EPI NORTH

The Northwest Territories Epidemiology Newsletter

March/April 1997 Vol. 9, Issue 2

In This Issue

Editor's Note:

The World Health Organization has proclaimed April 7, 1997 as World Health Day 1997. The focus this year is Emerging Infectious Diseases. This logo, *"Global Response, Global Alert"* is a challenge to all of us to recognize that the struggle against infectious diseases is a present and global concern. Several items in this issue of EpiNorth relate to this topic. A look at the **News Briefs** on page 16 shows the impact that travel (within North America and abroad) has on importing infectious diseases from one area to the next.

Spectacular progress has been made in recent years, with the eradication of smallpox and the marked decrease in other vaccine-preventable diseases. **Immunization News** on page 12 describes the development of a new pertussis vaccine. Despite progress on many fronts, other diseases are making a deadly comeback in many parts of the world. Malaria and tuberculosis, for example, have reappeared, stronger than ever, and able to fight off an arsenal of sophisticated antibiotics.

In addition, previously unknown infectious diseases are emerging at an unprecendented rate. For many of these diseases there is no treatment, cure or vaccine. **Emerging Infectious Diseases** on page 2 & 3 takes a closer look at some of these emerging and re-emerging diseases, from a global perspective. Recent changes to the **Communicable Disease Regulations** in the NWT (page 4) illustrates the need to be alert to these emerging diseases from a local perspective.

Antibiotic resistance is another important threat to human health which has emerged during the last 20 years. Drugs which could once be counted on for protection are becoming les and less useful. This issue's **Health Protection Unit Mailbox** specifically addresses guidelines for management of Methicillin Resistant Staph Aureus (MRSA) (page 11).

This issue also looks at Cancer Incidence and Mortality in the NWT, myths related to tobacco smoking, HIV testing in a correctional facility and a number of other interesting topics. This issue is packed with up-to-date and interesting information. Read on!!!

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Emerging Infectious Diseases

What are emerging and re-emerging infectious diseases?

Emerging infectious diseases are those due to newly identified and previously unknown infections which cause public health problems either locally or internationally.

Recent emerging diseases include a highly fatal respiratory disease caused by a virus called ***sin nombre***; a variant of Creutzfeldt-Jakob disease, a disease of the central nervous system which is suspected though not proven, to be associated with a similar disease in cattle called bovine spongiform encephalopathy; HIV infection which causes AIDS, with its sequelae of human suffering and economic burden; and disease such as Ebola haemorrhagic fever with a potential for international spread. Other examples of new or newly detected infectious diseases of global concern include a new form of cholera, a haemolytic uraemic syndrome, hepatitis C and hepatitis E, Legionnaires' disease, and Lyme disease. Although it is not always possible to know if these diseases are new in humans, or whether they have been present but unrecognized throughout the years, many emerging diseases are thought to be due to a closer contact of man with their reservoirs in nature, with a successful "jump" of the infectious agent from animal to man across the species barrier.

"...many emerging diseases are thought to be due to a closer contact of man with their reservoirs in nature..."

Re-emerging infectious diseases are those due to the reappearance and increase of infections which are known, but had formerly fallen to levels so low that they were no longer considered a public health problem.

Re-emerging infectious diseases often reappear in epidemic proportions. Tuberculosis is increasing worldwide due in part to its close association with HIV infection; cholera has been re-introduced into countries and continents where it had previously disappeared, and where it can spread because water and sanitation systems have deteriorated; dengue or "breakbone" fever has started to occur in urban areas where mosquito control has broken down.

"Emerging and re-emerging infections reflect the constant struggle of microorganisms to survive..."

Microorganisms resistant to antibiotic drugs emerged and spread soon after the introduction of those drugs and in parallel with their use. Many well-known antibiotics are no longer effective to treat common infections such as otitis, pneumonia, gonorrhoea and tuberculosis. At the same time, fewer new antibiotics are released on the market, partly because of the high cost of developing and licensing them and because the development of resistance reduces the "useful life" of antibiotics. If the arsenal of drugs against infectious diseases loses its power, the future for patients with even a banal ear infection will become bleak.

What causes emergence or re-emergence of infectious diseases?

Several factors contribute to the emergence and re-emergence of infectious diseases, but most can be linked with the increasing number of people living and moving on earth: rapid intense international travel; overcrowding in cities with poor sanitation; changes in handling and processing of large quantities of food; and increased exposure of humans to disease vectors and reservoirs in nature. Other factors include a deteriorating public health infrastructure which is unable to cope with population demands, and the emergence of resistance to antibiotics linked to their increased misuse.

Travel has always been a vehicle to spread disease across the world, and the central protective legislation edicted in the 14th century by the city-state of Venice has evolved, over the centuries, into the current ***International Health Regulations***. The volume of travel has dramatically increased in recent years; presently well over 50 million people use international air transport each year. The speed of travel has similarly increased: whereas cases of cholera, plague and small pox were slowly transported from one continent to another by ship and could be recognized during the voyage, it is now possible and quite likely that an infected traveller will only develop signs of the disease several days ***after*** arrival.

Emerging and re-emerging infections reflect the constant struggle of microorganisms to survive. One of the ways microorganisms have found of surviving is to overcome the barriers which normally protect humans from infections. This may follow deforestation, which forces forest animals closer to man in search of food, or failure to control mosquitos and other carriers of disease to humans, or a breakdown in water and sanitation systems, or failure to detect diseases early, or failure of immunization programmes, or high risk human behaviour.

All of these have been observed within the past decades, together with a waning concern - and decreasing resources - for infectious disease control. During the first half of the 20th century deaths from infectious diseases declined steadily because of improved hygiene and nutrition. This trend was strengthened with the advent of vaccines and antibiotics during the 1940s and culminated in the late 1970s in the eradication of one infectious disease, smallpox. Because at that time infectious diseases appeared to be a decreasing threat, funds for their control were channelled to other problems, experts on infectious disease retired or left the field and

Global Response: Global Alert

students turned to more rewarding subjects than viruses and bacteria - the infrastructure for communicable disease control began to crumble.

The global response

Since 1992 alarm over emerging and re-emerging diseases has resulted in a number of national and international initiatives to restore and improve surveillance and control of communicable diseases. The Member States of WHO expressed their concern in a resolution of the World Health Assembly in 1995, urging all Member States to strengthen surveillance for infectious diseases in order to promptly detect re-emerging diseases and identify new infectious diseases. The World Health Assembly recognized that the success of this resolution depends on the ability to obtain information on infectious diseases and the willingness to communicate this information nationally and internationally. This resolution has been translated by WHO into the establishment of the Division of Emerging and other Communicable Diseases Surveillance and Control (EMC), whose mission is to strengthen national and international capacity in the surveillance and control of communicable diseases, including those that represent new, emerging and re-emerging public health problems, for which it ensures a timely and effective response.

