EPI NORTH

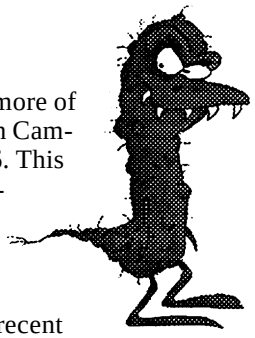
The Northwest Territories Epidemiology Newsletter

March/April 1996 Vol. 8, Issue 2

In This Issue

Editor's Note

Meet Marvin the Measle...



A rather unsavoury fellow, isn't he? You'll be seeing more of him in the upcoming nation-wide Measles Elimination Campaign, to take place in the NWT starting in April 1996. This issue of *EpiNorth* features Questions and Answers regarding this campaign. Any unaddressed questions should be directed to your Regional Medical Health Officer or to the Health Protection Unit.

The next article reviews the RSVvirus, the recent outbreak in Arviat as well as a review of its presence over the past several years.

This issue also looks at two aspects of tobacco usage in the NWT. The first one was written by Rick Tremblay, Youth Addictions Consultant. This article looks at tobacco usage amongst the youth in the NWT, and includes the results of surveys which have been completed over the past several years. The next one is a follow up article by Dr. Ian Gilchrist, Chief Medical Health Officer. He looks specifically at lung cancer in the NWT and how this may impact the passing on of Northern heritage.

The final article examines Helicobacter Pylorisin the NWT and its relationship to gastric and duodenal ulcers, presented by Dr. John Morse, Internist at Stanton Regional Hospital.

The regular monthly and year-to-date statistics on reportable diseases are followed by an added feature... News Clips. This section will keep you abreast of the happenings throughout Canada and around the globe. We hope to include noteworthy items dealing with outbreaks and vaccines.

As always, we welcome your comments and questions. Please contact us by phone, fax, e-mail or mail.

We will be conducting a readership survey in an upcoming issue.

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Northwest Territories Health and Social Services

Measles Elimination Campaign:

What are the components of the measles elimination campaign in the NWT?

As of January 1, 1996 all preschoolers began receiving a routine second dose of MMR, concurrent with their FOURTH DOSE of DPT/IPV/HIB (Pentavalent) vaccine at 18 months of age.

A mass "catch up" campaign will begin April 1, 1996. All other preschool and school-aged children (to the end of Grad 12) will be offered measles/rubella (MR) vaccine. The school-aged children will be immunized before the end of June 1996. The preschool children may be immunized throughout the 1996 year. This campaign is for 1996 only.

"With the current one dose program, outbreaks are expected at 5 - 7 year intervals."

Why is a Measles Campaign necessary?

Measles (rubeola) is often a severe disease, frequently complicated by otitis media or bronchopneumonia. Measles encephalitis occurs in approximately 1 of every 1,000 reported cases and survivors often have permanent brain damage. Death occurs in 1 of every 1,000 reported cases. The risk of death and complications is higher for infants and adults than for children and adolescents. Measles is also responsible for subacute sclerosing panencephalitis (SSPE), a fatal, chronic infection of the brain.

Prior to the widespread use of measles vaccine, virtually everyone acquired measles by age 18. The incidence of measles has decreased by over 95% since the 1970's because of routine immunization of infants and children.

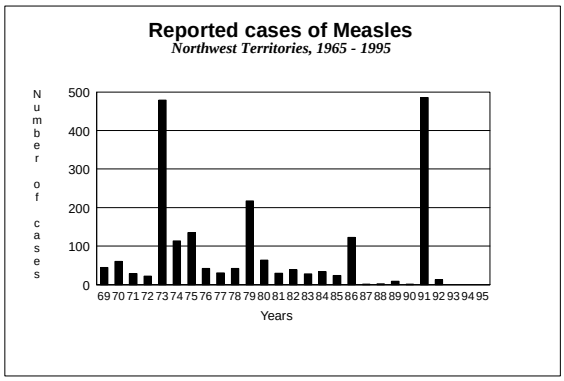
In Canada, however, there has been a significant increase in measles since 1989. Canada is now the prime exporter of cases of measles to the Americas. While Canada comprises 3.6% of the population of the Americas, it was responsible for 50% of reported cases of measles in 1995.

Measles vaccine confers high protective efficacy after only one dose (90-95%) when administered to children who are at least 1 year of age.

The cumulative contribution of the small percentage of primary non-responders and the 5% of children never vaccinated creates a pool of susceptibles that is significant enough to sustain outbreaks or epidemics even in highly vaccinated populations.

With the current one dose program, outbreaks are expected at 5-7 year intervals. For this reason, it has been predicted that significant outbreaks of measles will occur in Canada within the next two years.

The graph below shows the cycle of outbreaks in the NWT, with a 5-7 year interval. With the last significant outbreak in 1991, it is imperative to begin immunizing and thereby prevent such a reoccurrence.



The National Advisory Committee on Immunization (NACI) has recommended a two-dose schedule of measles immunization. This is expected to confer protection in over 99% of immunized persons.

A mass revaccination campaign is expected to reduce the number of susceptibles by immunization of those who did not respond to an initial dose. This will prevent outbreaks of measles and lead to the elimination of indigenous measles in Canada.

Why is MR vaccine going to be used?

This decision was made by the NWT Advisory Committee on Immunization. The benefit of this vaccine is the possible prevention of cases of congenital rubella syndrome. In the NWT there are many women identified at antenatal screening who are seronegative for rubella. The measles-rubella immunization catch-up will be achieved for virtually the same cost as the administration of the monovalent (M) measles vaccine. The cost of MMR vaccine is 8 times greater than that of the cost of Measles or MR vaccine. The addition of the mumps component could not be justified at this cost. The routine second dose of MMR will lead to elimination of mumps by about 2012, even without a mumps immunization catch-up.

