EPI NORTH

The Northwest Territories Epidemiology Newsletter

November/December 1996 Vol. 8, Issue 6

In This Issue

Northwest Territories Health and Social Services

Editor's Note:

It's hard to believe that 1996 has almost come to an end!! This issue marks the my first anniversary as the editor of EpiNorth. Speaking on behalf of the staff of the Health Protection Unit, we hope this publication is meeting your educational and informational needs. As always, ***please*** let us know how we can continue to improve the content of EpiNorth.

Before reading this last issue of 1996, consider the following questions:

- **Did you know that triple drug therapy is now the recommended protocol post-HIV Exposure?**
- **Do you know what the Cold Chain is? Do you know what to do if there has been a breech of the Cold Chain?**
- **Did you know that the NWT shows a higher proportion of abnormal cervical smear results that is expected for the population?**
- **Do you know what dipyllobothriasis is? What about cryptosporidium?**
- **How long does it take for a 20 lb. turkey to thaw in the refrigerator?**
- **What does the NWT and the Tropics have in common?**
- **What can happen when an infant is born to a chlamydia-positive mother?**
- **Should infants be mantoux tested if they receive BCG in the community rather than at the hospital?**
- **Should pre-term infants receive regularly scheduled vaccines?**
- **What is happening in NWT communities to combat the harmful effects of Tobacco?**

If you would like to know the answers to any of these questions, and many more, read on...

Note: A readership survey **will be conducted with our next issue**

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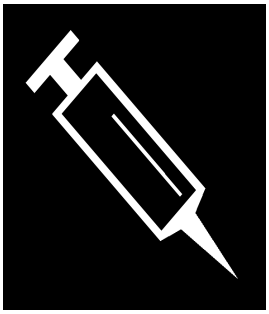

Prophylaxis Guidelines post-HIV Exposure

Dr. Andre Corriveau
Medical Health Officer
Health Protection Unit
GNWT - H&SS

Northwest Territories Hospitals and Health Boards may need to review and update their antiretroviral prophylaxis policies and procedures for prevention of infection following a high risk occupational exposure to blood or body fluids known or suspected to be contaminated with the HIV virus.

Recommendations

For all exposures where the source is known or highly suspected to carry HIV:

1) Contact the Regional Medical Health Officer (or HIV consultant involved in the management of the patient) to discuss the circumstances

2) Offer antiretroviral prophylaxis, with informed consent.

3) Report all HIV prophylaxis to the Health Protection Unit At 403-920-8646

The following advice is based on provisional recommendations recently published by the Centers for Disease Control and Prevention in the U.S[1].

"...starter kits should be made available in all NWT communities where HIV risk has been documented..."

Three Drug Therapy

Triple combination prophylaxis is now emerging as the preferred option in most circumstances. The three drugs of first choice would be:

AZT, 200 mg QID

Lamivudine (3TC), 150 mg BID

Indinavir, 800 mg TID

The initial doses should be given as soon as possible following exposure (ideally within two hours). For this reason, "starter kits" should be made available in all NWT communities where HIV risk has been documented. For cost-containment purpose, stocks of these medications could be maintained in only a few central locations (Yellowknife & Iqaluit for example). Chemoprophylaxis should be continued for a period of four (4) weeks. Starter kits prepared by SRH for a five day period would cost $200. A four week supply of the drug regime would cost $1100.

Two Drug Therapy

Exposed workers must be made aware of the lack of safety and tolerability information for protease inhibitors such as Indinavir. If someone prefers to use only two drugs, then AZT and 3TC should be chosen.

Doubtful Exposure

For care providers whose injury is classified as doubtful for risk of exposure to HIV, attempts should be made to test the source (with informed consent) and counseling should be provided that prophylaxis is not warranted. The exposed individual may nonetheless request to receive antiretroviral therapy; in such circumstances, the request should not be denied but the potential additional toxicity of a protease inhibitor would not be justified and a two-drug regimen using AZT and 3TC should be preferred.

Considerations

When considering this issue, it is useful to recall the following:

- The **average risk of transmission of HIV** is 0.3% following a percutaneous exposure to HIV infected blood; it will be less when dealing with a mucous membrane or skin exposure.
- **Viral load in the source patient and the type of injury** will also affect the risk of conversion. (A deep injury from a hollow needle that was used in a procedure involving direct placement in an artery or vein would carry a much higher risk than being scratched with a needle used for a subcutaneous injection.)
- **Triple-combination antiviral therapy is superior** to mono- or double-combination, but there is still limited data available on the safety and tolerability of the newer drugs, when used for prophylactic purposes. Known or suspected resistance of HIV to AZT or other antiretroviral drugs will influence the choice of chemoprophylaxis regimen.

Follow-Up

All workers with occupational exposure to HIV should receive follow-up counseling and medical evaluation, including HIV antibody tests at baseline, 6 weeks, 12 weeks and 6 months, and should observe precautions to prevent possible secondary transmission. Those taking antiretroviral drugs should also have a complete blood count as well as renal and liver function tests done at baseline and two weeks after starting the medications.

References

[1] Centers for Disease Control and Prevention. Update: Provisional Public Health Service Recommendation for Chemoprophylaxis after Occupational Exposure to HIV. MMWR 1996; 45: 468-472.

Managing a Vaccine Cold Chain Breach

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Throughout history, the value of immunization has been clearly demonstrated as a cost-effective method to prevent disease and promote health. Vaccines have to be maintained at the manufactures recommended temperature to ensure potency, thus making the product as efficacious as possible. Dr. Philippe Duclos, Director of Immunization at the Laboratory Center for Disease Control notes that from the recent studies that he has reviewed, "freezing appears to be the greatest risk to susceptible vaccines." We in the NWT are faced with this threat to the Cold Chains for approximately 8 months of the year.

Cold Chain Defined

The distribution and storage system which ensures that all vaccines are shipped and stored at an optimum temperature that maintains vaccine potency. In general, all vaccines should be refrigerated between 2° and 8° Celisuis unless otherwise specified by the manufacturer.

Considerations for Handling and Storage

- Temperature control must be maintained during transportation, storage and field use, (use Freeze-watch and Heat Indicators).
- Storage temperatures (2° to 8°) should be monitored twice daily and recorded by a designated person (Figure 1)
- Vaccine should not be used beyond their expiry date. Return expired vaccine to ordering source for possible refund.
- Vaccine should be stored on the middle shelves of the refrigerator - **not on door** -as there is a greater fluctuation of temperature in this area. Do not allow vaccine to touch refrigerator walls.
- Refrigerator should be on emergency generator. Keep bottles of water in refrigerator door. This will keep vaccine cold for 4-6 hours if power fails.
- Inactivated vaccines must be discarded if inadvertently frozen.
- Reconstitution of vaccines should be done immediately prior to use, and only with the diluent provided by the manufacture for that purpose. Unused reconstituted vaccines should be discarded at the end of the working day.
- Keep vaccine in coolers when transporting to schools or clinics. Leave ice packs at room temperature for 5 minutes or until they sweat and then cover ice pack with bubble wrap to prevent vaccine from freezing.

Handling A Cold Chain Breech

1. The vaccine Manager/Nurse In Charge will notify the Senior Nursing Officer if a Cold Chain Breech has occurred.

2. If due to a witnessed power outage, the Vaccine Manage/Nurse In Charge or designate will transfer all vaccines into a thermal container with ice packs and a thermometer until the vaccine can be transferred to another refrigerator.

3. When vaccine(s) have been exposed to temperatures outside the recommended range; the exposed vaccine(s) shall be put in a box marked "DO NOT USE" and placed in a functioning refrigerator. The Vaccine Manager/ Nurse In Charge or designate will consult with pharmacy or manufacturer(s) in order to determine if the vaccine may be used or whether it should be destroyed. Contact Regional Board about disposal of vaccines.