Internet: www.who.ch/programmes/emc

Division of Emerging & Other Communicable Diseases Surveil ance Control World Health Organization

Site-seeing on the 'Net

Destination: ***http://www.medscape.com***

Where are we? The Medscape website

What's there? Information and resource links to:

Topics: View current articles and updates on relevant issues from AIDS to women's health, including infectious diseases

Patient Info: Links to health hotlines and such topics as diseases, nutrition and mental health for the concerned individual

News: Recent headlines of relevant health issues relating to such areas as travel and tourism and pharmaceuticals

CME Center: Contains conference new online, Continuing Medical Education curriculum and program announcements

Journals: Contains links to different medical journal websites including AIDS Reader and Care Notes

Exam Room: Contains interactive case challenges, a question of the day and PicTours

Reference: Clinical tips, practice guidelines (American) and recommendations, as well as online health textbook purchasing

Psychiatric Virtual Consult: Opportunity for healthcare professionals to share experiences, offer comments and advice on challenging case studies

Orthopedics and Sports Medicine Online: Links to current events /updates, guest editorials and journals

New Pictour: Interactive case studies with photomicrograph including question, discussion and answer sections

Where does it link to? Within each journal article there are links to other sites listed under the Online Resources

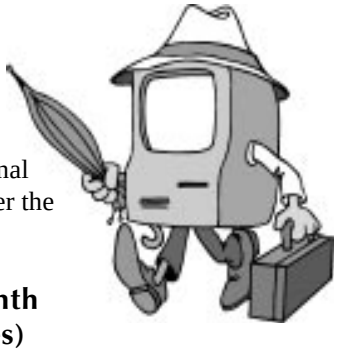
Special Attraction: Bug of the Month (Infectious Diseases)

This section features an interactive case study and discussion on a different infectious organism every month and includes online links to other related sites. Each monthly feature is laid out in a similar outline making navigation simple and the setup interesting. The topics chosen each month are relevant to everyone, from the healthcare professional to the concerned parent, and includes cause, methods of diagnosis, possible treatments and prevention tips.

Also at this page the previous *"bugs of the month"* are available for full viewing with the touch of a button. This site allows an individual to look up the current events in the area of infectious diseases and even make useful suggestions to the authors of the articles or ask them specific questions by email.

Road blocks? This site is well set up with interactive-friendly pages within. Although not really a road block, you need to go through a registration process (free!) that gains you full access to the site, including journal articles, medical databases and weekly email news. (Just don't forget your login & password!!)

Overall Rating: This site contains a large amount of valuable information for the healthcare professional, the patient and other interested individuals. The available topics within each section are numerous and access to MEDLINE, TOXLINE and AIDSLINE search engines make this a website to bookmark and return to.



Lisa McClelland
Health Protection Unit

"...make this a website to bookmark and return to..."

Communicable Disease Regulations

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

Under the *Public Health Act's* Communicable Diseases regulations, notifiable communicable diseases are listed under Schedule A. As these infections undergo periodic change in virulence and importance, Schedule A needs to be revised with some regularity. The last revision was made in 1991.

Over the past two years, work has been carried out to recognize new conditions of importance, such as "flesh-eating disease", Hepatitis C, Hantavirus, Creutzfeldt-Jakob disease, HTLV infectious, etc. The following is a new list for review.

Each health centre and physician should, by now, have received a copy of this revised list. The Communicable Disease Report (CDR) form, which lists the reportable conditions on the back, will be revised and distributed as old stock is used up. Until that time, health centres and physicians are responsible for complying with the new regulations.

"Rapid reporting of disease or suspected disease is vital to outbreak control..."

"Uncontrolled infectious disease spead costs the NWT hundreds of thousands of dollars each year, and a great deal of avoidable human pain and suffering..."

Schedule A

Item I (Reported within 24 hours)

1. Amoebiasis
2. Anthrax
3. Botulism
4. Campylobacteriosis
5. Cholera
6. Diphtheria
7. Escherichia coli (veritoxigenic)
8. Food poisoning (including communicable enteric infections)
9. Gastroenteritis, epidemic (including institutional outbreaks)
10. Hantaviral disease (including Hantavirus Pulmonary Syndrome)
11. Hemorrhagic fevers
12. Hepatitis (all forms)
13. Influenza
14. Invasive Group A Streptococcal infections (Including Toxic Shock Syndrome, Necrotizing Fasciitis, Myositis and Pneumonitis)
15. Invasive Haemophilus influenzae type B (Hib) infections
16. Invasive Neisseria meningitidis infections
17. Legionellosis
18. Malaria
19. Measles
20. Meningitis/Encephalitis
21. Neonatal Group B Streptococcal infections
22. Pertussis (whooping cough)
23. Plague
24. Poliomyelitis
25. Rabies (or exposure to rabies)
26. Rubella and congenital rubella syndrome
27. Salmonellosis
28. Shigellosis
29. Syphilis
30. Tetanus
31. Tuberculosis
32. Typhoid and paratyphoid fevers
33. Yellow fever
34. Epidemic forms of other disease
35. Unusual clinical manifestations of disease

Item II - Reported within 7 days

1. Acquired Immunodeficiency Syndrome (AIDS) and any Human Immunodeficiency Virus (HIV)
2. Brucellosis
3. Chancroid
4. Chicken Pox (Varicella)
5. Chlamydial infection
6. Congenital Cytomegalovirus infection
7. Congenital or Neonatal Herpes simplex infections
8. Creutzfeldt - Jakob Disease
9. Giardiasis (symptomatic cases only)
10. Gonococcal infections
11. Hemolytic Uremic Syndrome
12. Human T-cell Lymphotropic Virus infections
13. Leprosy
14. Listeriosis
15. Lyme Disease
16. Mumps
17. Psittacosis/Ornithosis
18. Q fever
19. Tapeworm infestations (including echinococcal disease)
20. Trichinosis
21. Toxoplasmosis (symptomatic only)
22. Tularemia

Rapid reporting of disease or suspected disease is vital to outbreak control. Section 3 of the Regulations reads "every person who believes or has reason to believe or suspect that another person is infected or has died from a communicable disease shall notify the Chief Medical Health Officer of this fact by the quickest means available and provide him or her with any further information that the Chief Medical Health Officer may require." Sections 2 & 4 spell out further detail on this matter.

However, where there is an appointed Regional Medical Health Officer, for expediency, reporting may be made to this person. Reporting may also be made to the Deputy Chief Medical Health Officer in the Health Protection Unit of the Department of Health and Social Services.

Uncontrolled infectious disease spead costs the NWT hundreds of thousands of dollars each year, and a great deal of avoidable human pain and suffering. Careful adherence to these Regulations is an important step to be followed by all Regions and services.

Cancer Incidence and Mortality in the NWT 1991 to 1996

As of March 31,1997, a total of **704** new cases of cancer (cancer incidence) were reported to the NWT Cancer Registry for the period from January 1, 1991 to December 31, 1996 inclusive. During that same period, **347** death certificates indicated cancer as a direct or contributing cause. The difference between these 2 numbers is explained by the fact that many types of cancer can be cured when found at an early stage. Also, there are usually several months (or years) of delay between the time of diagnosis and that of death. This means that people diagnosed with cancer one year only rarely die from cancer during the same year.

Women accounted for 418 (59.4%) and men 286 (40.6%) of the new cancer diagnoses. The relative frequency of various types of cancer also varies by sex.