What about the side effects of the rubella component of the vaccine?

Arthralgia and arthritis are possible side effects particularly in relation to post-adolescent (over 15 years of age) SERONEGATIVE females. It is not a concern for those already immune to rubella. Therefore, it will only be a concern in those 10%

Questions and Answers

of adolescent females not already immune to rubella. If not immunized during this campaign, many of these females will require immunization at an older age when arthralgia and arthritis are more common and severe adverse effects. Also, the wild rubella virus is at least four times as likely as the vaccine virus to cause such problems.

What about the risk to the fetus if rubella vaccine is received during pregnancy?

There has never been a reported case of congenital abnormalities in babies born to women who have received rubella vaccine in pregnancy. Therefore, the risk of teratogenicity is only theoretical. Because of this risk however, rubella vaccine should not be administered to pregnant females or to those who think they may be pregnant. Also, females should be advised not to become pregnant for 3 months following receipt of rubella vaccine.

What is the MR vaccine dosage, route, etc?

The MR vaccine needs to be reconstituted with the supplied diluent. It is administered by the subcutaneous route in a dose of 0.5 ml.

It is grown in human diploid cell culture in contrast to the MMR vaccine which is grown in chicken fibroblast cell culture. MR vaccine therefore contains no avian products and allergies to eggs is not a consideration for the use of this vaccine. Also, it does not contain any preservatives or antibiotics.

What are the side effects of the MR vaccine?

The adverse events are similar to those associated with the use of a combined MMR vaccine. Local reactions include tenderness at the injection site, redness, swelling, induration, a wheal and flare reaction or urticaria at the injection site. Rash is an infrequent reaction and is usually localized but can be generalized in rare cases. Most common systemic reactions include moderate fever, rash, malaise, headache, nausea, and rarely febrile seizures. Rash and systemic reactions usually occur 7-10 days after immunization.

Transient or intermittent arthritis, arthralgia, polyneuritis, myalgia, and paresthesia may also occur, but are rarely debilitating.

What are the contraindications to the MR vaccine?

- Hypersensitivity to any component of the vaccine. These include a stabilizer containing gelatin, lactalbumin hydrolyzate, sorbitol and lactose.
- Pregnancy
- As with all live vaccines, MR vaccine should not be administered to persons who are immunocompromised due to an underlying immune deficiency or secondary to a disease or immunosuppressive therapy. Those with asymptomatic or symptomatic HIV infection should be immunized because measles disease can be severe in the presence of HIV infection, and the adverse effects of the vaccine are not more severe in those with HIV infection.
- Those ill with a severe acute illness should not be immunized. However those with minor acute illness, such as a cold, with or without a fever, may be safely vaccinated.

Can the MR vaccine be given at the same time as other vaccines?

Yes, MR vaccine can be given with any other vaccine but at separate sites using separate needles and syringes.

Why is MMR vaccine being used in the routine schedule at 18 months of age?

The MMR vaccine will provide some additional protection against mumps, which could in the future cause outbreaks if a large number of susceptibles accumulates. One dose of mumps vaccine leave 15% unprotected, although outbreaks occur rarely because mumps is much less infectious than measles or rubella. Secondly, using MMR vaccine for the routine second dose will simplify vaccine inventory and minimize potential for errors in administration of the infant dose.

Will a second dose of measles vaccine be recommended for other groups?

No. The routine recommendations for immunization will remain unchanged for all other individuals. Generally, measles outbreaks in recent years have occurred primarily in school aged children, with secondary cases occurring in preschool aged children.

RSV in the Northwest Territories:

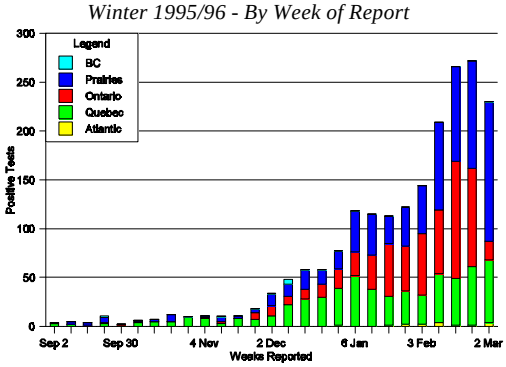
The recent outbreak of RSV in the Keewatin, which began in the community of Arviat in early February attracted nation-wide media attention. This attention has also produced questions among health providers as well as the general public regarding the presence of this virus in the NWT. The following article will review the RSV virus as well as identify its impact in the NWT over the past several years.

What is RSV?

Respiratory Synctitial Virus (commonly known as RSV) is the most frequent cause of serious respiratory tract infections in infants and children under 5 years of age. This common virus, which resembles the influenza and parainfluenza viruses, has infected most children by the age of three. In most young children it results in a mild respiratory infection that is not distinguishable from a cold. First isolated in 1957, RSV is the most common cause of bronchiolitis (isolated in 65% of cases) and can also cause pneumonia. Infants under the age of 2 and other children with chronic respiratory problems (asthma for example) are at particular risk of severe infection. In the United States, it is estimated that 4,500 infants die each year from RSV infection. Similar statistics are not available for Canada. Five infants with bronchiolitis (presumably RSV) have died in the NWT in the past 5 years, all of them less than 6 months old (two of these recently from Arviat).