Figure 1. Vaccine Fridge Temperature Readings

Month of _____

DATE	TIME	MIN	MAX
1	AM		
	PM		
2	AM		
	PM		
3	AM		
	PM		
4	AM		
	PM		

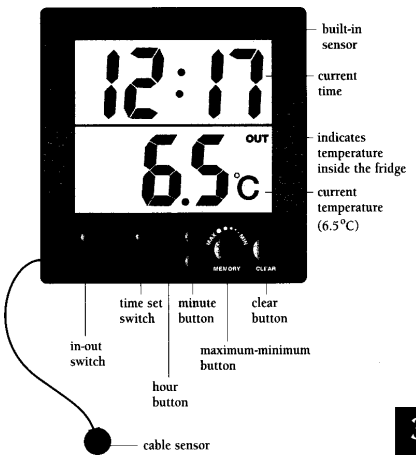
4. Pharmacists or Senior Nursing Managers can consult with the Health Protection Unit or vaccine companies to determine a Cold Chain breech. The phone numbers for all vaccine manufacturers are listed on pages 156-157 of the Canadian Immunization Guide, 4th Edition.

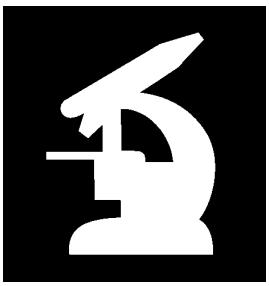
If there is a concern about the handling or storage of a vaccine in transport or on site the vaccine should not be used unless approved by the regional Medical Health Officer.

Using A Minimum-Maximum Thermometer

A digital minimum-maximum thermometer will document what the minimum and maximum temperatures have been inside the refrigerator since the thermometer was last reset, as well as the current temperature. This will identify if the vaccines were exposed to temperatures colder or warmer than the 2° and 8° Celsuis range. The min-max thermometer is the only way to know if the refrigerator is keeping vaccines at the right temperature. Check the thermometer twice daily.

Figure 2. A Digital Minimum-Maximum Thermometer





Cervical Cancer Screening (Part II):

During the study period of 1991-1994, 29,233 tests were taken for women aged 15 and over in the Northwest Territories. All tests were read and reported by the British Columbia Cancer Agency (BCCA). Although tests were taken for women under the age of 15, they are not part of the target population and their results will not be discussed in this article.

The last article in Epi-North presented the pattern of screening in the Northwest Territories. This article will discuss:

1. Quality assurance issues.
2. Pattern of screening test results, exploring age and ethnic differences.

"...The NWT shows a much higher proportion of "Abnormal" tests and "High grade Abnormality" than is generally expected in a population."

Quality Assurance Issues

A key factor determining the effectiveness of cervical screening programs is the quality of smear taking. Dr. Heather Mitchell, Medical Director of the Victorian Cervical Cytology Registry recommends that the following guidelines be followed:[1]

- 0.5-5% is the suggested standard for smears reported as unsatisfactory
- not more than 96% of technically satisfactory smears should be negative
- not more than 14% of technically satisfactory smears should be abnormal
- not less than 0.5% of technically satisfactory smears should show a high grade abnormality of CIN II and CIN III.

Pap smears are taken both by physicians and by Nurse Practitioners in the NWT and quality assurance is an important consideration. In the NWT, 4.04% (1171 tests) of Pap tests were reported as unsatisfactory during the study period. Unsatisfactory smears mean that the test cannot be read and reported at all, thus the test must be retaken. This is of concern due to potential delay in recalling the patient and retaking the Pap test. The other comments listed in Table 1 are quality assurance issues, however, the test can still be read when the other factors listed are present.

Table 1. Quality of Pap Smears in the NWT

Description	Nurse Pract.	MD	NWT
Smear quality unsatisfactory	4.50%	3.35%	4.04%
Difficult to interpret	6.81%	5.50%	6.22%
Inflammatory exudate	8.08%	6.45%	7.37%
Bloody Smear	1.41%	1.60%	1.50%
Scanty Smear	1.96%	0.97%	1.49%
Poorly preserved	0.78%	0.41%	0.62%
No endocervicals	1.50%	1.60%	1.56%
Smear too thick	0.05%	0.04%	0.04%

Because 1171 of the tests were reported as unsatisfactory, these tests must be removed from the denominator when calculating all other reportable results. Thus, all other results are based on 28,060 technically satisfactory tests (see Table 2).

[1] Personal Communication, February 1995.

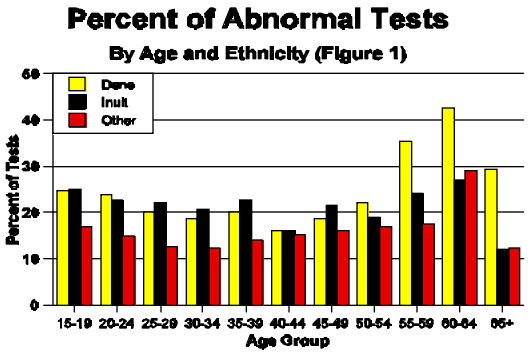
Table 2. Distribution of test results by Ethnicity and Jurisdiction

	Dene	Inuit	Other	NWT total	BCCA
Unsatisfactory	6.17%	4.34%	2.89%	4.04%	2.60%
Satisfactory Negative	78.38%	77.85%	85.75%	80.85%	86.60%
Satisfactory Abnormal	21.72%	22.15%	14.25%	19.15%	10.80%
Satisfactory CIN I	12.64%	12.60%	8.56%	11.12%	5.20%
Satisfactory CIN II	2.67%	2.91%	1.72%	2.42%	1.30%
Satisfactory CIN III	0.53%	0.88%	0.49%	0.67%	0.50%

Quality assurance standards are meant to indicate whether the lab that is reading the tests is meeting certain predefined levels of sensitivity and specificity. However, these standards also indicate what is generally accepted as a 'normal distribution' of results. It is apparent that the NWT pattern of results does not fall into the normal range of distribution. The NWT shows a much higher proportion of "Abnormal" tests and "High grade Abnormality" than is generally expected in a population. When compared to the BCCA's data from 1993, it is also apparent that the NWT has almost double the proportion of Abnormal tests than does the BC population. Since the BCCA read and reported on the tests from both populations, these are likely real differences in test results between the populations and not a manifestation of differences in quality of smear interpretation.

Test Results by Age Group and Ethnicity

Some countries recommend that initiation of screening be delayed until the age of 25 based on the assumption that no invasive disease will occur in women within 3 years of initiating sexual activity. In the NWT, because of the documented early age of intercourse (through birth statistics and STD statistics), it should be recommended that screening begin once the individual begins having sexual intercourse, regardless of her age. This recommendation is substantiated by the findings of this study of abnormal test results.



Test Results Between 1991and 1994

Cynthia Carr
Epidemiology Consultant
GNWT - H & SS

Between 1991 and 1994, 22% of Inuit and Dene "Satisfactory" tests and 14% of Other "Satisfactory" tests were classified as "Abnormal". Higher than expected (14%) proportions of "Abnormal" tests were reported in every age group, (except the 65+ group) of Dene and Inuit women (see Figure 1).

The rate of preclinical disease, such as CIN I is also quite high in the group of women that have been screened in the NWT (see Figure 2). The graph illustrates that 15% of Dene and Inuit tests and 10% of Other test were classified CIN I in the 15-19 year old age group. It is also of concern that 6 Dene tests, 9 Inuit tests and 5 Other tests were classified CIN III in the 15-19 year old screening group.