Table 1. Ten Most Commonly Diagnosed Cancers - 1991 to 1996

Men		Women	
LUNG	88 (31.0%)	CERVIX	146 (34.8%)
COLON & RECTUM	40 (14.0%)	LUNG	62 (14.8%)
ORAL CAVITY*	24 (8.4%)	BREAST	60 (14.4%)
STOMACH	23 (8.0%)	COLON & RECTUM	38 (9.2%)
PROSTATE	22 (7.7%)	ORAL CAVITY	16 (3.8%)
LYMPHOMAS	10 (3.5%)	PANCREAS	11 (2.6%)
PANCREAS	9 (3.1%)	KIDNEY	11 (2.6%)
KIDNEY	9 (3.1%)	UTERUS	9 (2.2%)
LIVER	8 (2.8%)	OVARIES	9 (2.2%)
TESTES	7 (2.4%)	LYMPHOMAS	7 (1.7%)

(* "Oral Cavity" includes cancers of the mouth, tongue, pharynx and nasopharynx)

Table 2. Ten Most Common Causes of Cancer Deaths - 1991 to 1996

Men		Women	
LUNG	84 (41.0%)	LUNG	46 (32.4%)
COLON & RECTUM	21 (10.2%)	BREAST	25 (17.6%)
STOMACH	17 (8.3%)	COLON & RECTUM	18 (12.7%)
PROSTATE	15 (7.3%)	ORAL CAVITY	12 (8.5%)
ORAL CAVITY	10 (4.9%)	PANCREAS	5 (3.5%)
PANCREAS	9 (4.4%)	KIDNEY	5 (3.5%)
KIDNEY	8 (3.9%)	UTERUS	4 (2.8%)
LIVER	6 (2.9%)	OVARIES	4 (2.8%)
LYMPHOMAS	4 (2.0%)	CERVIX	4 (2.8%)
ESOPHAGUS	3 (1.5%)	LYMPHOMAS	3 (2.1%)

Cervical cancer, although the most commonly diagnosed cancer in women, only represents a small fraction (2.8%) of the deaths from cancer. This is due to the relative success of cervical cancer screening programs using the Pap Test. On average, 24 cases of cervical cancer were diagnosed each year, but over the 6 years, only 9 cases were found at an advanced (invasive) stage. On the other hand, lung cancer is almost always untreatable when found, which explains the prominent place it occupies in both incidence and mortality tables.

Across the Northwest Territories, important ethnic differences can also be observed (Tabels 3 to 5).

Table 3. Five Most Commonly Diagnosed Cancers in Inuit People - 1991 to 1996

Men		Women	
LUNG	51	CERVIX	62
ORAL CAVITY	17	LUNG	39
COLON & RECTUM	11	BREAST	15
STOMACH	11	COLON & RECTUM	12
PROSTATE	6	ORAL CAVITY	9

Table 4. Five Most Commonly Diagnosed Cancers in Dene People - 1991 to 1996

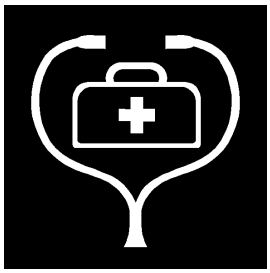
Men		Women	
COLON & RECTUM	18	CERVIX	27
LUNG	11	COLON & RECTUM	11
STOMACH	8	BREAST	8
PROSTATE	4	KIDNEY	5
KIDNEY	4	LUNG	4

Table 5. Five Most Commonly Diagnosed Cancers in Non Aboriginals - 1991 to 1996

Men		Women	
LUNG	23	CERVIX	55
STOMACH	11	BREAST	34
COLON & RECTUM	7	COLON & RECTUM	14
ORAL CAVITY	6	LUNG	12
KIDNEY	4	OVARIES	7

It is unfortunate to note that a majority of cancers afflicting people of the Northwest Territories are linked to lifestyle choices, and are readily preventable. Cervical cancer is related to Human Papilloma Virus, a sexually transmitted disease, and is enhanced by smoking. Other cancers with established links to tobacco smoke include that of the lungs, oral cavity, esophagus, stomach and breast. Cancers of the colon and rectum, as well as those of the stomach, breast and prostate are also associated with certain types of foods that people eat (or do not eat).

The May/June issue of EpiNorth will include an in-depth analysis of breast cancer incidence in the NWT.



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A toll-free cancer information line for all of the Aboriginal languages has been launched by SRH and the Canadian Cancer Society. Callers will speak to trained medical interpreters who will utilize the national Cancer Database to answer questions.

Cancer Information Line in NWT Aboriginal Languages

1-888-261-HOPE (4673)

N.B. The information obtained from the NWT cancer registry presents an imperfect picture of cancer incidence. Some cases may not be reported and numbers shown here are also subject to change due to late registration.

Debunking Myths in the Fight

As was mentioned in earlier issues of EpiNorth, the Northwest Territories has the dubious record of leading the country in the proportion of smokers and in statistics for illness and mortality rates directly attributable to tobacco smoking. On average, regular smokers will see a 22 year reduction in their life expectancy. The costs of treating illnesses linked to tobacco use divert precious dollars away from crucial areas of social need such as Education, Housing, Income Support and Economic Development. These facts easily qualify tobacco addiction as Public Health Enemy #1 for the NWT.

To diminish the prevalence of this problem in our society, it is necessary to devote more efforts to prevent the initiation of tobacco addiction in young people and help current smokers to quit.

Tobacco use highlights the difficulties in achieving public health goals without a political commitment. Physicians, nurses, CHRs and others, who, on a daily basis see the consequences of tobacco addiction, must learn to play a more active role in bringing about change in this arena. They can act first by personal example and role modeling, and then by lending their individual and collective voices to this effort.

Because of the complexity of this issue, a multifaceted strategy must be employed. Legislative initiatives at the Municipal and Territorial levels to limit access and exposure to tobacco smoke have a crucial role to play in this regard.

For all those involved in the fight against tobacco smoking, it is important to be ready to respond to common arguments that will invariably be brought forward against Tobacco control initiatives. Here are some of them, adapted from an article published on September 4, 1996 in the newsletter of the *«Coalition québécoise pour le contrôle du tabac»*.

"...On average, regular smokers will see a 22 year reduction in their life expectancy..."

"...Nicotine is one of the most addictive substances known..."

MYTH: Smoking is a personal choice and any intervention to restrict its use or limit access to tobacco is a denial of someone's basic freedom.

TRUTH: For most people, smoking is an addiction; the notion of freedom has very little meaning in such a context.

- Nicotine is one of the most addictive substances known.
- It has been shown that tobacco manufacturers manipulate the nicotine content of their products. There has been a 53% increase of the nicotine content of cigarettes between 1968 and 1995 in Canada. Cigarettes are nothing but a convenient vehicle to deliver nicotine to people.
- Very few adults actually make the choice to smoke. The majority (>80%) of adult smokers became addicted before the age of 18, influenced by marketing techniques of tobacco producers and by peer pressure.
- Every year, ¾ of smokers make some attempts to get rid of this addiction, although 90% will fail on their initial try.

MYTH: Public Education is better than Legislation

TRUTH: Legislative measures are essential

- Education campaigns, although important, are drowned under the tobacco promotion (direct and indirect) done by manufacturers.
- Anti-smoking legislation does not attack smokers, but rather it is aimed at practices of tobacco manufacturers intended for recruitment of new addicts, or to protect the health of non-smokers.
- Tobacco smoke is harmful to both smokers and non-smokers. Many studies have shown that even a majority of smokers approve of by-laws and regulations that procure smoke-free areas and limit access of minors to tobacco.
- The economic and health consequences of smoking are too great for society to rely on education and persuasion alone.
- Experience and research have shown that a combination of laws and public education is required to successfully impact on behaviors (such as use of seatbealts, drinking & driving, etc.)
- Tobacco Manufacturers themselves realize that legislative measures against smoking represent their greatest threat and for this reason spare no effort to lobby against them.

MYTH: Antismoking laws will threaten jobs and the economy; restaurants and bars will lose smoking customers and may have to close; if drugstores are not allowed to sell cigarettes, they may become unprofitable.

TRUTH: Antismoking legislation will not have any adverse effects on the economy.

- Studies have shown that on average revenus of

Against Tobacco Smoking

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restaurants where smoking was banned did not decrease after the change, as compared with other restaurants who did not institute any change.