Positive RSV Tests in Canada by Region

Winter 1995/96 - By Week of Report



How is RSV transmitted?

Like the "flu" and the common cold, RSV spreads from person-to-person contact through droplet transmission (sneezing, coughing). The virus can also survive from two to six hours on unwashed hands and the surfaces of objects.

What are the symptoms of RSV?

After an incubation period of 3 to 7 days, RSV causes nasal stuffiness and discharge, cough and sometimes ear infections. It is usually self-limiting (lasting 3 to 7 days) and does not require hospitalization or specific treatment--even in the majority of those who also have lower respiratory tract involvement (30-40%). These children may have a low-grade fever for several days, respiratory symptoms that may last for 1 to 2 weeks and a cough that sometimes persists beyond 2 weeks.

Lower respiratory infection is indicated by the onset of expiratory wheezing or diffuse inspiratory rates, marked cough, tacypnea and retractions, and varying degrees of cyanosis. In neonates, another presentation may occur, with apnea, lethargy and a decrease in appetite as the predominate symptoms. Progression is thought to be due to necrosis of the bronchiolar epithelium causing associated peribronchiolar inflammation. This necrosis is the pathologic hallmark of RSV infection. Disruption of surfactant may ensue and airways obstruction may occur. RSV infection predominates in the small airways and, when symptoms progress, abnormalities of gas exchange may be severe. Arterial oxygen levels drop and carbon dioxide is retained.

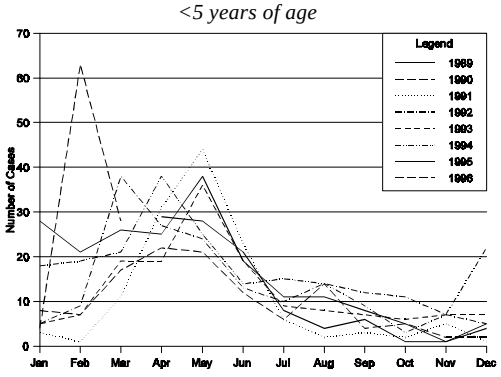
When is RSV most likely to occur?

RSV infection is a regular occurrence every year, with peak activity normally observed in April (usually imported North after the March break and spread around with some help from the many Carnivals that occur around that time in many communities). Certain laboratories across the country (called sentinel sites) routinely test for various respiratory viruses in order to monitor predict the incidence of these viruses over the winter months. This year, the virus made its appearance somewhat earlier and appears to be more virulent (infectious) than normal, with a high proportion of the cases developing pneumonia.

The following graph shows the cycle of medivacs for bronchiolitis in children under 5 over the past several years, with the peak generally in April.

Medical Travel for Bronchiolitis in NWT

<5 years of age

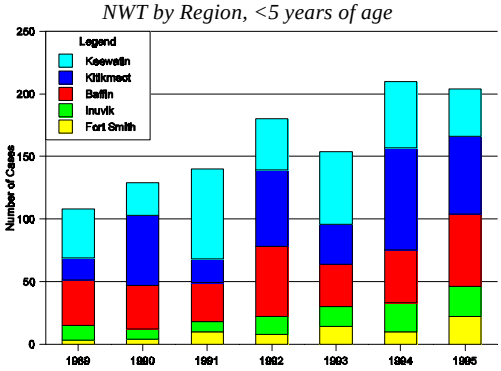


Examining the Keewatin Outbreak

The distribution of cases is predominantly in the eastern Arctic communities, with the largest numbers in the Keewatin and Kitikmeot.

Medical Travel for Bronchiolitis

NWT by Region, <5 years of age



How is RSV diagnosed?

Confirmation of RSV by culture can take up to two weeks. Therefore, once the presence of RSV is confirmed in a community, diagnosis is generally based on symptoms. If a child presents with symptoms of bronchiolitis, especially during an epidemic, they should be considered to be infected by the virus, and treated accordingly. Laboratory tests and chest x-rays contribute to the diagnosis.

How is RSV treated?

In the majority of cases, RSV infection is self-limiting and requires no specific therapy, other than controlling fever and treating any associated ear infections. Most children exhibiting the respiratory symptoms commonly associated with RSV (such as a stuffy nose and cough) require no treatment. If, however, the child has more severe symptoms, then hospitalization is generally necessary. Most hospitalizations occur in infants between 1 and 6 months old.

What type of treatment do children with RSV receive in the hospital?

Children are given humidified oxygen and oxygen levels are measured through pulse oximetry or measurement of arterial blood gases. Intravenous (IV) fluids are given to children whose respiratory rates are more that 60-70/min, who are dehydrated or those whose oral intake is decreased. These children's respiratory status should be closely monitored, and in severe cases may require intubation. Aerosol treatments (eg. Ventolin) may be helpful, but should be discontinued if ineffective. In severe cases, Epinephrine (injectable or aerosol) might also be indicated.

Can a person develop immunity to RSV?

The RSV virus is endemic in nature and commonly causes reinfection because immunity to it is short-lived. Reinfections are generally benign in adults; however, in elderly and immunocompromised patients, serious disease of the lower respiratory tract may result.

What is the latest on the 1996 outbreak in the Keewatin?