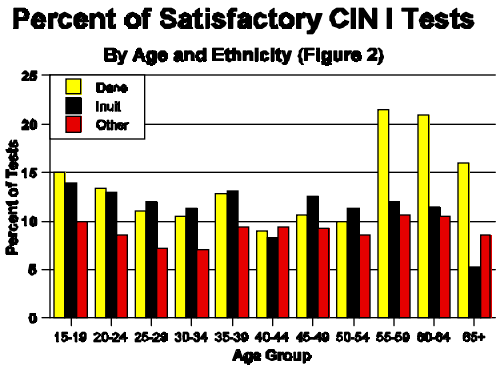


Table 3 provides more specific detail about the median age at which women's tests were classified as negative, CIN I, CIN II and CIN III. These results clearly point to the need to continue to screen young women although negative results also occur most frequently in the younger age group .

Table 3. Median Age at Test Result

	Negative	CIN I	CIN II	CIN III
	Median Age	Median Age	Median Age	Median Age
Dene	28.00	27.00	22.00	28.00
Inuit	26.00	25.00	22.50	28.00
Other	30.00	31.00	27.00	28.00

Test Results and the relationship to Screening Patterns

As reported in the last issue of Epi-North, differences in screening rates based on ethnicity were found. Figure 3 illustrates the relationship between tests taken, women screened and screening test results. This graph represents the distribution of tests and results in the population that was tested.

Dene women account for 20.44% of tests taken, Inuit women for 43% and Other women for 36% of tests taken. Dene women make up just under 20% of the population of women tested, Inuit women 36% and Other women 45% of the women in the database. This means that Dene women are approximately evenly represented in proportion of women and proportion of tests while Inuit women have proportionately more tests and Other women have proportionately less tests.

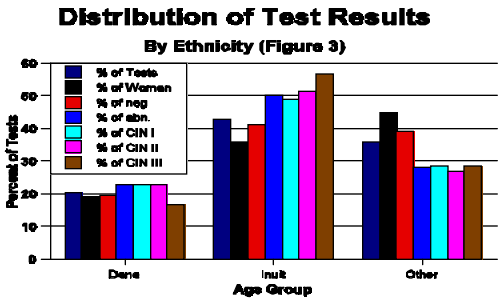


Figure 3. Distribution of tests and test results among those women tested between 1991 and 1994.

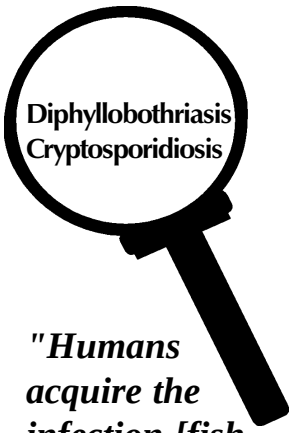
When we compare this pattern of screening to pattern of test results it is apparent that Dene women account for approximately the same proportion of Negative and Abnormal test results that you would expect from the proportion making up the screened population (that is, all are very close to 20%). However, this pattern is quite different for Inuit and Other women. Inuit women account for almost half of all Abnormal results when they accounted for only 43% of all tests taken; they are also more highly represented in the High Grade Abnormality test results (for example, Inuit account for 57% of the CIN III results). The opposite pattern is seen for Other women; although they accounted for just under 37% of all tests taken, they make up just over 27% of all Abnormal test results.

This pattern of results may partially explain the testing patterns. Those with Abnormal results are to be recalled and retested. Since Inuit women account for proportionately more "Abnormal" results, they are more likely to be re-tested.

Discussion

As discussed in the previous edition of Epi-North, between 1991 and 1994, 52% of the target population did not have a Pap test. This is of concern, particularly in view of the proportion of Abnormal results found in the population of women tested. Failures of screening programs have been attributed to the fact that women who attend for screening are those at lower risk. With over half of the target population being unscreened, unless a rigorous screening policy is developed and maintained, a rise in cases of invasive cervical cancer may occur. Thus, the implementation of organised screening programs should be a high priority in regions or communities where this is not already occurring. It is also of particular concern that Inuit women are consistently over represented in the "Abnormal" range of test results; this should be addressed with more vigilant screening and improved primary prevention programs.

"With over half of the target population being unscreened, unless a rigorous screening policy is developed and maintained, a rise in cases of invasive cervical cancer may occur."



Reportable Diseases in the NWT:

A Case of Diphyollobothriasis

A 16 month old from the Baffin Region developed diarrhea lasting for one month. Stool samples revealed diphyllobothrium latum. He was treated successfully with Niclosamide.

What is diphyllobothriasis?

Otherwise known as Fish Tapeworm, this is an intestinal tapeworm infection of long duration. Symptoms are commonly mild or absent. Massive infections may be associated with diarrhea, obstruction of the bile duct or intestine, and toxic symptoms. Diagnosis is confirmed by identification of eggs or segments (proglottids) of the worm in feces.

Infectious agents: Diphyllobothrium latum, D. pacificum, D. ursi, D. dalliae and D. klebanovskii.

Occurrence: This disease occurs in regions where eating raw or partly cooked freshwater fish is popular. Prevalence increases with age. In North America endemic foci have been found among the Inuit of Alaska and Canada.

Reservoir: Humans; mainly, infected hosts discharging eggs in feces; reservoir hosts other than people include dogs, bears and other fish-eating mammals.

Mode of transmission: Humans acquire the infection by eating raw or inadequately cooked fish. Eggs in mature segments of the worm are discharged in feces into bodies of fresh water, where they mature, hatch and infect the first intermediate host and become procercoid larvae. Susceptible species of freshwater fish (pike, perch, turbots, salmon) ingest infected copepods and become second intermediate hosts, in which the worms transform into the plerocercoid (larval) stage, which is infective for people and fish-eating mammals, such as the fox, mink, bear, cat, dog, pig, walrus and seal. The egg-to-egg cycle takes at least 11 weeks.

Incubation period: Three to six weeks from ingestion to passage of eggs in the stool.

Period of communicability: Not directly transmitted from person to person. Humans and other definitive hosts continue to disseminate eggs for many years.

Treatment: Praziquantel or niclosamide are the drugs of choice, given in a single dose. This is available from the Bureau of Biologics under the Emergency Drug Release program.

"Humans acquire the infection [fish tapeworm] by eating raw or inadequately cooked fish. .."

Tapeworm reports in the NWT

1996 - 1 (ytd)
1995 - 2
1994 - 3
1993 - 4
1992 - 4

Cryptosporidiosis in the NWT

Six cases of Cryptosporidiosis have recently been reported in the Northwest Territories.

Cryptosporidium parvum is an intestinal parasite transmitted by the ingestion of oocysts excreted in the feces of infected humans or animals. Symptoms of Cryptosporidiosis may include watery diarrhea, abdominal cramps, nausea, vomiting and fever. In otherwise healthy individuals, these symptoms may be relatively mild and can come and go for a period of several weeks. However, immuno- compromised persons (for example, those with HIV infection, or whose immune system is suppressed by medications) are at particular risk for protracted or fatal illness.

Several outbreaks of Cryptosporidiosis have been linked to municipal drinking water supplies during the past few years[1,2], most recently in the Thomson-Okanagan-Kootenay area of British Columbia[3]. The reason for this is that *C. parvum* oocysts are quite resistant to chemical desinfection (eg: chlorination) and may therefore persist in treated water, especially when filtration is not included in the process.

All surface waters (lakes, creeks and rivers) have a high probability of being contaminated by *Cryptosporidium* oocysts[2]. People should therefore be discouraged from drinking directly from such sources. It is also possible to acquire Cryptosporidiosis through contaminated beaches and swimming pools. Person-to-person and animal-to-person transmission can contribute significantly to the spread of disease.

When new cases are identified in the community, all the above possibilities will need to be ruled out as a possible source of infection. It will be important to emphasize the need for handwashing after going to the toilet or changing diapers, prior to eating or preparing food, and after touching farm animals and pets. Food handlers and staff members of daycare centres or long-term care facilities should remain off work while symptomatic. Children with diarrhea should similarly be excluded from day care centres until they no longer have symptoms.