- A 1994 Gallup survey revealed that 25% of respondants would go to restaurants more often if smoking was not allowed, as compared with 12% who stated they would go less often; the majority (62%) felt they would not change their frequency.
- In the year (1995) following the ban on tobacco sales in pharmacies in Ontario, a total of 50 pharmacies closed and 120 opened, a net gain of 70 stores.
- Money not spent on smoking can be used to buy other products; this can help to create local jobs.
- Non-smokers generally pay substantially less for life and supplementary health insurance than smokers do. Owners of buildings where smoking is not allowed may also pay less for insurance.

MYTH: Governments have little motivation to fight tobacco smoking because of their dependance on the large revenus they derive from tobacco taxes.

TRUTH: Taxes collected on tobacco products do not compensate society for all the costs associated with tobacco use.

- In Canada, Government revenus from tobacco were in the order of $6.2 billion dollars in 1993, while economic and health costs linked to smoking were conservatively estimated at around $9.6 billion dollars. The fact is, we are all subsidizing tobacco use through our taxes.
- The comparison for the Northwest Territories is even more unfavorable, because of the greater costs associated with the treatment of illness linked to smoking in the North.
- It is wrong for governments to support or tolerate a product that eventually kills ¼ to ½ of its users.

MYTH: Tocacco is a legal product for adults and banning tobacco publicity violates freedom of expression.

TRUTH: It is perfectly normal and legal for society to regulate publicity on certain products.

- Other legal products beside tobacco are also subject to specific restrictions with regard to publicity: pornography, prescription drugs, alcohol, etc.
- The Supreme Court of Canada has ruled that regulating publicity for health reasons is a legitimate right of federal and provincial governments.
- The publicity done by tobacco manufacturers does not try to inform the public on the nature of their product, which is addictive and potentially lethal; instead, their ads are misleading and try to associate smoking with positive attributes such as youth, fitness, independance, adventure and seduction.

MYTH: Tobacco advertising does not aim to recruit new smokers, but is only intended to maintain market share, prevent brand-switching or maintain brand loyalty.

TRUTH: Advertising is an integral part of the corporate expansion of the tobacco industry.

- Tobacco Munufacturers know that less than 10% of smokers are influenced to change their brand by publicity.
- To maintain sales and revenu levels, cigarette manufacturers must continually find new customers to replace those clients who have quit or they have lost through death.
- Even in countries where a tobacco company holds a monopoly position, advertising remains intensive.

MYTH: Tobacco publicity does not target youth.

TRUTH: Tobacco publicity primarily targets young people.

- Because very few people start smoking after the age of 18, tobacco manufacturers spend large amounts of money to study the youth market and better target their publicity to the motivations, attitudes, interests and insecurities or adolescents and pre-adolescents.
- Research has shown that young people themselves interpret Tobacco Manufacturers' sponsoring of cultural and sport events as publicity for tobacco products.

Note: References are available on request

"...In Canada, Government revenus from tobacco were in the order of $6.2 billion dollars in 1993, while economic and health costs linked to smoking were conservatively estimated at around $9.6 billion dollars...The fact is, we are all subsidizing tobacco use through our taxes..."

HIV Testing in a Northern Correctional

"Incarcerated individuals often engage in behavior which places them at higher risk for HIV infection..."

Background

Prevalence rates of HIV infection are much higher in correctional facilities than the general public. HIV among Canadian prisoners is estimated to be 6 to 10 times higher than in the general population[1]. Incarcerated individuals often engage in behavior which places them at higher risk for HIV infection. These high risk behaviors frequently occur before entering the prison system, but may continue during incarceration. Targeted high risk groups include young sexually active people, sex-trade workers, and injection drug users. The question can be raised whether inmates residing in northern correctional facilities exhibit similar risk patterns for HIV infection?

Baffin Correctional Centre

Baffin Correctional Centre (BCC) is a medium level security prison for men, located in Iqaluit, NWT. The majority of inmates who serve their sentences at the centre are from communities within the Baffin Region, although a few inmates originate from the Keewatin Region. BCC has a capacity for approximately 60 inmates and a total of 200 inmates were imprisoned at different time periods during 1996.

On arrival to BCC, each inmate undergoes a health assessment comprising of a medical history, physical assessment, TB screening, each inmate is alsooffered HIV testing.

HIV Screening Program

"Unprotected heterosexual sex was the largest identified risk factor..."

The HIV screening program was initiated in July 1995 through the cooperative efforts of the Baffin Correctional Centre's Nurse and the Regional Public Health Officer. Testing occurs in a private room and the NWT's HIV testing protocol is followed which includes written informed consent. The time it takes to screen an inmate varies greatly depending on the inmates' understanding of HIV infection, educational needs and questions regarding HIV and AIDS. The importance of HIV prevention is stressed at both the pre-test and post-test sessions. Turn around time for test results is usually 2-3 weeks. Inmates released prior to receiving their results are notified during pre-test counseling that their results will be forwarded to their community health centre.

Descriptive Analysis

Since the initiation of the program in July 1995, 138 inmates have consented to HIV testing. To date, no positive results have been identified. For 92% of the tested inmates, it represented their first HIV test. The geographic and age distribution of the tested individuals is as follows:

BAFFIN REGION	KEEWATIN REGION
Broughton Island	Baker Lake
Cape Dorset	Rankin Inlet
Clyde River	Repulse Bay
Hall Beach	Sanikiluaq
Kimmirut	Whale Cove
Igloolik	
Iqaluit	
Pangnirtung	
Pond Inlet	
Resolute Bay	

AGE DISTRIBUTION (YEARS)

AGE	No.
< 20	10
20 - 24	35
25 - 29	50
30 - 34	31
35 - 39	7
40 - 44	3
45 - 49	2
Total	138

Risk patterns for HIV infection were also obtained. Unprotected heterosexual sex was the largest identified risk factor at 92%. The only other self reported risk factor was injection drug use. Only 3 individuals (2.1%) reported a history of injection drug use which occurred while these individuals lived or visited Edmonton, Ottawa and Montreal. Homosexual sexual activity and blood product transfusion history were not identified as client risk factors.

Discussion

Providing HIV screening and education to inmates in northern correctional facilities allows these individuals access to a service which they may not normally utilize when they are not incarcerated. Sixty-nine percent of the tested inmates were 30 years of age or younger, which represents an age group which tends to be more sexually active. Amongst the inmates, 92% admitted to unprotected heterosexual sex. Unprotected heterosexual sex appears to be the greatest risk factor for acquiring HIV within this population group.

Facility: The Baffin Experience

Greg Stark, BA,BSN, Regional Public Health Officer
Lois Kroeger, RN, Baffin Correctional Centre Nurse

In southern correctional facilities, HIV prevalence is strongly related to injection drug use, especially in women, where there is a closer relationship between drug use, prostitution and incarceration.[3] Although only 3 individuals at BCC admitted to injection drug use, it is interesting to note that this activity only occurred in southern cities. This behavior creates the opportunity for HIV infection to be introduced back in to northern communities and makes even the smallest isolated community at risk for HIV infection.

Since self-reporting of risk behaviors was utilized, there is always the possibility of some individuals denying high risk behaviors.

The HIV testing program at BCC is an example of a public health program that attempts to meet the HIV screening and educational needs of a unique population. Although no positive HIV results have yet been identified at BCC, continued surveillance will help limit the potential spread of HIV in the north and health education will help promote lifestyle choices which prevent sexually transmitted diseases.

References

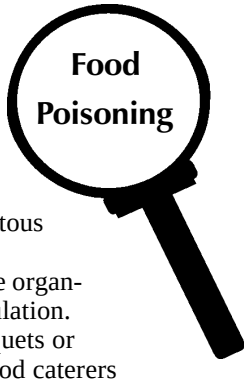
[1] Jurgens R. Aids Update:HIV Rates Soar in Canadian Prisons.*Can Infect Dis* 1995; 6 (6):336.

