communities have promoted some sort of physical activity under their Brighter Futures and Building Healthy Communities funding. Whether it’s a wilderness/hunting camp organized to teach students about traditional hunting and survival skills in Colville Lake, or five athletes from Fort Smith travelling to the Indigenous Games, it is events such as these that help to spread the word about active living. Although there is much more to be done to help people become active, events like the ones mentioned here help to promote that way of life. *Way to go!*

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Treating Otitis Media

Otitis media is an inflammation of the middle ear space. It is one of the most common childhood infections and is probably the most common reason for prescribing antibiotics. Hearing loss as a result of otitis media is common but usually transient. However, if left uncorrected, it can lead to impaired development of speech and language skills. Severe and life threatening infections may result if the middle ear infection spreads to surrounding tissues, but thankfully this is rare. Different diagnostic terms are used to describe otitis media, depending on the duration and severity of disease. This article will briefly discuss acute otitis media and middle ear fluid.

Risk factors

Acute otitis media (AOM) is a bacterial infection of the middle ear caused by the spread of infection along the eustachian tube (ET) from the nasopharynx. AOM occurs mostly in infants and young children but can affect people of any age. There are several factors that may predispose a child to AOM:

- **Winter months** - when URTI's occur most frequently. Colds result in swelling and a poorly functioning ET.
- **Day care** - not surprisingly children in day care have more problems with colds and OM.
- **Bottle feeding** - breast-fed children have fewer infections than bottle-fed babies. "Bottle propping" should be discouraged.
- **Cigarette smoking** - Children exposed to cigarette smoke have more OM and lung problems and therefore smoking in the home should be strongly discouraged.
- **Other factors** - Poor socioeconomic conditions are strongly associated with OM. Aboriginal peoples across North America have very high rates of OM. Genetic and some factors noted above are likely responsible.

Signs and symptoms of AOM

Acute otitis media is usually accompanied by pain, fever and tugging at the ear. However, patients may be afebrile and have minimal symptoms. The eardrum is generally erythematous and bulging. The "light reflex" is an unreliable sign in assessing an eardrum.

Treatment of AOM

Although the majority of AOM will resolve spontaneously, antibiotic treatment is still the standard of care in North America. A reasonable treatment

alternative would be to withhold antibiotics initially, while treating the pain and fever. If after 24-48 hours the symptoms persist or there is no improvement in the appearance of the drum, an antibiotic should be prescribed.

Antibiotics - Amoxil (10-14 days) remains the drug of choice, while drugs such as Septra, Pediazole, Clavulin, Ceclor, Suprax and others are second line. Erythromycin alone has poor H. Influenza coverage and is therefore a poor choice.

Decongestants and antihistamines - Use of nasal decongestant sprays would seem logical for decongesting the ET, however it has not proven itself a useful treatment. Antihistamines should only be useful if allergy is an underlying cause.

Recurrent infections

When AOM occurs more than 3 times in a 6 month period, antibiotic prophylaxis for 3 months is usually recommended. Half the daily dose (usually Amoxil or Septra) is given once a day. Bilateral myringotomies with tube insertions (BMATs) may be a more appropriate initial choice, depending on factors such as frequency of antibiotic use, ongoing hearing loss with speech delay and parental wishes. If AOM occurs while on the antibiotic prophylaxis, or if recurring AOM begins again as soon as the prophylaxis is finished, BMATs would usually be recommended.

Otitis media with effusion

Otitis media with effusion is a collection of fluid in the middle ear in the absence of signs and symptoms of AOM. There may be minimal symptoms or hearing loss and speech delay may be noted. The child may tug at their ears, but the condition is not painful and they are afebrile. The ear drum usually appears retracted and bubbles or an air fluid level may be noted behind the drum. The blood vessels may be prominent, but the drum is not acutely inflamed or bulging. Pneumatic otoscopy will show poor or no movement of the drum but, admittedly, performance of this skill requires a lot of practice. Most health centres will have a tympanometer, which is very useful for determining if there is middle ear fluid.

It is normal to have middle ear effusion following an AOM. Four weeks after an AOM 40% of children will still have middle ear fluid, while 20% will still have fluid 2 months after AOM. Usually this fluid goes away on its own, but in some people it becomes a chronic condition. When fluid persists for 3 months or more, myringotomies with tubes should be performed. Children with chronic effusion may develop noticeable hearing loss or speech delay if insertion of BMATs is delayed.

Further questions regarding ears/nose/throat can be directed to either Dr. Giovanetto or Dr. Cook at Stanton Regional Hospital Medical Clinic at (867) 669-4139.

Assessment of Hearing Loss

The following information answers some commonly asked questions about hearing loss and briefly explains the tests used to assess a person's hearing.

Types of hearing loss

Conductive - Caused by a problem in the outer or middle ear. Some causes are excessive wax in the ear canal, a perforated ear drum, ear infections, damage to the bones in the middle ear or a malformed ear.

Sensorineural - Caused by a problem in the inner ear or auditory nerve pathways from the ear to the brain. Some causes of sensorineural hearing loss include rubella, viral infections, ototoxic drugs, noise exposure, aging.

Mixed - Occurs when both a conductive and sensorineural component exist.

Risk factors for hearing loss:

- Family history of hearing loss;
- infections such as syphilis, rubella, CMV or herpes;
- asphyxia;
- birth weight less than 1500 grams (3 pounds);
- craniofacial anomalies;
- hyperbilirubinemia;
- ototoxic medications;
- baby required neonatal intensive care for two or more days;
- bacterial meningitis;
- chronic ear infections;
- head trauma;
- neurodegenerative disorders;
- noise exposure;
- acoustic neuroma; or
- aging.