While the media caught the beginnings of the outbreak in Arviat, it has continued to make its way through the other Keewatin communities. The totals for evacuations of Keewatin infants with respiratory difficulties, as of mid-March, are shown in the chart at the right:

Criteria for hospital admission of seriously ill with RSV bronchiolitis

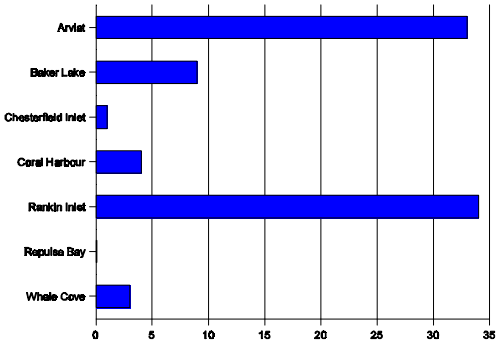
Hospitalization is recommended if any one of the following is present:

- Severe respiratory distress (deep retractions or grunting respirations)
- Respiratory rate over 50/min
- History of apnea or cyanosis
- Dehydration or very poor oral intake
- Less severe illness in infant with high-risk condition

***In the presence of an outbreak situation, other factors must be considered, including availablity of resources (eg. nursing staff) as well as impending poor weather.*

Evacuations of Keewatin Infants

Presumed RSV - February/March 96



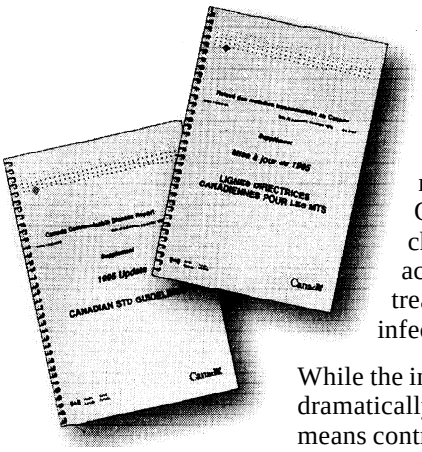
Was there anything different about the Keewatin outbreak?

The spread of virus appears to have begun in Arviat in late January, peaking there the third week in February. From there it spread to Rankin Inlet and then to other Keewatin communities. As noted above, the Keewatin outbreak came earlier than usual and appears to have been more virulent. It has also presented with more cases of pneumonia (42%). As of March 11, 1996, 93 Keewatin infants had been medivaced with respiratory difficulties. Of those infants, the majority were under 12 months (77%), with 41% under 6 months and 20% under 2 months. The two Arviat infants who died were both under 4 months.

continued on page 9

Treatment Guidelines

for Gonococcal and Chlamydial Infections



The 1995 Update of the Canadian STD Guidelines has recently been made available to all the health centres in the NWT. (It's light green, with black spiral binding, if you haven't seen it yet). Given the prevalence of gonococcal and chlamydial infections in the NWT (see accompanying graphs), the recommended treatment regimes for adults with these infections will be highlighted below.

While the incidence of gonorrhea has decreased dramatically over the past several years, it is by no means controlled. The treatment guidelines for gonococcal infection have been revised to reflect the increased prevalence of ***antimicrobial resistance.*** All gonococcal infections are treated presumptively as if they were resistant.

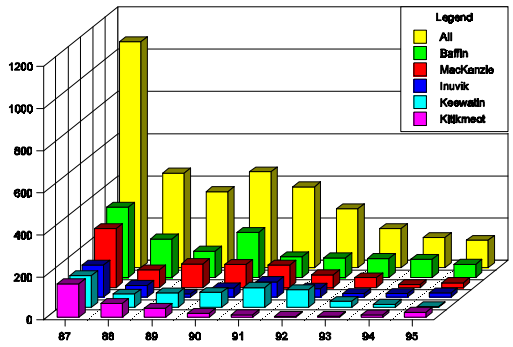
Penicillin, ampicillin, amoxicillin, and tetracyclines **are no longer recommended as first-line therapy** for gonorrhea**.**

Currently recommended as first-line are third generation cephalosporins (ceftriaxone and cefixime) and the fluoroquinolones (ciprofloxacin and ofloxacin) which are efficacious against *N. gonorrhoeae* strains resistant to penicillin and tetracycline. The dosage levels for ceftriaxone and cefixime have been reduced by 50% from those indicated in the 1992 STD treatment guidelines.

Chlamydial rates have remained constant despite previous treatment regimes. In an effort to see these rates decrease, **all patients treated for gonococcal infection should also be treated with an antimicrobial effective against chlamydia,** such as doxycycline or azithromycin, unless tests for chlamydia are known to be negative. Azithromycin, a single dose therapy, has been added as a first-line treatment for chlamydial infections in adults and adolescents. Single dose therapy is thought to improve compliance and hopefully improve treatment rates.