[2] Heinzig L. STDs:Chlamydia & Gonorrhea. *EpiNorth,* 1997;9 (1):3.

[3] Rothon A., Mathias R., Schechter T. Prevalence of HIV infection in provincial prisons in British Columbia. *Can Med Assoc J* 1994; 151 (6): 781-787.

"...there is always the possibility of some individuals denying high risk behaviors..."

Reportable Diseases in the NWT



An Outbreak of Clostridium perferingens in Yellowknife

In late Februrary, five people in Yellowknife reported symptoms characteristic of food poisoning. All five persons had consumed sandwiches made from deli meat 3 days earlier. One person who had also been with the group did not become ill. This person did not consume any of the sandwiches. Onset of symptoms was approximately 24 hours. Symptoms included: vomiting, cramps, chills and headache as well as diarrhea (with some blood) and malaise. These symptoms resolved within 24-48 hours. Two stool samples were sent to the Provincial Laboratory in Edmonton and confirmed as Clostridium Perferingens. The other cases were linked epidemiologically. Five different food samples were also sent for laboratory investigation. Unfortunately, these food samples froze during shipment, leaving the investigation inconclusive.

What is Clostridium perfringens?

C. Perfringens is an intestinal disorder characterized by sudden onset of colic followd by diarrhea; nausea is common, but vomiting and fever are usually absent. It is one of the organisms responsible for "food poisoning". Symptoms usually resolve withing 24 hours. C. Perfringens is rarely fatal in healthy people. Diagnosis is confirmed by identification of the organism in the feces.

Infectious agent: Type A *Clostridium perfringens*

Occurence: *C. Perfringens* is ubiquitous in the environment and is frequently present in raw meat and poultry. The organism survives initial cooking by sporulation. Infection is usually acquired at banquets or institutions or from restaurants or food caterers where food is present in large quantities and kept warm for prolonged periods.

Reservoir: Soil; also the gastrointestinal tract of healthy people and animals (cattle, pigs, poultry and fish).

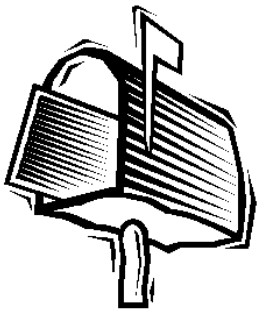
Mode of transmission: Infection is acquired by ingestion of food that was contaminated by soil or feces and then held under conditions that permit multiplication of the organism. Almost all outbreaks are associated with inadequately heated or reheated meats. Spores survive normal cooking temperatures, germinate and multiply during slow cooling, storage at ambient temperatures, and/or inadequate rewarming.

Incubation period: From 6 to 24 hours, usually 10 to 12 hours.

Period of Communicability: The illness is not transmissible from person to person.

Treatment: Usually no treatment is required. Oral rehydration or, occasionally, intravenous fluid and electrolyte replacement may be indicated for patients with unusually severe dehydration. Antibiotics are not indicated.

Suspected food poisoning should be reported to the regional EHO as soon as possible for investigation



Health Protection Unit Mailbox

TB OR NOT TB

Q. ***I have received a lab report that sputum collected on my client grew mycobacteria; is this tuberculosis?***

A. It may be, but then again, it may not. There are 54 species of mycobacteria listed currently in the ninth edition of *Bergey's Manual of Systematic Bacteriology.*

All of them have the distinguishing characteristic of being able to retain dyes following an acidic rinse, because of the high lipid content of their cell wall. Consequently, mycobacteria are called acid-fast bacilli or simply AFB. The lab may inform you that there are AFB seen on smear, or AFB growing on culture. Usually with that piece of information they will also tell you the shape of the bacilli and the type of formation. One of the distinguishing features of Mycobacteria Tuberculosis (MTB) isolated from clinical specimens are that they are rod shaped and are frequently seen in a closely bound curved masses or clumps, commonly referred to as "cording". Nontuberculosis mycobacteria (NTM), or "atypicals", are configured differently. NTM are usually seen in a disperse pattern on culture. NTM grow more slowly then TB in most instances and are rarely seen on smears.

What this is telling you...

The **most important thing** to remember when you receive a report of AFB in a clinical specimen, usually sputum, is that the reporting laboratory can offer **guidance with interpreting** the results. The lab person reporting will usually note whether this is a slow grower and if these bacilli are lining up in a tight formation or are dispersed. This information will help you decide whether you treat this as Mycobacterium tuberculosis or as an atypical. This is very important to help determine what follow up is necessary, the patient's history and clinical symptoms also being taken into account. If it is indicative of MTB, then immediate follow up is required to protect the public from person-to-person transmission of an airborne illness . The patient would then require a complete TB assessment and isolation until diagnosis is established. With the indication of an atypical mycobacterium the situation is less critical as there is little risk of person to person transmission. All laboratory specimens that grow AFB are sent to Provincial Laboratories for a DNA probe. This final step will confirm the diagnosis of MTB or NTM and give the typing of NTM.

All NTMs have varying degrees of pathogenicity. *Mycobacterium avium* is an atypical AFB commonly seen in AIDS-affected individuals or immunocompromised people and frail elderly. These individuals will require further consultation about follow up and possible isolation and treatment. NTM **are not** a public health threat, and usually do not require immediate action.

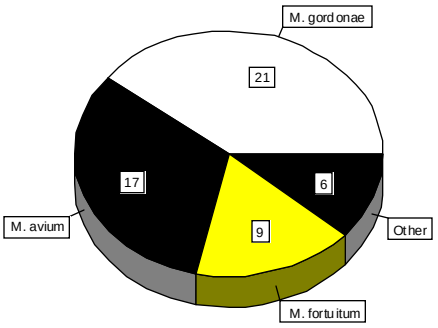
Occasionally you will receive a report from the lab that a specimen has an irregular pattern, few clumps but mostly disperse; this is informally known as the f*ence-sitter*. When this occurs you have to reassess the condition of your patient with other important clinical information. If the patient is currently asymptomatic, and the chest x-ray shows no active disease then such a patient may wait in the community for the results of the DNA probe. This decision should be made in consultation with the Medical Health Officer.

How often are Atypical Mycobacterium identified in the NWT?

Since 1990, atypical mycobacterium have been identified in 53 individuals. The following strains have been identified:

Incidence of atypical mycobacterium

NWT: 1990 to 1996 (Figure 1)



The "other" category includes 1 case each of: *m. chelonae, m. terrae, m. malmonense, m. peregrium, m. smegmatis and unknown.* Of these 53 cases, 27 were female and 26 were male. Looking at the age distribution, 42% were > 60 years, 19% 50-59 years, 32 % were 30-49 years and only 7% were <29 years. Regional incidence was distributed as follows: Fort Smith - 17 cases; Baffin - 13; Inuvik - 10; Kitikmeot - 8; Keewatin - 5.

As described above, most of these organisms are non-pathogenic and require little or no treatment *(such as m. gordonae).* Occasionally, these organisms will cause pathogenicity and may mimic MTB. Appropriate treatment is based on organism sensitivities.

However, atypical mycobacterium may skew the interpretation of mantoux screening.

Questions???

Contact:

Wanda White

Communicable Disease Consultant Health Protection Unit

GNWT - H&SS

(403) 920-8646

Health Protection Unit Mailbox

Wanda White, RN BSN
Communicable Disease Consultant
Health Protection Unit

Guidelines for Controlling and Monitoring MRSA

Dr. Greg Horsman, in a recent article on *Emerging Infections In Saskatchewan,* noted that "the earth is estimated to be 4.6 billion years old and the oldest rocks that retain cellular fossils, including bacteria, date back 3.5 billion years." The evolution and adaptability of microbes to select for an environment that is conducive to their survival strengthens the idea that "bugs" have been around for a long time and will continue to be. Bacteria that were easily controlled by antimicrobial therapy have now adapted to this new environment and have learned ways to survive and protect themselves through gene selection, as they have survived in various environments for millions of years.