Signs of hearing loss

Infants - The baby doesn't startle/cry at loud sounds; doesn't localize to sounds; doesn't respond to his/her name or recognize mother's voice; doesn't acknowledge/enjoy noise makers; doesn't babble/make different sounds or imitate simple words/sounds; doesn't stop and listen to speech or sound.

Children - Speech and language delays; poor performance in school; frequently appears unresponsive; asks for repetition; relies on visual cues to understand; frequent ear infections; commonly

mistakes words; difficulty localizing sounds; complains of not being able to hear well.

Adults - The adult asks for frequent repetition; misinterprets directions/instructions; answers with inappropriate responses; withdraws from social situations; strains to hear; thinks that people mumble or speak too softly; has difficulty hearing in background noise; turns up the television/radio to a level which is uncomfortable for others.

Test techniques:

Pure Tone Audiometry - Measures 1) what frequencies a person can hear and 2) how loud these sounds have to be before the person can hear them.

Tympanometry - Measures ear canal volume and ear drum movement. This test helps confirm whether fluid is present in the middle ear or if there is a hole in the ear drum.

Speech Testing - Validates accuracy of audiogram and assesses the person's ability to understand speech.

Auditory Brainstem Response (ABR) - Assesses function of the auditory nerve without participation of the patient. It is used for assessment of hearing loss in difficult to test patients (infants, severely handicapped). It is also used for differential diagnosis (multiple sclerosis, acoustic nerve tumours).

Distortion Product Otoacoustic Emissions (DPOAEs) - Assesses function of the cochlea without participation of the patient. It is used as a hearing screening in difficult to test patients (infants, severely handicapped). It can also be used in differential diagnosis (central vs. peripheral hearing loss).

If a hearing loss is suspected:

Good hearing is essential to communication. If a hearing loss is suspected, the person should be referred to an audiologist. Audiologists specialize in the prevention, identification, assessment and non-medical treatment of hearing and balance disorders. Hearing can be assessed at any age.

In the NWT there are three audiologists, two at the Stanton Regional Hospital in Yellowknife and one at the Baffin Regional Hospital in Iqaluit. Referrals are accepted from physicians, ENT, community nurses, public health, speech language pathologists, education personnel, health/safety personnel, parents and family members.

For further information contact the Elks Hearing Centre in Yellowknife at (867) 669-3100.



Raenne Rowsell
Audiologist
Stanton Regional
Hospital





Cervical and Breast Health: A Focused Needs Assessment in the NWT

Lona Heinzig
Consultant, Non-Communicable Disease
Department of Health and Social Services

In April 1998 a survey of both nurses and various groups of women in the Northwest Territories was initiated, on the topic of cervical and breast health. This needs assessment was conducted by the Department of Health and Social Services in conjunction with the Alberta Cancer Board and with assistance provided by the Health Canada Population Health Fund.

The survey sought to gather information on the following four areas:

- What resources are needed to improve cervical and breast screening in the NWT?
- What are the challenges to delivering comprehensive screening in well woman clinics (WWC) in the NWT?
- What is the potential contribution of the *Pap Resource Manual* (as prepared by the Alberta Cancer Board) to cancer screening activities in the NWT?
- What strategies would enhance existing screening practices in the Northwest Territories?

The survey included 45 nurse-practitioners from all NWT regions (including 10 nurses in the ANSEP program) and 153 women (mainly located in Yellowknife). Questionnaires were also distributed to the various regional nursing managers for feedback. The survey of nurse-practitioners included questions regarding recommended screening guidelines for cervical and breast cancer, comfort level with skills required (i.e. doing a Pap smear or clinical breast exam), risk factors for disease, learning and resource needs, etc.

The one-page survey for women asked: What is the reason for having a Pap test? Is the Pap test

important to you? What would make you go for a Pap test? Who decides when you have a Pap test? and similar questions regarding breast exams (clinical and self) as well as preferred learning style. For the purposes of this summary, only nurse-practitioner results will be discussed.

Nurse-practitioner survey results

Most nurses indicated that, when in doubt, they performed Pap smears on an annual basis. Most nurses listed the following risk factors for cervical cancer: multiple sex partners, family history and STDs. However, only 29% of nurses in the field and 10% of ANSEP nurses identified HPV as a risk factor. Risk factors for breast cancer included: family history, never breastfed and smoking. Most indicated they were unsure what the NWT guidelines for breast cancer screening were.

Most nurses learned to do Pap smears from another nurse in a health centre. While most nurses were comfortable performing a Pap smear, they were only "somewhat comfortable" in clinically assessing a cervix and in understanding the classification system for abnormal Paps. Many nurses mentioned that they rely heavily on the lab or the cytologist's recommendations, rather than relying on their own knowledge. "Hands-on" was the best way to learn Paps. There was some confusion as to the standard for obtaining a Pap smear from a pregnant woman.

Strategies identified

A standard orientation program was identified as one way to better inform and teach nurses about breast and cervical health. Consistent availability of teaching aids such as models for breast examination was recommended. It was felt that the development of a "woman's health" resource manual would be a valuable tool for well woman clinics. This manual would include a "how to" section, information on testing guidelines, result interpretation and treatment protocols. It would also include important NWT statistics as well as instructional materials and resources.

The results of this survey have been reviewed by the Department of Health and Social Services and circulated to the regional health boards. A commitment has been made to work towards addressing the identified recommendations. It is hoped that further funding for working on enhancing existing screening activities in the NWT will be available later in the fall. Thanks goes out to everyone who participated in this assessment.

October is Breast Cancer Awareness Month and the annual Run for the Cure is slated for Yellowknife on Sunday, October 4th, 1998. This nation-wide event, which raises money for breast cancer awareness and research, is being run for the third time in Yellowknife. Starting with just one site in Canada in 1991, this event has grown to 26 sites across the country, with every province and territory now represented.