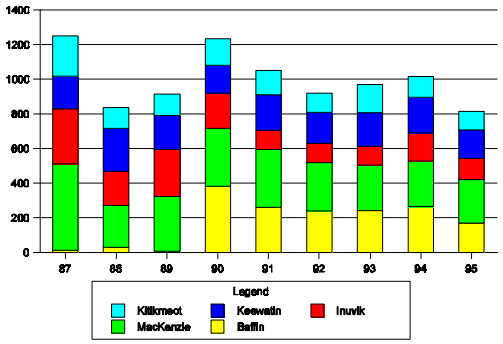
Gonorrhea Reports

NWT, 1987 - 1995



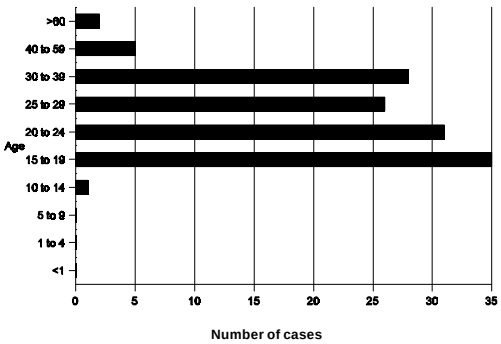
Chlamydia Reports

NWT, 1987 - 1995



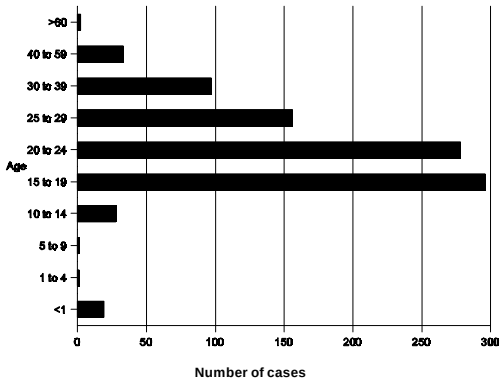
Gonorrhea in the NWT

Reported cases for 1995



Chlamydia in the NWT

Reported cases for 1995



Treatment of Gonococcal Infections in Adolescents and Adults

Urethral, endocervical, rectal pharyngeal infection (except pregnant women and nursing mothers) *

Oral	**Cefixime 400 mg** orally in a single dose or **Ciprofloxacin 500** mg orally in a single dose or **Ofloxacin 400 mg** orally in a single dose	**Plus** doxycycline tetracycline azithromycin **Note:** All patients treated for gonorrhea should also be treated for chlamydial infection.
Preferred IM	**Ceftriaxone 125 mg IM** in a single dose **	
Alternative IM (except pharyngeal)	**Spectinomycin 2 g IM** in a single dose	

* Ofloxacin and ciprofloxacin are contraindicated in pregnancy and doxycycline/tetracycline should be replaced by **erythromycin** (see page 88 in the *Canadian STD Guidelines*).

** Ceftriaxone and cefixime **should not** be given to persons with cephalosporin allergy or a history of immediate and/or anaphylactic reactions to *penicillin*.

Concurrent Treatment for Chlamydia in Adolescents and Adults

All patients should also receive empiric treatment for chlamydial and non-gonococcal infections:

Doxycycline 100 mg orally x 2/day for 7 days

or

Tetracycline 500 mg orally x 4/day for 7 days

or

Azithromycin 1 g orally in a single dose ***

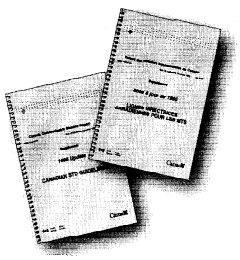
***There are only limited data as yet to support the use of azithromycin in non-chlamydial urethritis or cervicitis; more studies are currently being carried out.

See the ***Canadian STD Guidelines - 1995 Update*** for treatment of:

- Gonococcal ophthalmia (adolescent and adult) (p. 89)
- Disseminated infection: arthritis, meningitis (p. 89)
- Gonococcal infections in pregnant women and nursing mothers (p. 90)
- Gonococcal infections in children < 9 years old (p. 89)
- Gonococcal infection in neonates (p. 90)

The changes have been endorsed by the Canadian Infectious Disease Society's Sub-Committee on Sexually Transmitted Diseases and the Canadian Paediatric Society's Committee on Infectious Disease and Immunization.

Copies of the Canadian *STD Guidelines - 1995 Update* can be ordered from the Canadian Medical Association. To order by telephone, on credit card, call: 1-800-663-7336.



Youth and Tobacco Use

We can try to compare youth statistics for tobacco use between the North and southern Canada. However, we must first look at statistics in general. The recent Health Canada Youth Smoking Survey results are based on 14,200 school classroom questionnaires and 9,500 phone interviews of 15-19 year olds out of school. Whatever responses were received have been extrapolated to apply to the general population of youth in Canada. A sample was used to represent the population. Survey results are a "guesstimate" based on a sample.

The NWT statistics for youth tobacco use are not extrapolated for the whole population. Of the total student population of 9,735 students from grade four to twelve, 5,017(52%) answered the questionnaire. They are the actual statistics. The sample **IS** the population. NWT survey results are not a guesstimate but the ***actual*** results as stated by students.

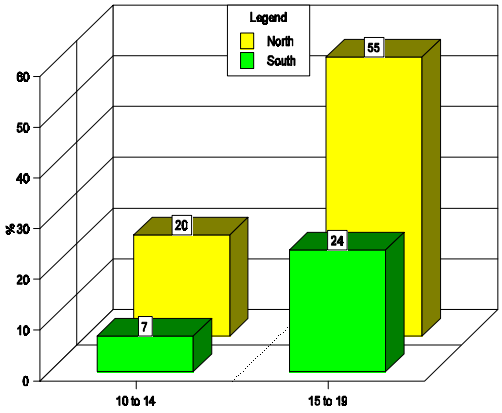
There are some similarities between results in the north and the south, especially if looking at trends. Smoking among young people has been decreasing since the 1980's, both north and south. The smoking rate increases as age increases. As all youth smokers get older, they smoke more. Boys smoke more cigarettes than girls. Most youth are aware of the effects of tobacco use. All youth find it easy to purchase tobacco products despite the federal laws which prohibit sales to minors below 18 years of age. This is where most similarities end.

In the NWT:

- More girls (38%) smoke than boys (28%)
- More Inuit youth smoke than other ethnic groups.
- By age nineteen, 69% of Inuit youth smoke; 60% Dene-Metis smoke; 30% of non-aboriginal smoke.