A mounting number of organisms are demonstrating resistance to antibiotics and have been increasing rapidly in nosocomial settings. METHICILLIN-resistant *Staphylococcus aureus* (MRSA) has been a problem in the United States since the early 1980's and has now been identified in several Canadian hospitals and in some long term care facilities as well. A NWT resident recently hospitalized in a provincial hospital has become colonized with MRSA. This has prompted the Department of Health and Social Services in the NWT, like other provinces, to develop control guidelines. The key elements of these guidelines include:

1) prudent use of antibiotic therapy

2) education programs

3) laboratory surveillance

4) preventing and controlling nosocomial transmission of MRSA

Identification and Reporting

With the appearance of MRSA in our population, all Hospitals and Health Boards in the N.W.T. need to develop a policy for the control of Multi-Resistant Organisms. All *Staphylococcus aureus* organisms should have susceptibility studies done, to include methicillin/oxacillin and vancomycin. It would be improtant to identify any resistance to vancomycin as it is the last drug to be used to decolonize MRSA infected individuals. All staph isolates to date are susceptible to vancomycin. Any MRSA or Vancomycin Resistant *staphylococcus aureus* (VRSA) should then be reported to the Chief Medical Health Officer (under the "unusual manifestations of disease". The Health Protection Unit will maintain a centralized database for the NWT to aid in surveillance and control of this emerging problem.

All Regions of the N.W.T. should screen their staphylococcus isolates for resistance to methicillin and vancomycin. All resistant isolates should be forwarded to referral laboratories for further testing, and the Chief Medical Officer should be notified of the emerging problem immediately. Such an isolate has impact on both public health and direct patient care.

Patient Control Measures

Once a patient is identified as having a resistant organism, he/she needs to be isolated in a single room, preferably with separate outside air-venting. Precautions of using gloves and gowns must be used for any direct physical contact with patient or body fluids. Masks are to be worn if the patient is a nasal carrier and/or has upper or lower respiratory colonisation. 48 hours after completion of antimicrobial therapy, swabs should be collected from the site(s) of infection and both nares. When two consecutive cultures a week apart are negative, isolation precautions may be lifted.

If an individual is found to be colonized by MRSA in the course of their hospitalization, staff responsible for Infection Control should be empowered to request nasal (or other) cultures of this individual, as well as from attending physician, staff members or students who have been in significant contact with the index case. In the event that any health care provider is found to be a carrier of MRSA, he/she will have to be removed from patient care until two consecutive nose cultures, one week apart, are negative for MRSA.

Attention to hand washing without retouching possible colonized surfaces as well as meticulous thermal cleaning are very important for controlling transmission in institutions. The provision of adequate sinks and paying attention to detail such as making sure to use a paper towel to turn taps on before hand washing will become important. Control of MRSA requires careful attention to universal precautions and strict adherence to infection control measures as these microbes are capable of prolonged survival on environmental surfaces.

The increase and indiscriminate use of antibiotics have enabled microorganisms to evolve antibiotic resistance. It is in this environment that we must all work together to implement a strategy to identify, prevent and curtail the spread of MRSA in the NWT.

"...the increase & indiscriminate use of antibiotics have enabled microorganisms to evolve antibiotic resistance..."

References:

Horsman, G. Emerging Infections In Saskatchewan: Controlling Vancomycin Resistant Enterococci. Saskatchewan Health, Fall 1996, Vol 2, No.4

Hartstein, AI. et al. DNA Typing and Control of Methicillin-Resistant *Staphylococcus aureus* at Two Affiliated Hospitals. Infection Control and Hospital Epidemiology, January 1997, Vol 18, No 1

WHO, Emerging Infectious Diseases: Challenges and Solutions. April, 1997.

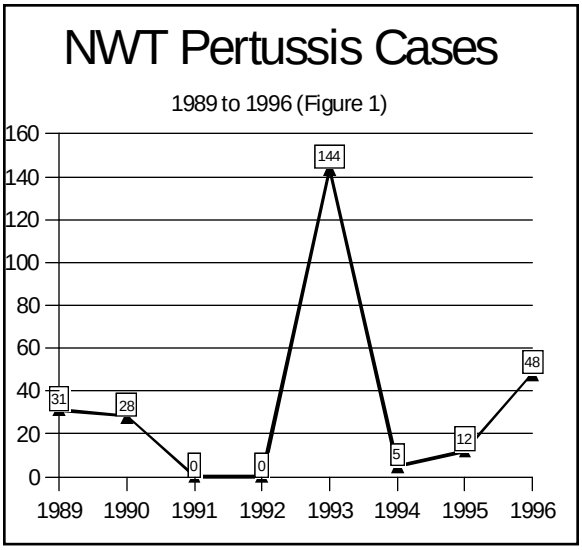
Stanton Regional Hospital Policy Statement: Multi-Resistant Organisms MRO). Infection Control Manual, Draft copy.

*Immunization News*Immunization News*

Pertussis: A New Vaccine

Pertussis (whooping cough) is a highly communicable bacterial disease caused by Bordetella pertussis. Because severity and fatality is greatest in infancy, protective measures such as vaccination should be initiated as early in life as possible.

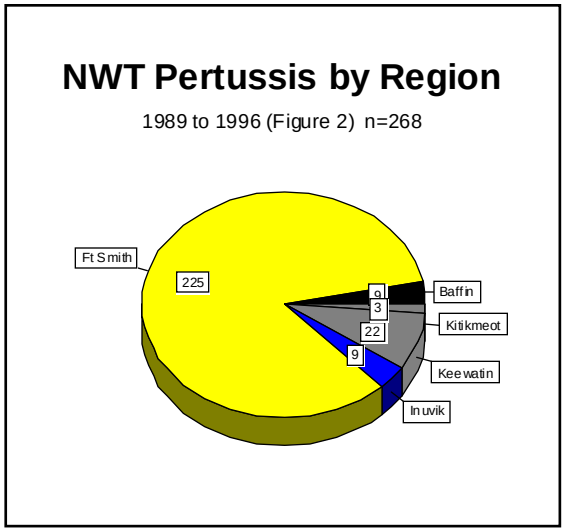
Presently in the N.W.T. the first dose of Pentavalent Vaccine is given at 2 months of age. This vaccine contains Diphtheria, ***Whole-Cell Pertussis***, tetanus, Hemophilus Influenza type B and Polio antigens.



The N.W.T. pertussis rates are comparable with the rest of Canada. The last 2 years have seen an increase in cases. Most of this activity was confined to the Western Arctic, largely due to an outbreak of Pertussis in the Yellowknife area. Figure 1 and 2 shows the pattern of disease seen in the last eight years.

There is an extra cost factor associated with pertussis in the North as the severe cases have to be medevaced. This is in addition to the normal cost incurred with treatment of cases and Prophylaxis of contacts.

"...The last 2 years have seen an increase in [pertussis] cases. Most of this activity was confined to the Western Arctic, largely due to an outbreak of Pertussis in the Yellowknife area..."



The present Whole Cell Pertussis product only provides approximately 50% effectiveness against preventing Pertussis, which is a continued expense to the public.

The whole-cell pertussis vaccine has been associated with adverse effects, which has led to questions about its use. In the 1980's, Great Britain and Japan discontinued the use of pertussis vaccine in the general population because of concerns about the associated risk of neurological illness. The escalation of disease to the pre-vaccine era quickly convinced these countries to reinstate their program. The mortality and morbidity from pertussis outweighed the risk of potential vaccine adverse events.