CANADIAN BREAST CANCER FOUNDATION
CIBC RUN 
for the CURE

Of the money raised, 25% will go back to national research projects and 75% will stay at the local level. It is hoped that this year's run will raise enough funds to purchase a replacement mammography unit for Stanton Regional Hospital, which serves not only the community of Yellowknife, but many other NWT women who receive screening or diagnostic mammography at Stanton. In 1996, 250 people participated in the run and raised \$15,000. In 1997, over 850 individuals participated and raised almost \$100,000. The results of the 1998 run will be posted in the next issue of *EpiNorth*.

Fast Facts on Breast Cancer Screening for the NWT

There were 1404 mammograms done at Stanton in 1997. They are broken down as: Screening - 1084; Diagnostic - 288; Cancer or cancer follow up - 34

Screening by regional health board (done at Stanton in 1997)

- Baffin: 5
- Deh Cho: 28
- Deninu: 2
- Dogrib: 15
- Fort Smith: 52
- Hay River: 81
- Inuvik: 69
- Keewatin: 2
- Kitimeot: 21
- Lutselk'e: 4
- Yellowknife: 707

Screening by age group: (Stanton - 1997)

- <39: 5.2%
- 40-49: 49.6%
- 50-69: 42.1%
- 70+: 3.1%

Target group for breast cancer screening

The target group for screening in the NWT is women aged 50 to 69. There are 2750 women in this age group in the NWT. The *NWT Breast Cancer Screening Guidelines* recommend screening of women in this age group every two years. Women aged 40-49 who have been identified as high risk should receive mammographic screening on an annual basis.

Breast cancer screening also includes Breast Self Examination (BSE) and Clinical Breast Exam (CBE).

Most breast cancer in the NWT is identified through identification of a lump (through BSE or CBE) followed by diagnostic mammography and a full diagnostic work-up.

SRH Mammography Service receives accreditation with the Canadian Association of Radiologists

Congratulations goes to the Diagnostic Imaging Department of Stanton Regional Health Board which has worked very hard to obtain accreditation for its Mammography Services. They have been awarded a three-year accreditation with the Canadian Association of Radiologists (CAR).

Mammography accreditation in Canada

This currently voluntary program is directed by the Committee on Mammography Accreditation of the CAR. The CAR, with support and endorsement of the American College of Radiology, offers radiologists the opportunity for peer review and evaluation of their facility's staff qualifications, equipment, quality control and quality assurance programs, image quality, breast dose and processor quality control. It is anticipated that some provinces will make this accreditation mandatory for all facilities providing mammography service.

This program developed as result of concerns raised by all stakeholders that qualified personnel perform and interpret mammograms, as well as using dedicated equipment for mammogram examinations. Accreditation demonstrates to the stakeholders that the service being provided meets nationally accepted standards and seeks to provide women with optimum mammographic services.

The accreditation process

Phase One — This phase includes the completion of an extensive questionnaire concerning the quali-

fications of the radiologists and mammography technologists, identification of the equipment used, the most recent physicists' inspection report, information regarding follow-up processes, data collection, record and film retention and the quality control/quality assurance program.

Phase Two — When the facility meets the criteria in the application phase, image quality and breast dose data is collected. This data is obtained by the use of a specially designed breast phantom and a thermoluminescent dosimeter (TLD) exposed at the same time. The facility also must submit two sets of normal clinical films, one of a fatty breast and one of a dense breast, consisting of two views for each set. This information is reviewed and scored by a panel of radiologists and radiological physicists using set criteria.

The Committee on Mammography Accreditation then provides the facility with a report indicating whether the phantom image and the TLD meet the established evaluation criteria. The images are also graded using various criteria and a comprehensive report is provided along with possible causes for any areas of concern. From this review the committee recommends whether your mammography services pass or fail. If the facility receives a failing grade, they can reapply for accreditation once they feel that they have corrected the deficiencies noted in the previous evaluation.

Any questions regarding mammography services or accreditation can be directed to Manager, Diagnostic Imaging Department, Stanton Regional Hospital at (867) 669-4111.





Frank Hamilton
Consultant, Environ-
mental Health
Department of Health
and Social Services

Priority Ranking of Environmental Health Programs:

Earlier this year, a priority ranking exercise was completed by regional Environmental Health Officers (EHOs) concerning the various programs that fall under environmental health. Several Department of Health and Social Services consultants and directors also completed the forms as to how they felt environmental health programs should be ranked.

Sixteen programs were defined and ranked according to a priority rating scale adapted from the Assessment Protocol for Excellence in Public Health (APEX PH).¹ There were some differences between regions as to what was considered a program area. After some thought, the following programs were identified (some programs identified by certain regions have been classified under a more general heading to provide for a more convenient grouping):

- Disease control (includes rabies lay vaccinator program);
- Environmental health assessments (included plan reviews);
- Recreational (included recreational waters, tourist facilities);
- Institutional environments (included schools, child care facility, public institutions, work camps); and
- Community and environmental sanitation (included housing, special events).

Environmental health program areas/functions

1. Disease Control

- Enteric, etc.
- Outbreak control
- Dog bites
- Rabies lay vaccinator

2. Environmental Health Planning and Impact Analysis

- Environmental assessment reviews
- Risk assessments
- Plan reviews
- Technical Advisory Committee

3. Water supply

4. Wastewater (treatment and disposal)

5. Solid waste management

6. Air quality

- Indoor air quality
- Ambient air

7. Food protection

8. Recreational

- Waters

- Tourist facilities
- Recreation facilities

9. Institutional environments

- Day care
- Schools
- Special care homes, treatment facilities
- Hospitals, health centres
- Jails, lockups
- Work Camps

10. Disaster preparedness

11. Contaminants

- Lead, mercury, radiation, hazardous wastes, etc.