Prevalance of Current Smokers

Comparing Northern and Southern Canada



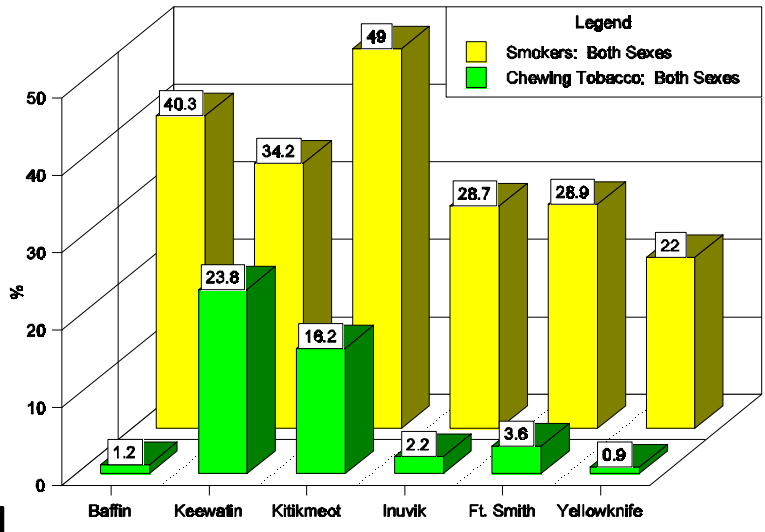
- Non-aboriginals smoke more cigarettes than other groups
- More boys than girls used chewing tobacco and snuff.
- More Inuit used chewing tobacco than the other groups
- More Dene-Metis used snuff than other groups.

As the chart at the left shows, there are some significant regional differences in tobacco use:

Nunavut appears to have its work cut out for them in addressing a major health problem of lifestyle that can be changed. As the last issue of *EpiNorth* stated, lung cancers are on the rise due to the coming of age of smokers who are now maturing into the results of a controllable lifestyle. The accompanying article in this issue demonstrates how lung cancer is prematurely robbing the North of valued individuals. Given the above figures, lung cancer and other related cancers will continue to devastate the North in the years to come.

Regional Differences in the NWT

Smoking and Chewing Tobacco Use in Youth



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How Cigarettes Steal Our Heritage

When my children were very young, my parents were killed in a car crash. As my children grew into adulthood, I always felt regret that they never got to know the wonderful people that their grandparents were. They never learned the incredible experiences of the old days, never had the support, encouragement and wise guidance of those patient elders, never heard about things that are now lost forever. It was a loss not only to me but to this next generation as well.

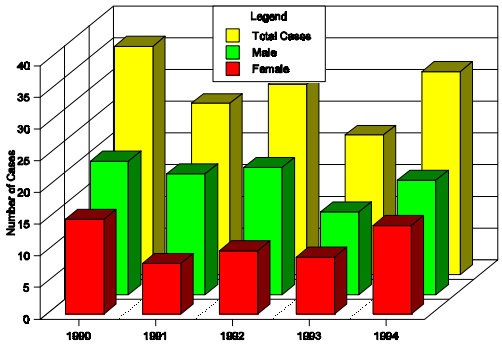
In the December 4 issue of *News/North*, Nunavut Commissioner Peter Ernerk told how his mother, sister and uncle all died of cancer. In this case it was not a car accident, but cigarette smoke that took their lives at an early age. The result is the same...their experiences, wisdom and knowledge are lost and cannot be brought back.

Nor is this a new kind of story. In a letter to *News/North* published five years earlier (May 7, 1990), Gabriel Nirlungayuk also told about losing his grandmother to lung cancer when she was still in her 40's. He too described this loss, both to himself and his children.

In the NWT, perhaps more than any other place, it is difficult to build on the wisdom and experience of parents and grandparents. Why? Simply because there are very few elders. Only 2% of the NWT population is over the age of 70, compared to 8% nationally. At the same time, 42% of the NWT population is under 20, compared to 28% nationally. There is a much larger percentage of young people to learn from a much smaller percentage of older people. This is a handicap for those who value the wisdom and experience of those who go before them.

In the NWT, cigarette smoking is responsible for taking many elders away prematurely. So for older people who want to enjoy and teach their grandchildren for many years, and for young people who want to enjoy and learn from their grandparents, as well as for health professionals who want to see their patients live in good health, the ***most worthwhile thing you can do*** is to face the problem of cigarettes and make your contribution to keeping the generations together through long and health lives. Those who, like Peter Ernerk, Gabriel Nirlungayuk and myself, see the loss of that strong bond between grandchildren and grandparents, will always regret it.

NWT Deaths from Lung Cancer



Look then at these sobering tolls which cover the period 1990-1994.

The youngest case in each of the above years ranged from 39 to 44 years. Lung cancer, once it is found, usually develops rapidly. There was merely an average of 7 months from the time the above 147 people were diagnosed until they died. That is a very short time to say goodbye and to pass on to others all the experiences that one would long to share.

These figures only represent deaths from lung cancers. Many other forms of cancer are also related to cigarette smoking. On another occasion we will share those counts too, and ***show even more clearly,*** how the use of cigarettes is hurtful to the heritage of NWT peoples.

F. Ian Gilchrist, MD, DPH
Chief Medical Health Officer

RSV Outbreak (continued from page 5)

Almost all of the children have had a history of previous respiratory tract infections, many repeated. Distribution between boys and girls appears equal. More than 65% were not breastfed.

It should be noted that all statistics are based on ***evacuations***, not on actual incidence. Many more children have been infected in all instances, but not to the extent that they required medical evacuation.

Are there any ways to avert an outbreak?