The health risk associated with drinking unfiltered treated tap water contaminated with small numbers of *C. parvum* oocysts is unknown. One study has shown that the median infectious dose in healthy human volunteers was 132 oocysts[4]. In current public health practice, a boil-water advisory would not be issued simply because of the presence of low levels of *Cryptosporidium* oocysts, unless additional evidence of contamination was also

"All surface waters (lakes, creeks & rivers) have a high probability of being contaminated by Cryptosporidium oocysts..."

Tapeworm & Cryptosporidiosis

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Cryptosporidiosis (cont.)

present[2]. However, it would be prudent for all persons with a weakened immune system to take extra precautions with their drinking water. The safest approach is to boil for at least one minute all water to be used for drinking. Use of bottled water may be a safe alternative, but label information does not always adequately inform the consumer on the source and the treatment and/or testing done on the product. In general, bottled water obtained from an underground source (wells or springs) would have less likelihood of being contaminated, and bottled water that has been boiled or distilled would be safest. Water filters that only use ultra violet light, activated charcoal or penthiodine-impregnated resin will not protect against *Cryptosporidium.* Only those capable of removing particles of 1 m or less should be viewed as adequate, but bacterial overgrowth on filters may pose its own additional health risk.

REFERENCES:

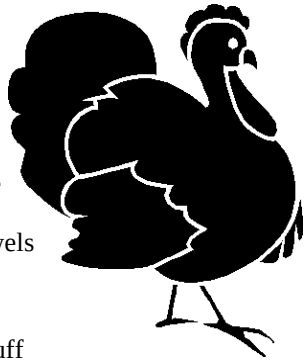
[1] MacKenzie WR, Hoxie MS, Proctor ME, et al. A massive outbreak in Milwaukee of *Cryptosporidium* infection transmitted through the public water supply. N Engl J Med 1994;331:161-7.

[2] Centers for Disease Control. Assessing the public health threat associated with waterborne Cryptosporidiosis: report of a workshop. MMWR 1995;44(N° RR6):1-20.

[3] BC Centre for Disease Control. PHO Advisory: Increased cases of Cryptosporidiosis. September 23, 1996; N°134.

[4] Dupont HL, Chappell CL, Sterling CR, et al. The infectivity of *Cryptosporidium parvum* in healthy volunteers. N Engl J Med 1995;332:855-9.

Avoiding The Turkey Trots



Bill Wrathall and
Ron Breadmore
Environmental Health Officers, Inuvik Region

The smell of roasting turkey may soon fill your home. If you are chosen as the chief cook, be aware that improper handling and preparation of your turkey may result in bacterial food poisoning.

The following reminders and tips will help ensure your bird is prepared safely.

If buying your turkey frozen, make sure it is frozen throughout and keep it frozen until you are ready to cook it.

When ready to cook the turkey, thaw it first in the refrigerator. Place the turkey in a try on the lower shelf to prevent melting water/juices from dripping on ready-to-eat foods. **DO NOT THAW YOUR TURKEY AT ROOM TEMPERATURE**. This promotes bacterial growth.

Thawing Time in Refrigerator:

8-12 lbs - 1 to 2 days
12-16 lbs - 2 to 3 days
16-20 lbs - 3 to 4 days
20-24 lbs - 4 to 5 days

A quick thawing method is to place the turkey, bag and all, in a sink of cold running water, or at least with frequently changed cold water.

Thawing Time in Cold Water:

8-12 lbs - 4 to 6 hours
12-16 lbs - 6 to 9 hours
16-20 lbs - 9 to 11 hours
20-24 lbs - 11 to 12 hours.

After thawing, rinse the cavity and outside with cold water. To prevent the spread of bacteria, wash your hands, utensils and all other contact surfaces, including the sink, with warm soapy water and then rinse with clean water. Sanitize all items with a solution of bleach and water (1/4 tsp. per liter water). Place soiled hand towels and aprons in the laundry basket.

Turkey stuffing is a great place for bacteria to grow because it is dense and cooks slowly. Stuff your bird just before cooking and when the turkey is done, remove the stuffing right away. If you're cooking a large bird, cook the stuffing in a separate pan.

Cook your turkey at 325° F using a cooking chart according to weight. The turkey is done when the leg moves easily and there is no pink colour to the meat. To avoid guess work, use a meat thermometer. Push it into the bird between a leg and the body. The temperature should read 180° F or more. Do not partially cook your turkey one day, and complete it the next. Interrupted cooking enhances the chance of bacterial growth.

Slow cooking at lower temperatures (ie. 250° F) is not recommended as the turkey may take more than 4 hours to reach a high enough temperature to kill bacteria and be that time, bacterial levels could be too high to control.

Left over turkey should be refrigerated immediately after dinner. Large birds should be de-boned and packed into smaller portions to cool down quickly in the fridge.

Reheat all leftovers to at least 180° F.

For more information, contact your regional Environmental Health Officer.

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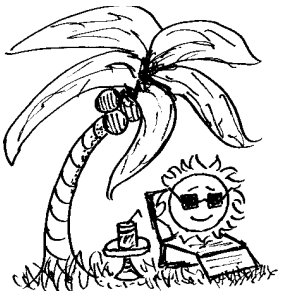


North of 60, Tropical Travel and...

Most people might be pretty surprised to learn that tropical diseases can be an important risk to those of us who live in the circumpolar NWT; and particularly in the winter! Why is this?

Global Village

The first thing, of course, is that the World has indeed become a global village, and approximately 3 million Canadians now travel to other countries each year, often making those trips during the coldest months of the Canadian winter.

The number of NWT residents who join their fellow Canadians in travel abroad are not readily available, but in general it is evident that we travel alot. That happens, in part, because:

- our populations are young and adventurous
- we have close links to mining and exploration developments that are taking place around the world
- our constitutional and political systems are being crafted in the light of experiences in many other areas
- religious activities here are linked to church work in a lot of other places
- the level of technical expertise here is welcomed by people in other countries
- there is a high enough standard of living and travel subsidy that we can afford to go quite far away
- to escape the long northern winters
- undoubtedly for other reasons too.

"...while tropical travel is a bonus for many NWT people, it also carries risks that we must keep in mind..."

Risks of Tropical Travel

While tropical travel is a bonus for many NWT people, it also carries risks that we must keep in mind.

The Canada Communicable Disease Report of October 15, 1996, makes the point by giving an account of the recent deaths of two Canadians who died from malaria after they had been off for a few weeks of travel in different parts of Africa.

Malaria presents a big problem to all Canadian travellers to most any part of the tropical world. This disease, spread by mosquitos, can develop and kill within a matter of hours. Furthermore, Northerners may be at particular risk because we are often used to tolerating quite a few bites by our Arctic mosquitoes, and perhaps would be lax about avoiding the single tropical mosquito bite that could be a killer.

After the Second World War it looked like malaria would be beaten a) by killing mosquitoes with insecticides, and b) by taking drugs which could prevent malaria parasites from developing in our blood. Unfortunately, neither work anymore, so both the mosquitoes and their parasites are now resistant to these products.

This means that most Canadians are vulnerable to this dangerous disease when they go to tropical areas, even for short periods of time. And, of course, there are many other tropical conditions that travellers can get besides malaria, so that every year NWT doctors and nurses see people with skin conditions (which they got from swimming in contaminated waters), bowel problems (which they got from eating unclean food), sexual diseases (if there have been changes in safe sexual practices), etc.

It is really important therefore, before one sets off to travel to a tropical place, to check out with a travel clinic, or the Medical Health Officer, what conditions are like in the place one intends to go, and what needs to be done in order to make sure that the trip does not turn into a tragedy.