12. Tobacco use (not implemented)

- Retailer compliance, inspection/education, enforcement, ticketing

13. Injury prevention

- Hazards, poisons, playgrounds

14. Personal services

- Hair salons, tattoos, massage parlours, i.e. services to peoples' bodies, etc.

15. Promotion/education

- Public communication, i.e. media, materials for public consumption

16. Community and environmental sanitation

- Nuisance and general sanitation (noise, odour, garbage, excreta, vermin, spills, filth)
- Housing (overcrowding, sanitation, pests)
- Special events
- Product safety

Not every region agreed with the naming of the program areas, e.g. disease control. Some preferred to have their rabies program designated as its own program. However, to simplify the table, such programs were included under general headings. Also, some regions felt that the health promotion or educational aspects of the environmental health programs were normally included in the routine activities of all their programs.

Rankings compared among the various regions

Table 1 compares the priority of the programs as seen by the various health and social services boards. Each board has its own specific emphasis due to the type of work required by community demands, the demographics of the area and the differing health concerns peculiar to the region. The lack of consensus noted in the table reflects the different health problems, issues and services in different regions of the NWT. Regional variations

An NWT-Wide Survey

in rankings (Table 1) show the influence of local issues and priorities.² For example, the Baffin region ranked food protection and wastewater a higher priority than other regions, whereas Yellowknife ranked environmental assessments and disease control higher.

Another interesting perspective was the rankings received from the Department of Health and Social Services (HSS). About five departmental participants submitted their rankings. They consisted of directors and medical health officers. Though there were some differences, the rankings were generally similar. The rankings shown in Table 1 were the average of those received. The department ranked disease control, tobacco use, injury prevention and promotion education higher overall than most of the regional Environmental Health Officers did in the survey.

The overall ranking of environmental health protection programs, 1998

1. Food Protection
2. Safe Water Supplies
3. Disease Control
4. Air Quality (Indoor)

5. Community & Environmental Sanitation
6. Institutional Environments
7. Wastewater
8. Disaster Preparedness
9. Injury Prevention
10. Environmental Health Assessments
11. Solid Waste Management
12. Recreational
13. Personal Services
14. Contaminants

The priority setting process identifies strategic directions we can aim towards. However, there are legal, financial and operational constraints which prevent immediate implementation of priority setting results. It will be interesting to repeat this exercise in about a year to see how the priorities identified by the department affect the rankings of environmental health programs across the NWT.

1. "A method for setting priorities among health problems." In *APEX PH: ASSESSMENT protocol for excellence in public health*. (1991, March).
2. *B.C. Health and Surveillance*. V6, No 1. January 31,1997

For more information, contact Frank Hamilton at: (867) 920-8646

Table 1: Rankings of Environmental Health Programs

Program	Overall	Baffin	Keewatin	Kitikmeot	Yellowknife	Hay River	Inuvik	Department
Disease Control	3	5	9	1	2	6	4	1
Environmental Health Assessments	10	6	12	10	1	15	11	11
Water Supplies	2	4	4	3	11	1	3	3
Wastewater	7	2	9	7	8	13	8	6
Solid Waste Management	11	4	13	7	12	10	14	10
Air Quality	4	7	6	4	3	4	1	8
Food Protection	1	1	2	2	5	2	2	7
Recreational	12	9	9	9	13	8	10	13
Institutional Environments	6	3	4	8	6	8	5	12
Disaster Preparedness	8	12	6	5	7	13	9	10
Contaminants	14	16	16	10	14	12	18	15
Tobacco Use (proposed)	N/A	N/A	N/A	N/A	10	N/A	N/A	2
Injury Prevention (Proposed)	9	10	8	11	9	16	7	5
Personal Services	13	14	15	N/A	15	5	16	16
Promotion/Education	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4
Community and Environmental Sanitation	5	10	1	6	4	3	6	9



Wanda White
Consultant, Communi-
cable Diseases
Department of Health
and Social Services

Influenza: A Review of the Last Year and

National surveillance of influenza

Every year the Laboratory Centre for Disease Control (LCDC) and the College of Family Physicians of Canada initiates a Flu Watch Program. This increased surveillance program for influenza asks sentinel sites in the provinces/territories to report "flu activity" on a weekly basis. Along with this, the provincial laboratories also report the number of specimens received for respiratory virus detection (including influenza, parainfluenza, respiratory syncytial virus and adenovirus) and all positive results. This allows LCDC and the provinces/territories to get a good picture of the influenza activity in Canada.

LCDC also reports global influenza activity at regular intervals. This diligent surveillance activity not only lets us know the type and amount of activity, but it also serves as an early warning system. Activity in the rest of the world will eventually show up in Canada. Because activity in Canada normally moves from east to west, if it is going to be a particularly bad year for influenza or if there is a change in the type of influenza seen it is usually experienced first in eastern Canada. National reporting allows time for the rest of the provinces/territories to prepare for it in advance. Since September 1997 LCDC has received reports on 29,694 laboratory tests for influenza, of which 4,186 were confirmed as influenza A and 12 as influenza B.

A review of the 1997/98 influenza season

The big concern this year was the Influenza Type A/Sydney/5/91 -like (H3N2), which was not in the influenza vaccine this year. This type of influenza A was first documented in Sydney, Australia in mid-1997. By early fall it was identified on a cruise ship that docked in Canada and by the time the flu season was in full swing it was documented right across Canada. The provinces and territories

became concerned that their susceptible populations—the elderly and those who are immune compromised through co-morbidity—would be exposed to this strain, so everyone got their Amantadine protocols dusted off and ready to go. Amantadine is used as prophylaxis in influenza A outbreaks to lessen severity of disease and to curtail viral activity.