Although the outbreak in the Keewatin appears to be tapering off, other communities in the NWT will have to remain vigilant during the coming weeks. Prevention of spread is very difficult to control in small communities where there is a lot of interaction between individuals and overcrowding is a factor. Exposure to second hand tobacco smoke is also an important determinant of illness severity. Finally, it is important to remind the public that basic hygienic measures are the best defense: keeping sick children home; shielding infants from sick individuals; frequent hand washing; covering one's nose and mouth when coughing and sneezing.

Acknowledgements: Dr. D. Kinloch , Dr. Ian Gilchrist and Dr. Andrée Corriveau

Prepared by: L. Heinzig, RN, BSN

Helicobacter Pylori in the Western NWT

Over the past five years, clinicians seeing patients with acid pepsin disease noted high prevalence of Helicobacter Pylori infection in the western part of the Northwest Territories. This organism accounts for 90% of duodenal and 75% of gastric ulcers. Gastric cancer has been associated with this organism as well. Non ulcer dyspepsia, non-steroidal anti-inflammatory drug (NSAID) induced ulcers and reflux esophagitis are common problems but not associated with Helicobacter Pylori.

H. Pylori Treatment Guidelines

Confirmed, non-NSAID duodenal ulcer and proven non-malignant gastric ulcers should be treated for H. Pylori if the patient presents with:

- an acute duodenal disorder
- a previous duodenal or gastric ulcer on maintenance acid supressing treatment
- an inactive duodenal or gastric ulcer

Treatment of H. Pylori is not felt to be routine for the following conditions:

- dyspepsia
- non-ulcer dyspepsia
- NSAID ulcers
- esophagitis
- gastric cancer
- family members of known cases
- asymptomatic individuals

Treatment Recommendations:

1. Clarithromycin 250 mg BID
2. Omeprazole 20 mg BID
3. Amoxicillin 1gm BID or, if allergic to penicillin, metronidazole 500 BID

Treatment should be for seven days and can be followed by a further 21 days of acid supression for gastric ulcer.

We have tried to estimate the prevalence of Helicobacter Pylori patients seen at Medical Daycare at Stanton Regional Hospital (SRH). We have also compared various ways of detecting the organism, helping to find a cost-effective way of treatment and curing peptic ulcers.

Methods

Twenty-five of thirty-two symptomatic patients were studied by the salivary Helisal EIA, the tissue CLO (urease) Delta West Pty Ltd. and histopathology. The remaining seven of thirty-two were studied by Helisal EIA and histopathology.

A positive Helisal EIA was more than 0.15 Eu/ml. CLO (urease) tests were urinally inspected for colour changes (yellow to red) up to twenty-four hours after sampling.

Results

Table One shows the indications for endoscopy and the results of histopathological and Helisal EIA. The majority (87.5%) of duodenal ulcers were positive to both tests. Half of the gastric ulcers were positive to both tests. 40% of non-ulcer dyspepsia patients were positive. An unexpected finding was both esophageal stricture patients were Helicobacter Pylori positive by histopathology. Follow up of these cases indicated good long term results in duodenal and gastric ulcer patients and variable results in patients with non-ulcer dyspepsia.

Discussion

We have changed our approach to acid pepsin disease diagnosis and treatment as a result of this study. We now treat all patients with duodenal and proven non-malignant gastric ulcer for Helicobacter Pylori without any Helicobacter Pylori testing. When no ulcer is found at the time of endoscopy but the patient may have had an ulcer but improved clinically with treatment (at left), we use only the tissue CLO instead of more expensive histopathology. We have found by anecdotal experience that if a patient was on omepramole at the time of endoscopy false negative results with CLO testing were often found when only the antrum was sampled. We have sampled both the antrum and the gastric body.

Helisal testing is not clinically available in our hospital. It could be used to assess needs for further investigation of dyspeptic patients. If a patient is Helisal EIA negative, is not using NSAIDs and has no weight loss, dysphagia or gastrointestinal blood loss, then the chances of finding a significant problem with endoscopy or upper gi series are very low. I recommend that this test be available at the community level to assist in stratifying risk for serious acid pepsin disease. What conclusions that can be drawn from a positive test in the absence of endoscopy or upper gi series is still unclear.

Diagnosis	Positive Pathology	Helisal EIA IgG Positive	Agreement
Normal			
Duodenal ulcer			
Non ulcer dyspepsia			
Gastric/antral ulcer/duodenal ulcer			
Esophageal ulcer/stricture			
Esophagitis			
Irritable bowel syndrome			
Retroperitoneal sarcoma			
Hiatal hernia			
Diarrhea			
Total			

Table One: Study Findings

Acknowledgements: R. Kinley, MD; S. Chouinard, MD; K. Patton, RN

Prepared by: J. Morse, MD, S. I. Hnatko, MD, C. Brown; C. Linger-Albright, Stanton Regional Hospital, Yellowknife and Dr. S. Hanson & Associates Medical Laboratory, Edmonton

Notifiable Diseases By Region For January & February 1996

DISEASE	Month	Cummulative		REGIONS (YTD - 1996)					
	Jan & Feb 1996	1995 YTD	1996 YTD	Baffin	Fort Smith/ Mackenzie	Inuvik	Keewatin	Kitikmeot	
H. influenzae B	1	0	1	0	0	0	1	0	
Measles									Vaccine Preventable Diseases
Mumps									
Pertussis	4	2	4	0	1	0	3	0	
Rubella									
Amoebiasis									
Botulism		1							
Campylobacteriosis	4	0	4	1	2	0	1	0	
Clostridium/Perfringens									
E.Coli 0157:H7									Enteric Diseases
Food Poisoning									
Giardiasis	4	6	4	0	2	0	2	0	
Salmonellosis	3	2	3	0	1	0	1	1	
Shigellosis									
Tapeworm Infestation									
Trichinosis									
Chlamydia	154	162	154	43	50	18	23	20	
Gonorrhea	16	25	16	12	1	2	0	1	Sexually Transmited Diseases
Syphillis									
Hepatitis A									
Hepatitis B		3							Viral Hepatitis
Hepatitis C	5	5	5	0	5	0	0	0	
Hepatitis, Other									
Brucellosis									
Chickenpox	70	291	70	23	36	0	1	10	
Malaria									
Meningitis/Bacterial	1	1	1	0	0	1	0	0	
Meningitis/Pneumonococcal									Other Systemic Diseases
Meningitis/Unspecified									
Meningitis/Viral Infection									
Rabies Exposure									
Tuberculosis	13	2	13	0	11	1	1	0	