We need to remember as well that in fact most of the things we can get on these trips are not even really **tropical** diseases. In fact there is now only one disease (yellow fever) left for which an International Sanitary Certificate is required in tropical areas. But the problem is that many diseases including those that have now really been wiped out in Canada and the NWT, are still very present in some tropical countries. Other diseases are still among us, but rare, and of little risk, because of our good hygiene practice compared to many tropical countries. An example here would be Hepatitis B, or Tetanus. So nearly always the most important step to make sure that we do not get sick while we are abroad, is to a) make sure our immunizations are complete and up-to-date, and b) learn all we can about the countries where we plan to travel.

One problem frequently seen at travel clinics is that people make often make their travel plans at the last moment. Even then, they may not be sure exactly where they will be going! Yet to be fully immunized for travel abroad may take up to six months depending on which diseases may be endemic and which immunizations are required. Therefore people thinking about travelling abroad should approach their health centre staff, doctor, or Medical Health Officer, very early in the planning of their trip to make arrangements of immunization and to receive education about prevention of disease.

Travel Clinics

In Canada there are many of Travel Clinics which play a very important role in protecting people from travel disasters. In the NWT there is, at this time, such a clinic operated by the Mackenzie Regional Health Service. There are also a number of national associations and organizations that provide advice, direction and protective materials for travellers. These include the Canadian Society for International Health (613-230-2654).

Travel Health Sites on the Net

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

Health professionals can also obtain free materials for their patients from a number of companies (one is Connaught Laboratories Limited - call 1-800-268-4171 and ask for item T129E1). The International Association for Medical Assistance to Travellers specializes in travel health (and can be reached at 519-836-0102).

Most travel to tropical places is exciting, refreshing, and educational. If one prepares early and well, most of what we learn will also be positive. But as the colder weather closes in, health professionals, travel agencies, and trip organizers should be prepared to start reminding their patients and clients that for the sake of self, family, and friends, travel requires responsible preparation.

Case Reports

Please read the two malaria case reports in the October 15 Canada Communicable Disease Report. Included here also are three examples of NWT travellers whose trips ended unhappily:

1. 45 year old female took a 3-week spring break in the Caribbean. Did not swim just in the hotel pool, but swam extensively in the ocean lagoons adjacent to the town. Developed a whole body itchy rash and felt ill on the last days of her holiday. The rash persisted for several months after return to the NWT in spite of multiple doctors' visits and treatments. The cause was not found but may have been from a sensitivity to parasitic cercariae in the ocean water.
2. 36 year old male travelled back to his previous home in an Asian country for the first time in 12 years. He was well during a 6 weeks stay there, but about 3 months after returning to Canada began to feel periodically feverish and unwell. He was seen by different doctors 4-5 times over the next six months, and had various treatments for flu. His brother then suggested he ask a doctor to check him for malaria parasites. When this was done, they were found, and treatment was then curative, after almost a year of illness.
3. 30 year old male travelled to several tropical countries. He took malaria prophylaxis on this trip, but still developed fever, malaise and cough 2-3 months after getting back. Six months later he had been shown to have tuberculosis. An HIV test was done and was found to be positive.

In none of these cases were there medications or vaccines that could have protected the subsequent victims. Their illnesses resulted from failed understanding of the environments into which they were going. Doctors, nurses and trip organizers, can exercise the most effective preventive actions by ensuring their patients/clients are clear that good health does not always come in a pill or a needle.

Travel Health Sites on the Net

Travel Health Online

Location: www.tripprep,com/index.html
Links to: health sites, medical provider sites
Focus: This user friendly site is set up so that a country profile contains info on diseases, immunizations and location of health related resources in that country. Information is also available on the medicines and vaccines themselves as well as summaries of travel illnesses. This site offers the most extensive access to information on travel health
Overall Rating: ★★★★★

Rating

Excellent ★★★★★
Good ★★★★
Satisfactory ★★★
Average ★★
Not User Friendly ★

Centers for Disease Control (Atlanta)

Location: www.cdc.gov/cdc.html
Links to: WHO, EID Journal, MMWR
Focus: A general site where one can go for information on a number of subjects including travel health issues. You can pick a country and info will come up regarding diseases, risks and prevention in each region. Opportunities for employment are also listed here. **Overall rating:** ★★★★★

International Traveller's Clinic Web Site

Location: www.intmed.edu/travel.html
Links to: many other travel health sites
Focus: This user-friendly site features lists of diseases, the areas they are common to and which ones require immunization. The site also discusses environmental hazards and what to watch for.
Overall Rating: ★★★★

The Virtual Hospital (Travel Medicine)

Location: radiology.uiowa.edu/Providers/Textbooks/TravelMedicine/TravelMedHP.html
Links to: many other health related sites
Focus: This is a user friendly site set up in such a way that one can find the country they are travelling to and see which disease are common to the area and what immunization is required. The site also gives helpful info to travellers with special medical conditions and people travelling with children. **Overall Rating:** ★★★★

Laboratory Center for Disease Control web site (Ottawa)

Location: www.ca/hpb/lcdc/phi_e.html
Links to: WHO, CDC (Atlanta), vaccine labs, Virtual Tourist I & II, etc.
Focus: Is fairly general in its content but you can look up specific info by utilizing the user friendly subject guide.
Info on Travel Health: There is an area under Public Health where general tips are given in regards to prevention and safety, types of immunization and types of diseases. **Overall Rating:** ★★★

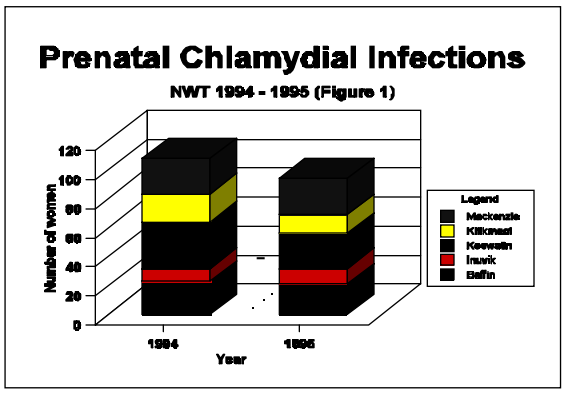
Internet info and artwork prepared by aspiring tropical traveller, Lisa McClelland

Chlamydia Infection in Infants and Children

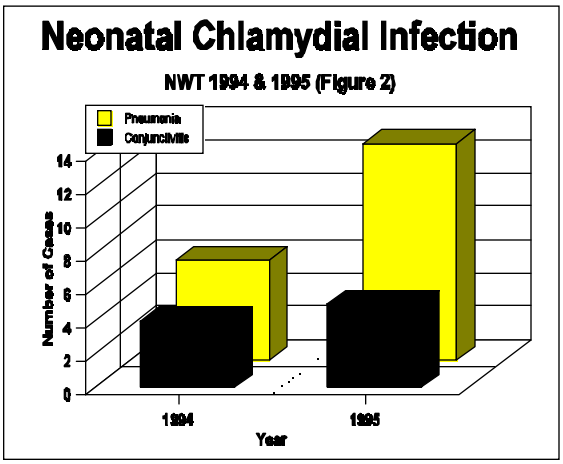
Chlamydia trachomatis is an obligate intracellular bacterial parasite. It is currently the most common sexually transmitted infection in North America.

C trachomatis can be transmitted from the genital tract of infected mothers to their newborn infants. Acquisition occurs in about 50% of infants born vaginally of infected mothers and in some infants delivered by cesarean section with intact membranes. Of infants acquiring *C trachomatis*, the risk of conjunctivitis is 25% to 50% and the risk of pneumonia is 5% to 20%. Asymptomatic infection of the conjunctiva, pharynx, rectum, or vagina of the infant can persist for more than 2 years. Newborns in the NWT are particularly vulnerable to developing infections in their first weeks of life as chlamydia rates are substantially higher in the NWT than anywhere else in Canada. Sexually active adolescents and young adults are at very high risk for *C trachomatis.* Prevalence in pregnant women varies between 6% and 12%. As noted in Figure 1, chlamydia is a well documented fact in our prenatal population.