The NWT participates in flu watch

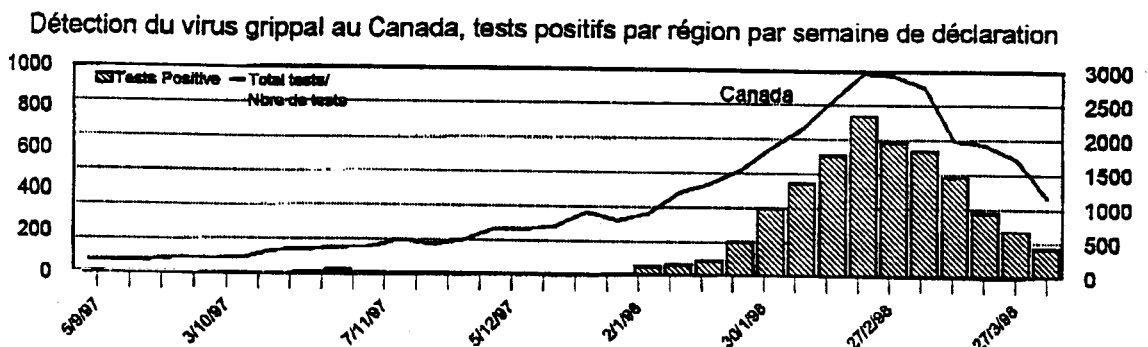
This is the first year that all regions of the Northwest Territories participated in the Flu Watch Program. This served to heighten awareness of the dangers of influenza across the NWT. Throughout the year, NWT sentinel sites notify LCDC of their influenza activity level at weekly intervals.

The Health Protection Unit of the Department of Health and Social Services received much earlier reports of influenza activity from all NWT regions, compared to others. The level of screening increased and the number of positive cases were the most received in a the past three years. All cases to-date for 1998 have been of influenza A, serotypes pending.

The seniors' facilities in Iqaluit, Yellowknife, Hay River and Fort Smith have all experienced higher levels of influenza in their population, despite greater than 95% immunization for influenza. This prompted the implementation of the Influenza Outbreak Protocol with prophylaxis of the senior population of these facilities with Amantadine, on the suspicion that Influenza A/Sydney was responsible for the influenza activity. It is important to remember that the elderly are especially vulnerable to illness caused by influenza, and health care professionals must do everything in their capacity to prevent the morbidity and mortality associated with this disease in the elderly population. Unofficial reports of four deaths associated with influenza have been reported among seniors this year. Influenza is not kind to elders.



Positive Influenza Tests in Canada by Region by Week of Report



Recommendations for the Coming Season

Recommendations for the 1998/99 influenza season

This year's vaccine will contain the type A/Sydney-like strain of influenza virus, along with A/Beijing and B/Harbin. These components have characteristics which match the current and emerging influenza virus strains.

In the NWT, influenza vaccine should be offered free of charge to all at risk groups as defined by the National Advisory Committee on Immunization. At-risk groups include:

- Adults 65 years of age or older (lowered age may be predicated on regional factors).
- Adults and children with chronic cardiac or pulmonary disorders (including bronchopulmonary dysplasia, cystic fibrosis and asthma) severe enough to require regular medical follow-up or hospital care.
- Adults and children with chronic conditions such as diabetes and other metabolic diseases, cancer, immunodeficiency (including HIV infection), immunosuppression, renal disease, anemia and hemoglobinopathy.

- People of any age who are residents of nursing homes and other chronic care facilities.

Influenza vaccine should also be:

- actively promoted to caregivers and other people who may transmit the virus to those at-risk, as well as those who provide essential community services; and
- made available to anyone who asks for it, on a cost-recovery basis.

Influenza in the NWT			
Year	Influenza A	Influenza B	Total
1996	1	0	1
1997	10	5	15
1998	22	0	22

Hopefully participation in the National Flu Watch Program will continue as it did this year. We should congratulate ourselves for the great effort put forward to control and curtail the rates and effects of influenza, but of course we must remind ourselves that this effort is ongoing and this year, as always, may be full of surprises.

A reminder to all Health Centres who offer seasonal vaccine programs. Please order and prepare for **Pneumococcal, Hepatitis B and Influenza.**

Adverse Vaccine Events

The reporting of adverse **vaccine** events should not be confused with Adverse Drug Reporting (ADR), which was highlighted in the last issue of *EpiNorth* (Spring 1998). A reminder that all adverse vaccine events should be reported to the Health Protection Unit (HPU) on the approved Health Canada form. These events are then reported to the Laboratory Centre for Disease Control (LCDC) in Ottawa by the HPU and are periodically reported back to you in *EpiNorth*.

Any questions regarding vaccines, immunization schedules or adverse vaccine events should be directed to Wanda White, Communicable Disease Consultant at (867) 920-8646.

3rd Canadian National Immunization Conference

Partnerships for Health through Immunization

The Calgary Convention Centre - Calgary, Alberta
December 6-9, 1998

Organized by: The Laboratory Centre for Disease Control, Health Canada and the Canadian Pediatric Society

Objectives: To present a forum for discussion and information exchange related to the practical aspects of immunization programs in Canada, and means of improving them. This will cover issues such as vaccine supply and delivery, education, assessment of vaccine programs, regulations and legislation, and global immunization efforts. The conference will look at both programmatic and disease-related issues, with primary focus being on

programmatic issues. The main focus will be on childhood immunization. There will also be an examination of progress towards the achievement of established Canadian national goals for the reduction of vaccine-preventable diseases of infants and children.

To access conference information or to be put on the conference mailing list, check the conference website at: <http://www.hc-sc.gc.ca/hpb/lcdc/events/cnic/index.html>

or fax to:

Chuck E. Schouwerwou
Conference and Committee Coordinator
Division of Immunization
Fax: 613-952-7948





The Health Protection Unit Mailbox:

The Health Protection Unit would like to announce that there will be new forms to replace the Communicable Disease Report or CDR, as it is commonly known. This is the blue, multi-carboned form which is used to report any confirmed or suspected communicable diseases to the Chief Medical Health Officer/Health Protection Unit.