HIV INFECTIONS BY YEAR REPORTED IN NWT RESIDENTS

YEAR	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
NUMBER/YEAR	3	2	2	3	3	8	4	2	0	**1**
CUMULATIVE	3	5	7	10	13	21	25	27	27	**28**

Notifiable Diseases Reported By Community

January 1996	February 1996
Campylobacteriosis, 3: Fort Rae 1; Hay River 1; Sanikiluaq 1.	**Campylobacteriosis,1:** From Iqaluit.
Chickenpox (varicella), 33: Gjoa Haven 10; Fort Rae 10; Fort Smith 9; Yellowknife 3; Rankin Inlet 1.	**Chickenpox (varicella), 22:** Igloolik 6; Pangnirtung 5; Grise Fiord 3; Hay River 3; Fort Rae 2; Yellowknife 2; Arctic Bay 1.
Chlamydia, 60: Yellowknife 6; Fort Rae 5; Repulse Bay 5; Fort Providence 4; Fort Resolution 4; Cambridge Bay 3; Coppermine 3; Fort McPherson 3; Inuvik 3; Taloyoak 3; Arviat 2; Baker Lake 2; Coral Harbour 2; Gjoa Haven 2; Hay River 2; Holman 2; Pelly Bay 2; Rankin Inlet 2; Fort Liard 1; Jean Marie River 1; Sanikiluaq 1; Tuktoyuktuk- 1; Tulita 1.	**Chlamydia, 94**: Iqaluit 11; Pond Inlet 9; Yellowknife 9; Igloolik 6; Hall Beach 5; Fort Providence 4; Hay River 4; Inuvik 4; Arctic Bay 3; Clyde River 3; Fort Simpson 3; Rankin Inlet 3; Arviat 2; Cape Dorset 2; Fort Good Hope 2; Fort Liard 2; Fort Rae 2; Lac La Martre 2; Pangnirtung 2; Pelly Bay 2; Taloyoak 2, Tuktoyuktuk 2; Aklavik 1; Baker Lake 1; Broughton Island 1; Cambridge Bay 1; Chesterfield Inlet 1; Deline 1; Fort Smith 1; Lake Harbour 1; Sanikiluaq 1; Whale Cove 1.
Giardiasis, 1: From Yellowknife.	**Giardiasis, 3**: 1 each from Coral Harbour, Repulse Bay and Yellowknife.
Gonorrhea, 2: Cambridge Bay 1; Inuvik 1.	**Gonorrhea, 14**: Iqaluit 4; Arctic Bay 2; Igloolik 2; Pangnirtung 2; Pond Inlet 2; Inuvik 1; Yellowknife 1.
Hepatitis C, 1: From Yellowknife.	**Hepatitis C, 4**: From Yellowknife.
Meningitis/Bacterial, 1: From Inuvik.	**H. influenzae B meningitis, 1**: From Coral Harbour.
Pertussis, 1: From Chesterfield Inlet.	**Pertussis,3**: Arviat 2; Fort Rae 1.
Salmonellosis, 2: Taloyoak 1; Yellowknife 1.	**Salmonellosis, 1:** From Baker Lake.
Tuberculosis, 7: Lutsel k'e 5; Fort Smith 1; Yellowknife 1.	**Tuberculosis, 6:** Lutselk'e 2; Fort Good Hope 1; Fort Liard 1; Hay River 1; Sanikiluaq 1.

Notifiable Disease information reported in Epi North 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 the disease to their ***Regional Medical Health Officer*** within the time frame legislated in the Public Health Act/Communicable Disease Regulations.

News Clips

Suspected Ebola Haemorrhagic Fever: Gabon

The World Health Organization (WHO) has reported an outbreak of suspected Ebola Haemorrhaic Fever in the Village of Mayibout on the Invido River. This is in a remote rural area of Gabon, West Africa about 150 km from Makokou, the provincial capital of Ogooue - Ivindo. Of the 19 cases so far recorded 10 have died and the remaining 9 persons have been isolated and appear to be recovering. In addition, 4 other persons are under surveillance for possible infection. Preliminary laboratory results on blood specimens taken from 9 of the cases support the initial diagnosis of Ebola Haemorrhaic Fever, and further confirmatory tests are under way.

The initial source of the outbreak is reported to have been contact by some of the patients with a dead chimpanzee on 26 January 96. Several youths were involved with butchering and consuming it. Patients were susequently admitted to Makokou Hospital on 5 & 6 February. The circumstances of the outbreak are being investigated by a medical team. The WHO report that the government of Gabon has requested WHO's assistance to investigate the situation.

If confirmed, this outbreak will be the second appearance of the disease in Africa since the epidemic in Zaire in 1995 which infected 316 people and killed 245. A single case of Ebola was confirmed in Cote d'Ivoire last December. The patient survived.