"...[chlamydia] occurs in about 50% of infants born vaginally of infected mothers and in some infants delivered by cesarean section..."



Neonatal chlamydia conjunctivitis



Chlamydial conjunctivitis presents at a few days of age to several weeks after birth. Symptoms include conjunctivitis, congestion, edema and discharge of the eyes. Pseudo-membranous formation and diffuse injection of the tarsal conjunctiva are common. Prearicular adenopathy is unusual. The infection can last for 1 to 2 weeks or longer.

Figure 2 illustrates the documented cases of neonatal pneumonia and conjunctivitis in the NWT over the past two years.

Chlamydia pneumonia in young infants

This presents at 3 to 19 weeks after birth. Repetitive staccato cough often terminating in vomiting or cyanosis, as well as tachypnea are characteristic but not always present. Fever is unusual; otitis media can be present in over half of the cases. Respiratory symptoms can be preceded by conjunctivitis. On auscultation, rales can be heard but rarely wheezes. Chest radiographs may show prominent hyperinflation but otherwise there are no pathognomonic signs. A mild peripheral eosinophilia is seen in half of the cases. Untreated disease can linger or recur, especially in small or immunocompromised infants.

Diagnosis of Chlamydial Pneumonia

This can be made by isolating the organism in tissue culture or by rapid detection of antigen techniques (DFA, EIA). Results are highly dependent upon adequacy of specimen, laboratory expertise and type of test available. Culture has traditionally been considered to be the most sensitive and most specific test. It is the test of choice in medico-legal considerations. Results however are highly dependent upon specimen transport and laboratory expertise.

Conjunctival specimens must contain conjunctival cells obtained by scraping the tarsal conjunctiva. Pus may not contain many such cells. Nasopharyngeal aspirates are also appropriate if they contain epithelial cells. Antigen detection techniques are adequate in most circumstances provided the possibility of false-positive tests is considered, and there are no legal implications; they are not appropriate in nasopharyngeal specimens. False positives are a real concern in low prevalence situations.

Treatment

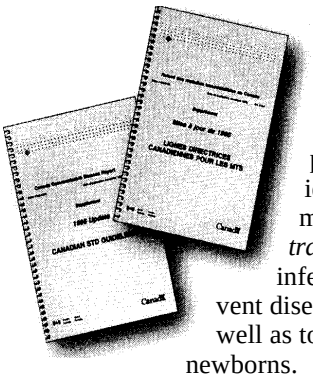
Treatment should be initiated on diagnosis of a syndrome compatible with a chlamydia infection, without waiting for the results of specific diagnostic tests for *C trachomatis*. Neonates and infants born to infected women **must** be treated. Parents of infected infants must be evaluated and treated as appropriate. Young in[illegible]are treated with oral **erythromycin (30-50[illegible]g/day in four divided doses; max. 500 mg/d[illegible]for 14 days** (see 1995 Canadian STD Guideli[illegible]p. 94). Oral sulfonamides may be used aft[illegible]e immediate neonatal period for infants who[illegible]ot tolerate erythromycin.Topical t[illegible]ment of conjunctivitis is ineffective and unnece[illegible]. Since the efficacy of erythromycin is approx[illegible]tely 80%, a second course is sometimes re[illegible]d.

Chlamydial Infections (cont.)

Dr. Nicole Chatel
Pediatrician, Stanton Regional Hospital

Isolation

Isolation of the hospitalized patient with chlamydia pneumonia is not necessary. Drainage/secretion precautions for the duration of the illness are recommended for infants with conjunctivitis.



Control measures

Control measures in pregnancy include the identification and treatment of women with *C trachomatis* genital tract infection as this can prevent disease in the infant as well as topical prophylaxis for newborns.

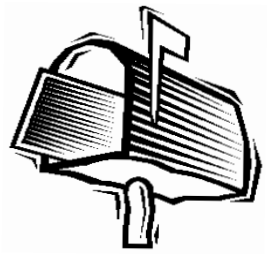
Prenatal Screening & Treatment

Pregnant women at risk for *C trachomatis* infection should be targeted and screened. Screening should occur at the women's first prenatal visit and then again in their last trimester at 36 weeks. A test for cure at 3 - 4 weeks post-treatment should be done on all pregnant women. Results of testing must be communicated to physician/service designated prior to delivery of newborn to prevent perinatal transfer of infection.

Topical prophylaxis

The recommended topical prophylaxis with erythromycin for all neonates for the prevention of gonococcal ophthalmia will not reliably prevent neonatal chlamydia conjunctivitis or extraocular infection.

Health Protection Unit Mailbox



Question:

Do newborn babies who go back to their own communities prior to getting BCG at the time of their birth, require prior Mantoux testing before BCG is given?

Answer:

The Canadian Immunization Guide, Fourth Edition clearly states on page 31, that BCG can be given to infants less than 6 weeks of age without Mantoux testing.

"BCG should be given only to persons with a negative tuberculin skin test (Mantoux 5 TU PPD-S). Infants under 6 weeks of age do not need to be tuberculin tested prior to receiving BCG since reactivity does not develop before this age" (pg 31).

In infants, the developing immune system will not response to tuberculin skin testing (TST) much like the immune-compromised who will have anergy (no response) to TST.

Question:

Should pre-term infants receive regularly scheduled vaccines?

Answer:

Prematurely born infants, including those of low birth weight should be immunized at the usual chronologic age, in most cases. Vaccine doses should not be reduced for preterm infants.

- Preterm infants exposed to **mothers who are HBsAg-positive** should receive HBIG within 12 hours of birth and the appropriate dose of hepatitis B vaccine should be given concurrently (at a different site), or as soon as possible thereafter, and always within the first month of life.
- The optimal time to initiate hepatitis B vaccination in preterm infants with birth weight less than 2kg, whose **mothers are HBsAg-negative,** has not been determine (1994 Red Book). Seroconversion rates in very-low birth-weight infants, in whom vaccination was initiated shortly after birth, have been reported in some studies to be lower that those with birth weights greater than 2kgs. Hence, initiation of vaccination in preterm infants with birth weight of less than 2kg, should be delayed until just before hospital discharge or until infants weight is 2kgs or more, or until approximately 2 months of age, when all scheduled immunization should be given.
- Preterm infants who develop chronic respiratory disease should be given influenza immunization at 6 months of age. To protect these infants and those with other chronic conditions before this age the family and other caregivers should also be immunized against influenza.

Questions???

Contact:

Wanda White

Communicable Disease Consultant
Health Protection Unit

GNWT - H&SS

(403) 920-8646

Site-Seeing (on the "Net")

As winter is becoming more evident, how about heading for BC for a bit of "site-seeing"???

Destination: ***http://www.hlth.gov.bc.ca***

Where are we? The British Columbia Ministry of Health and Ministry Responsible for Seniors WWW home page

What's there?

About the Ministry- an overview of the B.C. provincial health system including some corporate facts and statistics.

Programs & Services- a list including the Aboriginal Health Policy Branch, Health Informatics, Ministry of Health Library and toll-free information lines.

What's new- news releases from the Ministry of Health categorized by date and/or subject.

General Health Information- Health Files consisting of 1 page reports on different health issues and diseases. Also found here are links to other health sites.

Featured new site- focuses on new additions to the home page. The new site featured was the Vital Statistics Agency and Adoption Information.

Where does it link to?

- The Canadian Center on Substance Abuse
- Internet Mental Health
- National Institute of Nutrition Online
- Publications Online, Libraries, News Sources.