Two new forms

There are now two double-sided forms. One is for STDs and the other is for all other communicable diseases. The *Communicable Disease Regulations* require that the CMHO or their designate be notified of 55 current reportable disease under the *Public Health Act*. The list of reportable diseases is printed on the back of the new Communicable Disease Form. These forms can be photocopied and faxed to the HPU at (867) 873-0442. Keep the original as part of the patient record.

Depending on the specific disease, an additional report may be required for disease control and data collection purposes. These diseases include: meningitis, hepatitis, pertussis and food and water-borne illnesses. For some cases, the Environmental Health Officer will complete this form. Completed forms should be faxed to the HPU as soon as possible at (867) 873-0442.

The NWT Public Health Act

A reminder to anyone that *any unusual presentations* should be reported to the HPU at the earliest

date possible. Also, to those of you who are unfamiliar with the *Public Health Act*, the *Communicable Disease Regulations* state in Section 4 (1) (a) that in the case of a Schedule A -Item I disease, the medical practitioner, nurse or dentist shall (i) "immediately notify the Chief Medical Health Officer by telephone" and (ii) "within **24 hours**, send a written report to the Chief Medical Health Officer in a form approved by the Chief Medical Health Officer." It also states in Section 4 (1) (b) "in the case of a disease listed in Item II of Schedule A, within seven days send a written report to the Chief Medical Health Officer in a form approved by the Chief Medical Health Officer."

Schedule A diseases

The following Schedule A diseases must all be reported to the Chief Medical Health Officer within the appropriate time period:

Item I

- Amoebiasis
- Anthrax
- Botulism
- Campylobacteriosis
- Cholera
- Diphtheria
- Escherichia coli (verotoxogenic)
- Food Poisoning (including communicable enteric infections)
- Gastroenteritis, epidemic (including institutional outbreaks)
- Hantaviral disease (including Hantaviral Pulmonary Syndrome)
- Haemorrhagic fevers
- Hepatitis (all forms)
- Influenza
- Invasive Group A Streptococcal Infections (Toxic Shock Syndrome, Necrotizing Fasciitis, Myositis & Pneumonitis)
- Invasive Neisseria meningitidis infections
- Legionellosis
- Malaria
- Measles
- Meningitis/Encephalitis
- Neonatal Group B Streptococcal infections
- Pertussis (whooping cough)
- Plague
- Poliomyelitis
- Rabies (or exposure to rabies)
- Rubella and congenital rubella syndrome
- Salmonellosis

NWT COMMUNICABLE DISEASE REPORT

Complete this form for all Reportable Diseases*. See list on back of form.
*For STDs, use separate Sexually Transmitted Disease Report form.

- Name of reportable disease: _____
- Patient's name: _____
(First name) (Last name)
- Date of birth: _____ HCP# _____
(year/month/day)
- Sex: Male Female
- Home Community: _____
- Has a laboratory confirmation been sought? Yes No Unknown
If yes, what test? _____ Date requested _____
- Date of illness onset: _____
(year/month/day)
- Date of diagnosis: _____
(year/month/day)

Report Submitted By: _____ (please print)

Signature: _____

Report Date: _____

Community: _____

Clinic Name: _____
(Health Centre, Hospital, etc.)

Phone Number: _____

Page 1 of 2

The Latest in Forms



- Shigellosis
- Tetanus
- Tuberculosis
- Typhoid and paratyphoid fevers
- Yellow Fever

- Echinococcal disease)
- Trichinosis
- Toxoplasmosis (symptomatic only)
- Tularemia

Item II

- Brucellosis
- Chicken Pox (Varicella)
- Congenital Cytomegalovirus Infection
- Creutzfeldt - Jakob Disease
- Giardiasis (symptomatic cases only)
- Hemolytic Uremic Syndrome
- Human T-cell Lymphotropic Virus infections
- Leprosy
- Listeriosis
- Lyme Disease
- Mumps
- Psittacosis/Ornithosis
- Q fever
- Tapeworm infestations (including

Copies of the *Public Health Act - Communicable Disease Regulations* can be obtained from:

Doug Ritchie, Senior Policy Officer, Department of Health and Social Services, Policy, Planning and Evaluation, (867) 920-3275.

Disease follow-up

Many of the Item I diseases require immediate treatment and follow-up to limit their spread to others. This follow-up may involve prophylaxis of individuals who have been in contact with the source case (see accompanying chart) or investigation by an Environmental Health Officer, to determine the cause (such as contaminated water or poor food handling).

For any further information on reporting, treatment, investigation and prophylaxis, contact the Health Protection Unit at (867) 920-8646.

Recommended Post-Exposure Prophylaxis		
Disease	Required Within	Chemoprophylaxis
Botulism	ASAP if symptomatic or if consumed suspected food source	Botulism antitoxin
Hepatitis A	24 hours to 2 weeks	Hepatitis A Immune Globulin Hepatitis A Vaccine
Hepatitis B	48 hours	Hepatitis B Immune Globulin Hepatitis B Vaccine
HIV	Optimum is within 2 hours	2 or 3 of the following anti-retroviral prophylaxis: AZT (Zidovudine), 3TC (Lamivudine) and Indivar
Influenza	As per recommendations of MHO	Amantadine
Measles	6 days	Measles Immune Globulin Measles Vaccine
Meningitis (bacterial)	24 hours	Rifampin or ceftriaxone
Pertussis	ASAP and up to 5 days	Erythromycin
Rabies Exposure	ASAP but up to 6 months if late reporting	Rabies Immune Globulin Rabies Vaccine
Streptococcal A/ Necrotizing Fasciitis	7 days	Cephalosporins as recommended by MHO