Nonetheless, the concern about adverse events and the effectiveness of the vaccine has led to development of a new Acellular Pertussis Vaccine (APV). APV uses five proven effective components of Bordetella Pertussis to protect against disease instead of the killed whole-cell organism. These major antigens are:

- Filamentous haemagglutinin (FHA)
- Pertussis toxin (PT)
- Pentactin (69KDa)
- Fimbrial agglutinogens (AGG2, and 3)

The reason why these five antigen components of Bordetella Pertussis are used is that they all showed protectiveness in animal models. Convalescent sera contains antibodies to all five components.

The efficacy of APV was evaluated in a large Swedish Study. The Acellular Vaccine was observed to have 85% efficacy, in comparison with whole-cell pertussis which showed only 48% efficacy. The Acellular Vaccine also gives protection against both severe and mild disease. Protective levels were maintained over 2 years. This differs from whole-cell which did not provide much protection from mild disease and protective levels of immunity fell off quickly with time.

Acellular vaccines adverse reactions have also been monitored in a large Canadian Study. Both the frequency and severity of local and systemic reactions were found to be reduced.

This product will be available in the summer of 1997. The NWT-Advisory Committee on Immunizations will be recommending a switch to the new 5 antigen component vaccine that will contain Diphtheria, ***Acellular Pertussis***, Tetanus, polio and Hemophilus Influenza as soon as it is available. Further information about the change over from Pentavalent to Pentacel will be relayed in upcoming articles of Epi-North and to the Regional Boards.

*Immunization News*Immunization News*

Wanda White, RN BSN
Communicable Disease Consultant
Health Protection Unit

Hepatitis B Immune Globulin

Hepatitis B Immune globulin (HBIG) is required in many circumstances as post-exposure prophylaxis for Hepatitis B. Anytime someone who is non-immune to Hepatitis B comes in contact with blood or body fluids from an individual infected with the virus (or strongly suspected of being a carrier), he/she must be protected from possible transmission of Hepatitis B [see pages 52 and 53 of the 1993 Immunization Guide for details concerning different types of exposure]. Immune globulin is used to confer immediate immunity while vaccine will elicit longterm protection from the immune system. The quicker exposed patients receive immune globulin after exposure, the better protected they will be. It is preferable that it be given within 48 hours after exposure. Efficacy of HBIG decreases with time and is uncertain after 7 days.

Recently in the NWT there was a 5 day delay to obtain IG from the Red Cross. The world's supply of IG has decreased as this blood product's safety has been questionable. Bayer Inc. is now making available to the Canadian Red Cross (CRC) a solvent detergent virally inactivated Hepatitis B Immune Globulin called BayHep B™. Solvent detergent is a virucidal method, based on the addition of an organic solvent and a detergent to inactivate lipid enveloped viruses like Hepatitis B, C, D and HIV. There have been no reported cases of viral transmission from Hepatitis B Immune Globulin preparations distributed in Canada.

Since this product is still not licensed in Canada, , the Bureau of Biologics has placed it under the Emergency Drug Release Programme. To regulate the issue of the product, we have been informed by the Bureau to obtain the following information:

- Name of ordering Physician
- Name of Hospital
- Patient's initials, date of birth, sex, and if possible the weight
- Dosage required (5 ml or 0.5 ml)
- Indication for use

Due to the logistics of getting this product to small communities in the NWT in a timely fashion, the CRC has allowed a small stock to be kept at Regional Centres. To obtain this product in the NWT please notify the Regional contact person (see sidebar).

If there are questions as to the need for use of HBIG, please contact the Medical Health Officer for your Region or the Communicable Disease Consultant at the Health Protection Unit (phone (403) 920-3430/8646).

Baffin: Sylvia Healey, Head of Baffin Lab @(819)979-5231

Keewatin: Rosemary Brown, RNO @ (819)645-2171

Inuvik: Diane Bocock, Pharmacist @ (403) 979-2955

Kitikmeot & Mackenzie: Judy Zinck, Pharmacist @ (403) 669-4811

News from around the NWT

Attention...All holders of the NWT HIV Manual

Have YOU received your updates yet?

Updates of the following sections were sent out from the office of the Chief Medical Health Officer in early March 1997.

These updates involve changes to the consent procedure as well as other updates.

If you have not received these, contact your SNO or senior nursing supervisor.

Changes to susceptibility Testing at Stanton Laboratory

Effective mid-Februrary, changes to susceptibility reporting will be as follows:

1) Salmonella, will no longer have susceptibility results routinely reported, unless the following criteria are met:

- Patients < 1 year of age
- Patients > 65 years of age
- On request by physician

2) Some organisms will no longer have susceptibility testing performed. This follows when the organism has a **predictable pattern of susceptibility.** In these cases, the predictable pattern of susceptibility will be reported.

3) Anaerobic susceptibility testing will be performed in the following circumstances:

- Infections with anaerobes known to exhibit resistance to various antibiotics
- Anaerobes isolated from specific specimens/sites of infection
- Failure of empiric anaerobic therapy or persistent infection

Questions or concerns about these changes can be directed to:

Noreen Fraley, Technical Supervisor Bacteriology, 920-4111 Ext. 170

Notifiable Diseases by Region for Jan & Feb 1997

	DISEASE	Month	Cummulative		REGIONS (YTD - 1997)				
		Jan & Feb 1997	1996 YTD	1997 YTD	Baffin	Fort Smith/ Mackenzie	Inuvik	Keewatin	Kitikmeot
Vaccine Preventable Diseases	H. influenzae B	0	1	0	0	0	0	0	0
	Influenzae	10	0	10	0	0	0	10	0
	Measles								
	Mumps	0	0	0	0	0	0	0	0
	Pertussis	4	4	4	0	2	1	0	1
	Rubella								
Enteric Diseases	Botulism	1	0	1	0	1	0	0	0
	Campylobacteriosis	1	4	1	0	0	0	1	0
	Cryptosporidiosis	6	0	6	6	0	0	0	0
	E.Coli 0157:H7	2	0	2	0	2	0	0	0
	Food Poisoning	5	0	5	0	5	0	0	0
	Giardiasis	2	4	2	1	1	0	0	0
	Salmonellosis	1	3	1	1	0	0	0	0
	Shigellosis								
	Tapeworm Infestation	1	0	1	0	1	0	0	0
	Trichinosis								
Sexually Transmited Diseases	Chlamydia	138	154	138	52	39	10	28	9
	Gonorrhea	28	16	28	22	4	1	0	0
	Syphillis								
Viral Hepatitis	Hepatitis A								
	Hepatitis B								
	Hepatitis C	5	5	5	0	5	0	0	0
	Hepatitis, Other								
Other Systemic Diseases	Brucellosis								
	Chickenpox	79	70	79	1	1	0	34	43
	Malaria								
	Meningitis/Encephalitis	1	0	1	0	1	0	0	0
	Meningococcal infection								
	Rabies Exposure								
	Tuberculosis	5	13	5	0	5	0	0	0

HIV INFECTIONS BY YEAR SEEN IN NWT RESIDENTS

YEAR	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
NUMBER/YEAR	3	2	2	3	3	8	4	2	0	2	**1**
CUMULATIVE	3	5	7	10	13	21	25	27	27	29	**30**

Notifiable Diseases Reported By Community

January 1997

Bacterial Meningitis, 1: In Tuktoyaktuk

Chickenpox (varicella), 22: Sanikiluaq, 19; Iqaluit, 1; Hay River, 1; Gjoa Haven, 1.