Special Attraction: Health Files

This page provides health-related information on a variety of infectious diseases, immunizations and general prevention (such as safe canning, air pollution, dental care for infants, ultraviolet light). Most of this information is general enough for public usage but involved enough to provide a good overview for health professionals. While these pages are not visually appealing (gopher format), the information can easily be downloaded to a wordprocessing program, made NWT specific and reformatted as desired. At last count, there were 118 different topics listed.

Overall Rating: The BC Health Site contains a lot of valuable information for any health-conscious person. It is both complete and easy to understand. The links made available to other sites are varied and quite helpful. This web site was well-made and easily accessible to the average user. This is a great site to visit!

Risk Factors for Sudden Infant Death

Reprinted by permission of the Mass. Medical Society. This summary originally appeared in Journal Watch, Sept 15, 1996.

Death rates from sudden infant death syndrome (SIDS) have fallen considerably in a number of countries since the circulation of warnings about avoiding the prone sleeping position. Nevertheless, SIDS remains an important public health problem and prompted alarge-scale British case-control study. There are two papers which detail the results.

For most of the two-year period from 1993 through 1994, all SIDS cases in a population of 17 million were identified (195 deaths) and compared--via parental interview--with 780 controls matched for age and date of interview.

The first paper shows that major risk factors for SIDS included prone sleeping position (odds ratio, 9), side sleeping position (OR, 1.84), sleeping with bed covers over the head (OR, 21.56), and sleeping the entire night with a mother who smoked (OR, 9.25). Sleeping with a pacifier had a protective effect (OR, 0.38). The babies' initial sleeping position had the biggest population effect, accounting for 14.2% (prone) and 18.4% (side) of deaths.

The second paper reviewed the impact of parental smoking and found that prenatal maternal smoking doubled the risk (OR, 2.1). Postnatal maternal smoking added further to the risk (OR, 2.93), as did paternal smoking (OR, 2.50). Overall, parental smoking was an important risk factor in 61% of the deaths.

Comment: The risk associated with side-sleeping, which can result in the infact's turning to the prone position, is an important finding of this study. The research also brings into clearer focus (but does not resolve) the role of parental smoking as a factor.

Fleming PJ; et al. Environment of infacts during sleep and the risk of sudden infant death syndrome. BMJ 1996 Jul 27; 313; 191-5.

Blair PS; et al. Smoking and the suddent infant death syndrome. BMJ 1996 Jul 27; 313:195-8.

Measles Elimination Program Update

Around the NWT

Around the NWT, the mass vaccination program using MR (Measles-Rubella) which began in April has gone relatively well. As of the end of October 1996, the Health Protection Unit was still receiving reports from the regions.

A few communities had to put their programs on hold until September, when school resumed. Many communities scheduled catch-up clinics for the 19 month to pre-school age group during the summer and fall. Most communities have now completed their programs. Everyone who has been involved with the program deserves recognition for their efforts. Well Done!!! The final report on vaccine coverage will be completed for the next issue (January 1997) of EpiNorth.

Of special note is that Jan Stirling, NIC at Yellowknife Public Health with be presenting the NWT Measles Elimination Campaign at the upcoming Immunization Conference in Toronto (in December). Best of luck to you Jan!!

Now, here's a look at what's happening across the country...

Around Canada

Province	Program			Reports of Measles-1996 (to Nov 9th)
	2nd MMR	Catchup		
NWT	18 months	19 months to Grade 12	MR	**0**
Yukon	18 months	Grades 1-12	M	**2 (1 imported)**
BC	18 months	18 mths to Gr.12	MR	**38**
Alberta	School entry	No catchup		**8 (5 imported)**
Saskatchewan	18 mths	Preschool & Grades 6-8	MR	**5**
Manitoba	School entry	Prim. grades	MR	**0**
Ontario	School entry	Ktg to Gr. 13	M	**176 (2 imported)**
Quebec	18 months	19 months to Grade 12	M	**83 (2 imported)**
New Brunswick	No 2nd dose	No catchup		**0**
Nova Scotia	School entry	No catchup		**3**
PEI	School entry	Gr. 1 to 12	M	**0**
Newfoundland	18 months	No catch up		**0**

Total: 315

Combatting Harmful Effects of Tobacco

The Northwest Territories is actively combatting tobacco harm. With high smoking rates (56% - 70%) and high ETS-levels, the situation appears bleak. But northerners active in tobacco harm reduction are reporting progress.

A community-controlled ETS reduction campaign in Qamanittuaq (Baker Lake) Eastern Arctic, is a successful northern model of harm reduction. A local radio program educated the community and Health Centre staff visted every home. This community achieved 60% Smoke Free Homes in 1992 and has maintained a high level of Smoke Free Homes for the past 4 years. In Qamanittuaq, families with newborns are especially encouraged to eliminate ETS.

In the Western Arctic, K'ahbamitue (Colville Lake) youth educated the community regarding tobacco harm. Lisa Duncan, a North Slavey universtiy student, initiated a school awareness campaign and visited families with newborns to promote smoke free homes. The Department of Health and Social Services produced a television advertisement featuring Lisa and describing the K'ahbamitue initiative. The ad campaign, "Showing the Way" is currently aired on CBC-North and encourages other communities to initiate tobacco harm reduction.

The NWT currently has 40 Tobacco Harm Reduction Stategy projects, funded by Health Canada. Effective initiatives promote community consensus building and demonstrate the importance of local control. Although much work remains to be done, northerners can take pride in the gains being made to reduce tobacco harm and the unique northern style of achieving these successes.

For more info contact:

Lona Hegeman, Early Childhood Intervention Consultant, Community Health Division, GNWT-H&SS

1-800-661-0782

Notifiable Diseases By Region For Sept & Oct 1996

	DISEASE	Month	Cumulative		REGIONS (YTD - 1996)				
		Sept & Oct 1996	1995 YTD	1996 YTD	Baffin	Fort Smith/ Mackenzie	Inuvik	Keewatin	Kitikmeot
Vaccine Preventable Diseases	H. influenzae B	0	1	2	0	0	0	2	0
	Measles								
	Mumps	0	0	1	0	0	0	1	0
	Pertussis	24	9	40	5	23	7	5	0
	Rubella								
Enteric Diseases	Amoebiasis	0	2	0					
	Botulism	0	1	1	0	1	0	0	0
	Campylobacteriosis	1	12	14	1	12	0	1	0
	ClostridiumPerfringens								
	E.Coli 0157:H7								
	Food Poisoning								
	Giardiasis	4	24	17	2	6	0	7	2
	Salmonellosis	9	14	25	0	12	4	5	4
	Shigellosis		2	0					
	Tapeworm Infestation	1	2	1	1	0	0	0	0
	Trichinosis	1	8	3	0	1	0	1	1
Sexually Transmited Diseases	Chlamydia	144	607	566	171	173	74	91	56
	Gonnorhea	22	95	81	54	11	4	1	11
	Syphillis								
Viral Hepatitis	Hepatitis A	0	0	1	0	0	0	1	0
	Hepatitis B	3	2	4	1	3	0	0	0
	Hepatitis C	9	17	27	5	20	1	1	0
	Hepatitis, Other	0	1	1	0	1	0	0	0
Other Systemic Diseases	Brucellosis	1	0	1	0	0	0	1	0
	Chickenpox	158	720	525	74	406	1	23	21
	Malaria		1	0					
	Meningitis/Encephalitis	1	4	2	1	0	0	1	0
	Meningococcal infection	1	1	2	0	1	1	0	0
	Rabies Exposure								
	Tuberculosis	7	16	32	5	22	1	2	2

HIV INFECTIONS BY YEAR SEEN 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

September 1996

Chickenpox (varicella), 20: Broughton Island, 5; Yellowknife, 4; Pangnirtun, 3; Whale Cove, 3; Fort Providence, 2; Arviat, 1; Fort McPherson, 1, Wrigley, 1.