Notifiable Diseases by Region: April-June 1998

Disease	Month	Cumulative		Regions (YTD - 1998)								
	Apr-Jun 1998	1997 YTD	1998 YTD	Baffin	Ft. Smith/Mackenzie	Inuvik	Keewatin	Kitikmeot				
H. influenzae B	0	0	0	0	0	0	0	0				
Hepatitis B	1	2	2	0	1	1	0	0				
Influenzae	16	15	22	6	12	1	3	0				
Vaccine Preventable Diseases												
Measles	0	0	0	0	0	0	0	0				
Mumps	0	0	0	0	0	0	0	0				
Pertussis	1	15	2	0	1	0	1	0				
Rubella	0	0	0	0	0	0	0	0				
Chlamydia	221	468	510	149	414	83	97	40				
Gonorrhoea	23	77	58	27	19	4	4	4				
Sexually Transmitted/Bloodborne Diseases												
Hepatitis C	10	9	20	0	14	2	1	3				
Hepatitis, Other	0	0	0	0	0	0	0	0				
Syphilis	0	0	0	0	0	0	0	0				
Chicken Pox	88	144	282	36	121	97	28	0				
Group A Strep	3	2	4	0	2	0	0	2				
Legionellosis	1	0	1	0	1	0	0	0				
Diseases by Direct Contact/Respiratory Route												
Meningitis, Pneumococcal	0	0	0	0	0	0	0	0				
Meningitis, Other Bacterial	1	6	3	1	0	0	2	0				
Meningitis, Viral	0	0	0	0	0	0	0	0				
Meningococcal Infections	0	0	0	0	0	0	0	0				
Tuberculosis	9	19	20	15	4	0	0	1				
Botulism	0	1	0	0	0	0	0	0				
Campylobacteriosis	1	6	4	0	3	1	0	0				
Cryptosporidiosis	0	8	0	0	0	0	0	0				
E.Coli O157:H7	0	6	0	0	0	0	0	0				
Enteric, Food and Waterborne Diseases												
Food Poisoning	2	5	2	0	2	0	0	0				
Giardiasis	2	3	8	0	4	0	1	3				
Hepatitis A	0	0	5	0	5	0	0	0				
Salmonellosis	6	7	11	1	5	1	0	4				
Shigellosis	1	1	2	0	1	1	0	0				
Tapeworm Infestation	0	1	0	0	0	0	0	0				
Trichinosis	3	0	6	0	0	0	6	0				
Brucellosis	1	1	1	0	0	1	0	0				
Vectorborne/Other Zoonotic Diseases												
Malaria	0	0	1	0	0	0	1	0				
Rabies Exposure	2	4	67	0	0	49	0	18				
HIV Infections by Year Seen in NWT Residents												
Year	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Number/Year	3	2	2	3	3	8	4	2	0	2	1	
Cumulative	3	5	7	10	13	21	25	27	27	29	30	

Notifiable Diseases Reported by Community

April 1998	May 1998	June 1998	
		Yellowknife, 2; Hay River, 1	Amoebiasis
Inuvik, 1			Brucellosis
Yellowknife, 1			Campylobacteriosis
Rankin Inlet, 7; Fort MacPherson, 4; Sachs Harbour, 3; Pangnirtung, 3; Tuktoyaktuk, 1; Rae Edzo, 1; Norman Wells, 1; Aklavik, 1	Yellowknife, 14; Tuktoyaktuk, 6; Fort Smith, 6; Hay River, 2; Norman Wells, 1	Hay River, 19; Yellowknife, 9; Rae Lakes, 6; Fort Providence, 2; Nahanni Butte, 1; Arviat, 1	Chicken Pox
Yellowknife, 13; Rankin Inlet, 5; Whale Cove, 4; Wha Ti, 4; Arviat, 3; Fort MacPherson, 3; Kugluktuk, 3; Fort Simpson, 2; Inuvik, 2; Cape Dorset, 2; Taloyoak, 2; Tuktoyaktuk, 2; Cambridge Bay, 2; Baker Lake, 2; Rae Edzo, 2; Chesterfield, 1; Iqaluit, 1; Kimmirut, 1; Pelly Bay, 1; Sachs Harbour, 1; Jean Marie River, 1	Inuvik, 9; Yellowknife, 8; Rankin Inlet, 7; Arviat, 5; Iqaluit, 4; Arctic Bay, 3; Wha Ti, 3; Tuktoyaktuk, 2; Whale Cove, 2; Rae Edzo, 2; Pond Inlet, 2; Cape Dorset, 2; Fort MacPherson, 2; Fort Simpson, 2; Cambridge Bay, 1; Fort Providence, 1; Fort Resolution, 1; Hay River, 1; Kimmirut, 1; Igloolik, 1; Kugluktuk, 1; Lutsel K'e, 1; Pangnirtung, 1; Tulita, 1; Holman, 1	Iqaluit, 19; Yellowknife, 11; Arviat, 8; Inuvik, 6; Wha Ti, 5; Tuktoyaktuk, 4; Arctic Bay, 4; Rankin Inlet, 4; Cambridge Bay, 4; Hay River, 3; Fort MacPherson, 3; Pond Inlet, 3; Pangnirtung, 3; Baker Lake, 3; Holman, 3; Cape Dorset, 2; Lutsel K'e, 2; Igloolik, 2; Kimmirut, 2; Rae Edzo, 2; Fort Providence, 1; Coral Harbour, 1; Gjoa Haven, 1; Hall Beach, 1; Rae Lakes, 1; Paulatuk, 1; Norman Wells, 1	Chlamydia
		Wha Ti, 2	Food Poisoning (Baci)
Taloyoak, 1		Yellowknife, 1	Giardiasis
Yellowknife, 1; Kugluktuk, 1; Pelly Bay, 1	Iqaluit, 4; Pangnirtung, 2; Yellowknife, 1	Iqaluit, 5; Yellowknife, 2; Fort Good Hope, 1; Rae Edzo, 1; Wha Ti, 1; Whale Cove, 1; Hay River, 1	Gonorrhoea
Gjoa Haven, 1; Hay River, 1; Yellowknife, 1			Group A Strep
	Fort Good Hope, 1		Hepatitis B
Fort Smith, 1; Hay River, 1; Rankin Inlet, 1; Kugluktuk, 1	Yellowknife, 2; Inuvik, 1, (Diag OT); Hay River, 1	Kugluktuk, 1; Fort Smith, 1	Hepatitis C
Hay River, 5; Yellowknife, 3; Repulse Bay, 3; Fort Smith, 3; Inuvik, 1; Rae Edzo, 1			Influenza A
		Baker Lake, 1	Meningitis (Bacterial)
		Yellowknife, 1	Pertussis
Kugluktuk, 1; Sachs Harbour, 1			Rabies Exposure
Cambridge Bay, 1; Yellowknife, 1	Cambridge Bay, 3	Hay River, 1	Salmonellosis
Yellowknife, 1			Shigellosis
	Coral Harbour, 3		Trichinosis
Cape Dorset, 1; Hall Beach, 1; Pond Inlet, 1	Cape Dorset, 1; Iqaluit, 1	Iqaluit, 1; Pelly Bay, 1; Rae Edzo, 2	Tuberculosis
<p>Notifiable disease information reported in <i>EpiNorth</i> on a monthly basis reflects reports received in the Health Protection Unit during the current month, not the month in which the cases occurred. Health professionals who suspect or diagnose a Notifiable Disease are required to report it to their Regional Medical Health Officer within the time frame legislated in the <i>Public Health Act/Communicable Disease Regulations</i>.</p>			