Chlamydia, 86: Pond Inlet, 14; Iqaluit, 12; Yellowknife, 6; Rae Edzo, 5; Wha Ti, 5; Cape Dorset, 4; Coral Harbour, 4; Igloolik, 3; Arviat, 3; Cambridge Bay, 3; Fort Mcpherson, 3; Fort Smith,3; Rankin Inlet, 3; Broughton Island, 2; Fort Liard, 2; Hay River, 2; Repulse Bay, 2; Arctic Bay, 1; Chesterfield Inlet, 1; Kugluktuk, 1; Inuvik, 1; Lutselk'e, 1; Nanisivik, 1; Pangnirtung, 1; Pelly Bay, 1; Rae Lakes, 1; Sanikiluaq, 1.

Cryptosporidiosis, 4: Iqaluit, 1; Pangnirtung, 3.

Escherichea coli, 1: In Hay River

Gonorrhea, 22: Iqaluit, 6; Pond Inlet, 5; Pangnirtung, 3; Yellowknife, 3; Cape Dorset, 1; Clyde River, 1; Fort Mcpherson, 1; Hall Beach, 1; Inuvik, 1.

Hepatitis C, 1: In Yellowknife

Pertussis, 2: Inuvik, 1; Rae Lakes, 1.

Tuberculosis, 4: Rae Edzo, 2; Hay River, 1; Yellowknife, 1.

.

February 1996

Botulism, 1: In Yellowknife

Campylobacteriosis, 1: In Sanikiluaq

Chickenpox (varicella), 57: Cambridge Bay, 25;Sanikiluaq, 15; Taloyoak, 15; Bathurst Inlet, 1; Kugluktuk, 1.

Chlamydia, 52: Iqaluit, 6; Rankin Inlet, 5; Rae Edzo, 4; Repulse Bay, 4; Yellowknife, 4; Fort McPherson, 3; Sanikiluaq, 3; Cambridge Bay, 2; Grise Fiord, 2; Igloolik, 2; Pangnirtung, 2; Tuktoyaktuk, 2; Wha Ti, 2; Arviat, 1; Baker Lake, 1; Cape Dorset, 1; Fort Good Hope, 1; Fort Liard, 1; Fort Resolution, 1; Hay River, 1; Kugluktuk, 1; Pond Inlet, 1; Rae Lakes, 1; Taloyoak, 1.

Cryptosporidiosis, 2: In Pangnirtung.

Escherichia coli, 1: In Hay River

Food poisoning, 5: In Yellowknife

Giardiasis, 2: Pangnirtung, 1; Yellowknife, 1.

Gonorrhea, 6: Iqaluit, 2; Cape Dorset, 1; Hall Beach, 1; Pangnirtung, 1; Yellowknife, 1.

Hepatitis C, 4: Fort Providence, 1; Yellowknife, 3.

Influenza, 10: In Arviat

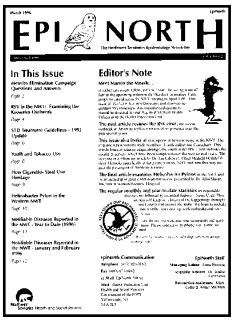
Pertussis, 2: Cambridge Bay, 1; Yellowknife, 1.

Salmonellosis, 1: In Resolute Bay

Tapeworm Infestation, 1: In Rae Edzo

Tuberculosis, 1: In Lutselk'e

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 it to their ***Regional Medical Health Officer*** within the time frame legislated in the Public Health Act/Communicable Disease Regulations.


EPI NORTH

In This Issue

Editor's Note

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.

News Clips:

Measles Outbreak: Newfoundland

A cluster of 7 cases of Measles (Rubeola) occurred in Newfoundland during the week of March 17-21, 1997. The index case was an un-immunized child who had been to Florida within the incubation period. The cases were identified by Measles IgM serology and virus culture. The last recognized Measles outbreak in Newfoundland occurred in 1989. *Source: Newfoundland Department of Health*

Measles: Canada (update)

Cases of measles continue to be reported across Canada. During the last week in March, a total of 39 cases were reported in 7 provinces. Year to date, there have been 298 cases in BC and 61 cases in Alberta, which makes up almost 94% of the 382 total cases. Alberta has announced that it is implementing a 2nd dose measles mass vaccination program for Grade 1-9 students starting April 1, 1997 over a period of 12 months. *Source: LCDC*

Rubella: Manitoba

On March 24, 1997 the office of the Chief Medical Officer for Manitoba issued an updated press release. Since October 1996, 1,449 cases of rubella have been reported; most cases (85%) have occurred in males. Half of the male cases occurred in the 15-18 year old group. Only 10% of all cases have been immunized. Women between the ages of 15 and 45, and in particular, women in the first 20 weeks of pregnancy and those contemplating pregnancy are being cautioned about the outbreak because of major risks to the unborn child. Pregnant women are being advised to contact their physician or public health nurse if they do not know whether they are protected against rubella. *Source: Manitoba Health*

Mumps: British Columbia

There have been 77 cases of Mumps reported in British Columbia this year to March 21 compared with 13 cases in the same period last year. The reported Mumps immunization history for cases is: 16 un-immunized; 27 one dose; 0 two doses; 17 unknown; and, 17 not recorded. With the assistance of a Federal Field Epidemiologist, a case-control study is under way to investigate exposure risks and immunization history. *Source: BCCDC*

Influenza: Canada (update)

Similar to last season, a secondary wave in influenza activity is spreading across Canada. The majority of recent cases have been associated with influenza B virus and have been reported in the Prairie and Atlantic provinces. The number of B isolates reported to LCDC increased in January and in the last two weeks of February influenza B was more common than influenza A. *Source: LCDC*

Hepatitis A Outbreak: Michigan

An outbreak of Hepatitis A is ongoing in Michigan that is associated with the consumption of frozen strawberries which originated in Mexico and was served in school lunch programs in 6 states.

Since the beginning of March 1997, approximately 151 cases of hepatitis A have been identified in Calhoun County, Michigan. Virtually all cases were associated with schools (elementary, middle, and high) in three different districts and occurred among both students and teachers. No single event or food handler was identified, and there was no evidence for a contaminated water source. However, most of the cases ate lunch in school, and both a case-control and cohort study found a strong association between illness and consumption of food items containing frozen strawberries.

In Canada, most of the implicated product was sent to two large companies who have since said the baking processes were sufficient to kill the virus (ie. the product was safe for consumption).

Gastrointestinal illness: Antigua

LCDC is investigating an outbreak of gastrointestinal illness in Canadian tourists beginning soon after their arrival in Antigua on March 2, 1997 and on March 9, 1997. Almost 50% of the passengers on a single charter flight originating from Toronto on March 2, 1997 developed a gastrointestinal illness within the first 2 days of arriving in Antigua. The illness was characterized by vomiting and diarrhea and lasted no more than 48 hours. One week later, several Canadians travelling on the same charter flight also became ill after arriving in Antigua. It is unclear whether Canadian tourists became ill due to exposure during flight or soon after their arrival in Antigua. The flight kitchen in Toronto serving this particular charter airline has been inspected by federal public health officials and hygienic precautions have been reinforced. *Source: LCDC*

Gastroenteritis: Dominican Republic

Preliminary reports suggest a number of individuals are returning from the Dominican Republic with gastroenteritis. To date suspected associated cases have ben recorded in Nova Scotia (42), New Brunswick (9), Newfoundland (4) and Prince Edward Island (2). Campylobacter has been isolated from one returning Canadian. So far recorded cases have visited the Dominican Republic in the period from mid February up to early March 1997.