Chlamydia, 108: Yellowknife, 20; Kugluktuk, 10; Rae, 9; Inuvik, 7; Hay River, 5; Cambridge Bay, 4; Fort McPherson, 4; Pangnirtung, 4; Rankin Inlet, 4; Wha Ti, 4; Igloolik, 3; Iqaluit, 3; Pond Inlet, 3; Aklavik, 2; Arctic Bay, 2; Deline, 2; Fort Liard, 2; Fort Simpson, 2; Hall Beach, 2; Lutselk'e, 2; Taloyaok, 2; Baker Lake, 1; Coral Harbour, 1; Fort Providence, 1; Fort Resolution, 1; Fort Smith, 1; Gjoa Haven, 1; Holman Island, 1; Pelly Bay, 1; Rae Lakes, 1; Sanikiluaq, 1; Tuktoyuktuk, 1; Tulita,1.

Giardiasis, 2: Hay River, 1; Sanikiluaq, 1.

Gonorrhea, 9: Hall Beach, 2; Iqaluit, 2; Yellowknife, 2; Cambridge Bay, 1; Cape Dorset, 1; Kugluktuk, 1.

Hepatitis C, 1: In Yellowknife.

Meningitis/Encephalitis, 1: In Pangnirtung.

Pertussis, 11: Yellowknife, 6; Fort McPherson, 5.

Salmonellosis, 7: Fort McPherson, 4; Yellowknife, 2; Kugluktuk, 1.

Tuberculosis, 1: In Igloolik.

October 1996

Campylobacteriosis, 1: In Yellowknife.

Chickenpox (varicella), 35: Broughton Island, 16; Hall Beach, 7; Rankin Inlet, 4; Pangnirtun, 2; Yellowknife, 2; Cambridge Bay, 1; Iqaluit, 1; repulse Bay, 1; Whale Cove, 1.

Chlamydia, 86: Yellowknife, 11; Kugluktuk, 10; Rae, 7; Baker Lake, 6; Inuvik, 6; Fort Liard, 5; Iqaluit, 5; Fort Smith, 4; Hay River, 4; Wha Ti, 4; Aklavik, 3; Cape Dorset, 3; Rankin Inlet, 3; Arctic Bay, 2; Fort McPherson, 2; Kimmirut, 2; Lutselk'e, 2; Gjoa Haven, 1; Hall Beach, 1; Pangnirtung, 1; Rae Lakes, 1; Repulse Bay, 1; Sanikiluaq, 1; Taloyoak, 1.

Cryptosporidiosis, 2; Kimmirut, 1; Rae, 1.

Giardiasis, 2: In Repulse Bay.

Gonorrhea, 12: Iqaluit, 4; Inuvik, 2; Aklavik, 1; Broughton Island, 1; Kimmirut, 1; Norman Wells, 1; Resolute Bay, 1; Tuktoyuktuk, 1.

Hepatitis B, 1: In Rankin Inlet.

Hepatitis C, 2: In Yellowknife.

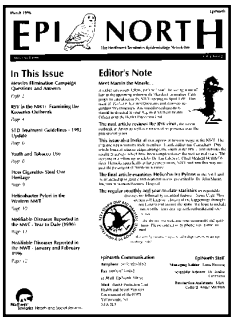
Meningitis/Encephalitis: 1, In Yellowknife.

Pertussis, 13: Yellowknife, 7; Rae, 3; Fort Liard, 2.

Salmonellosis, 2: Rae, 1; Rankin Inlet, 1**.**

Tapeworm Infestation, 1: In Igloolik.

Trichinosis, 1: In Gjoa Haven.



EpiNorth is a publication of the Health Protection Unit, Division of Population Health, Department of Health and Social Services.

Contributions are welcome and should be sent to the Managing Editor. Articles should be in WordPerfect format. Inclusion of material in **EpiNorth** does not preclude publication elsewhere.

Views expressed are those of the authors and do not necessarily reflect departmental policy.

Notifiable disease information reported in **EpiNorth** 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 Publich Health Act/Communicable Disease Regulations.

News Clips:

Parainfluenza: Manitoba

Cadham Provincial Laboratory has reported a greater than expected number of cases of parainfluenza infection for two consecutive weeks (late September/early October). Cases were from the Northwest Territories and a northern reserve in Manitoba and most have been due to Parainfluenza virus type 3.

Source: Cadham Provincial Laboratory, Manitoba

Salmonella thompson: British Columbia and Yukon Territory

Seventeen cases of S. thompson have been identified by the BC Provincial Laboratory since August 1st this year. The majority of cases have been detected since August 29th and were from the Vancouver area. Cases range in age from 2-87years (male:female ratio is 1:1), with dates of onset in late July and August. A questionnaire, which includes exposure to foods commonly associated with salmonella infection as well as alfalfa and bean sprouts and Asian food products, is being administered to all BC cases and has been shared with the Health Department, Yukon Territory.

Source: BC Centre for Disease Control; Health Department, Yukon Territory

Salmonella heidelberg: New Brunswick

Seventeen cases of S. heidelberg infection have been recorded in New Brunswick since the beginning of August. Cases are distributed across all age bands.

Source: New Brunswick Department of Health and Community Services

E-coli 0157: USA

On October 30, 1996, CDC Atlanta notified LCDC that they were experiencing an outbeak of E-coli 0157 in Washington State. A total of 58 cases (average age: 5 years) have been reported. The implicated source is Odwaller unpasteurized apple juice which is also distributed in British Columbia. There have been 11 associated cases in BC. A recall by the producers has been completed.
Source: CDC Atlanta, BC-CDC.

Ebola Haemorrhagic Fever: Gabon

An outbreak of Ebola haemorrhagic fever began a few weeks ago in the Makokou region, in the northeastern part of Gabon. Fourteen cases have been detected; 10 were fatal, 2 are recovering and 2 are acutely ill in hospital. The Health Ministry in Gabon reports the first case occurred on July 24 in a hunter who probably became infected in the forest and died in a hospital in Boué, 200 km from Makokou, on August 7. The last suspected case, which had no obvious link to other cases, died on October 8. Sixty contacts have been identified. Serological diagnosis with locally available reagents confirmed that an Ebola-like virus is responsible for the outbreak; further tests on blood and tissue samples are in process at the WHO Collaborating Centre at CDC, Atlanta. The Ministry of Health quickly reinforced the local health facilities with medical and paramedical staff. A WHO team arrived on site on October 12 to assist in the investigation of the outbreak, foll-up of contacts and control activities. S*ource: WHO*

Polio: Albania

An outbreak of paralytic illness has been reported by Albania. Cases were reported in April, but there was a sharp increase in cases in July and August. The clinical picture is acute onset, asymmetric flaccid paralysis typical of poliomyelitis. A WHO team assisted the Albanian Ministry of Health has investigated 129 cases of paralytic illness, including 13 deaths. WHO reference laboratories in Italy and the Netherlands have now isolated wild poliovirus, type 1 from 7 cases. A campaign to immunize both adults and children with OPV is underway, and case reports are decreasing.
Source: WHO

Yellow Fever (Brazil)

In April 1996, a tourist to the Brazilian Amazon died of yellow fever after he returned home to Switzerland. He had not been vaccinated. In August 1996, an American tourist who had recently returned to the USA from a fishing trip in the Brazilian Amazon also died of yellow fever. In October 1996, the authorities the Brazilian Amazona Province began vaccinating the population of the city for yellow fever. Brazilian health officials recommend that travellers to rural areas be vaccinated against yellow fever at least 10 days before arrival. *Source: WHO*

Yellow Fever (Benin)

Between July 1 and October 20, 1996, a total of 86 cases of yellow fever have been reported in Benin, West Africa. The case fatality rate is currently 76%. Yellow fever vaccine donated by vaious agencies has been distributed to 175,000 of the population at risk, however, 500,000 further doses are required.

Source: WHO