The Case of the Swimmer's Rash

Some summers are worse than others, but usually there are a number of complaints in the NWT concerning skin rashes which appear after a day of swimming at the beach. In past years many complaints have been received by the local public health authorities (Public and Environmental Health) and likely others, but no cause found. This summer, several complaints from swimmers at one Yellowknife area lake prompted an investigation into the cause of these rashes.

Here is one example of one such complaint: *A mother called the Yellowknife Public Health Unit during the heat wave in July 1998. Her daughter had just returned from swimming in Long Lake. When she came out of the water she felt stinging pain over her skin everywhere except where it was covered by a bathing suit and had a fine red rash. She had dried herself off right away after getting out of the water.*

What is swimmer's itch?

Initially, "swimmer's itch" was the suspected cause, but the signs and symptoms didn't really fit. Swimmer's itch refers to a skin rash caused by a non-pathogenic parasite, *Schistosoma* species. The larvae enter the water system via aquatic bird excrement and then develop in snails to the cercarial stage. These cercariae are then able to penetrate human skin and frequently cause transient, pruritic papular eruptions. This rash, caused by *Schistosoma* parasite, is often called cercarial dermatitis. In previous years, water samples from northern lakes and skin biopsies from affected individuals had failed to identify *Schistosoma* as the culprit. In the absence of identifiable larvae and considering the presentation (such as acute stinging pain, rashes covering a greater area of the skin than usually associated with swimmer's itch, and rapid onset of rash), another cause was suspected. Algae was considered the next likely suspect.

Mystery solved

Algae blooms are also known to cause rashes in swimmers who have come in contact with the algae toxins. More specifically, algae blooms produced by the Blue-Green algae family known as *Lynghya* have been documented as causing severe dermatitis in swimmers. Based on this information, an Environmental Health Officer from Yellowknife Health and Social Services sampled the water from the lake where the latest complainant had been swimming and made arrangements with a laboratory in Winnipeg to identify the algae. The lab identified the algae as *Lynghya limetica*, one of the Blue-Green family that is known to produce toxin that causes skin rash in swimmers.

There may have been a bloom of these algae related to the heat wave and perhaps other factors.

Contact with the algae toxins likely caused a reaction in certain individuals. This is similar to the type of reaction seen when an individual is in contact with poison ivy. Treatment generally involves removing the source of irritation and providing symptomatic relief (see sidebar).

Prevention of cercarial and contact dermatitis

Some preventative measures include: drying off well with a towel immediately, rather than allowing water to evaporate on the skin, showering as soon as possible once home and possibly using a waterproof sunscreen prior to going in the water (which acts as a barrier and protects the skin).

Dealing with other "unsolved mysteries"

The regional Environmental Health Officer should be contacted as soon as possible and provided with as much information as available. Prior to initiation of an investigation, the following questions should be answered:

- How many people have been affected?
- How long does this condition last?
- Are the infected individuals responding to treatment? If yes, what treatment is being used?
- Were all individuals exposed to the same source, or are there multiple sources?
- Are there any unusual activities occurring nearby, such as dumping of sewage, garbage, chemicals, wildlife, etc.?
- Has any testing occurred (such as water or soil testing) for presence of chemicals or bacteria?

Other information provided would vary, depending on the particular case.

If you notice anything unusual in your community, contact your regional Environmental Health Officer for investigation.

Note: There have been other reports of swimmer's itch throughout the NWT this summer. While these cases have been generally attributed to schistosomiasis, to the knowledge of this writer, these have not been confirmed by laboratory evidence. Swimmer's itch is not a reportable disease in the NWT.

Treating Contact Dermatitis

Treating contact dermatitis generally involves removing the source of irritation and providing symptomatic relief, such as:

- Soothing skin soaks (e.g. with baking soda);
- Antipruritic medication;
- Topical applications (such as calamine lotion or topical steroids if necessary);
- Analgesics (e.g. acetaminophen); or
- Oral steroids (only in severe cases).