EPI NORTH

The Northwest Territories Epidemiology Newsletter

May/June 1996 Vol. 8, Issue 3

In This Issue

Editor's Note

Welcome to another issue of EpiNorth. Here are the highlights...

In April 1996, a 43 year old British Columbia man developed symptoms of Hantavirus Pulmonary Syndrome (HPS) and later died. Our first article describes HPS, its incidence, spread, treatment and prevention.

Following a Thanksgiving dinner at the Legion in 1995, a large number of Yellowknifers ended up ill and several were hospitalized. Read Environmental Health Officer Frank Hamilton's report on the investigation.

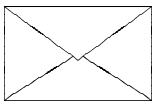
Results of the 1993 NWT Breast Feeding Surveyare highlighted by Cynthia Carr, Epidemiology Consultant for the GNWT.

Dr. Roger Purnell, Orthopedic Surgeon at Stanton Regional Hospital describes an audit of wrist injuries which cover a six month period in 1995.

The final article reviews the Canadian National Guidelines for storage and transportation of vaccines.

Other items include:

- Information regarding the Canadian Immunization Conference in December 1996
- Preventing Cancer in the 90's which outlines cancer reduction strategies
- An update of the Measles Elimination Campaign in the NWT and in Canada
- "Site Seeing" - A new feature which looks at the Internet and various health-related web-sites
- NewClips from around the Globe.



As always, we invite your comments, suggestions and submissions. We can be reached by phone, fax, mail, cc: mail and now by e-mail via the Internet. Talk to us!!! Note: See the March/April 1996 issue (Vol. 8, Issue 2) and all future issues of EpiNorth at the GNWT - Health and Social Services web site: http://www.hlthss.gov.nt.ca.

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Facts about Hantavirus Pulmonary Syndrome:

In April 1996, a 43 year ol British Columbia man developed symptoms of Hantavirus Pulmonary Syndrome (HPS) and later died. He had recently cleaned out a cabin located in the mid-region of Vancouver Island. This is the first case reported in Canada in 1996.

What is Hantavirus?

Hantavirus is a rare virus carried by some rodents in North America. Hantavirus is not a new disease, and there is no indication that it is increasing or spreading. All that is new is our ability to recognize it. It causes Hantavirus Pulmonary Syndrome (HPS).

What is Hantavirus Pulmonary Syndrome?

HPS is a serious, often deadly, respiratory disease that has been found mostly in rural areas. In May 1993, an outbreak of severe respiratory illness occurred in the southwestern United States (Colorado, Arizona, New Mexico and Utah.) Prior to this outbreak, hantaviruses were not known to cause disease in North America. In Asia, human hantavirus infection has been associated with haemorrhagic fever with renal syndrome(HFRS).

"Hantavirus is spread from wild rodents, especially deer mice, to people"

In the United States, 133 cases of HPS have been diagnosed in 24 states (as of April 20, 1996). Of these, 66 have died . To date, most of these cases have been identified in the western part of North America, including several states that border Canada (Washington, Idaho, Montana, North Dakota and Minnesota).

The first time HPS was found in Canada was 1994. As of May 1996, 12 cases (with 5 deaths) of Hantavirus pulmonary syndrome have been reported in Canada: 7 in Alberta and 5 in British Columbia. While eastern provinces have confirmed the presence of hantavirus in deer mice samples, there have been no reports of human infection east of Alberta. Cases have been found as far north as Fort McMurray, Alberta, but there has been no evidence of hantavirus in the NWT. Testing of several hundred mice and voles from the NWT in 1994 found no evidence of the virus.

How is Hantavirus spread?

Hantavirus is spread from wild rodents, especially deer mice, to people. The virus, which is found in rodent urine, saliva, and feces, gets in the air as mist from urine and saliva or dust from feces. Breathing in the virus is the most common way of becoming infected; however, you can also become infected by touching the mouth or nose after handling contaminated materials. It may be possible to catch the virus by eating or drinking food or water that has been soiled by rodents. A rodent's bite can also spread the virus. Hantavirus infects the rodents, but does not kill them.

Hantavirus does not appear to be spread from person to person. The virus, which is able to survive in the environment (for example, in contaminated dirt and dust), can be killed by most household disinfectants, such as bleach, Lysol, or alcohol.

How are deer mice identified?

Deer mice are found in most forested areas in the Northwest Territories. A deer mouse is 7-10 centimetres long from its head to tip of tail. It is pale grey to reddish brown and has white fur on its belly, feet, and underside of the tail. It has a long tail and oversized ears. The droppings of deer mice and other rodents look like small black grains of rice.

A mouse nest (burrow) is usually a pile of material under which the mouse lives. This pile can contain many different materials, such as twigs, insulation, styrofoam, and grass.

What are the symptoms of HPS and how long after infection do they appear?

Symptoms of hantavirus pulmonary syndrome usually appear within 2 weeks of infection but can appear within 3 days to as late as 6 weeks after infection. First symptoms are general and flu-like; fever, headache, abdominal, joint and lower back pain; sometimes nausea and vomiting. However, the primary symptom of this disease is difficulty in breathing, which is caused by fluid build-up in the lungs and quickly progresses to an inability to breathe. In North America, about five out of every ten people with HPS have died.

How is HPS treated?

If any of the symptoms described above--especially difficulty in breathing--appear after direct or indirect exposure to rodents, then close monitoring should occur. Most patients require hospitalization, usually in intensive care. If transferring to another facility, make sure to mention your exposure to rodents. Antiviral drugs are occasionally used.

Is there a cure for or vaccine against hantavirus infection?

No cure or vaccine is yet available against hantavirus infection. The sooner after infection medical treatment is sought, the better the chance of recovery.

What Is HPS?

Who may be exposed to Hantavirus?

- Hantavirus infection is rare, and the risk of exposure is very small. However, some activities increase the risk of possible exposure.
- People living in houses with rodents or who move into a home where rodents were living.
- Hunters and trappers using cabins with rodents on a seasonal basis.
- Campers and hikers visiting areas with rodents.
- Individuals who work in crawl spaces under homes where rodents are living.

How do you protect yourself?

The best protection against exposure to hantavirus is to prevent all rodents from entering your home or cabin, and to carefully clean and disinfect areas where they have been . For people whose work may expose them, precautions include wearing protective clothing and using a properly-fitting respiratory protection device.

Rodent-proofing your home, cabin or campsite

- Seal any small hole in walls or floor where rodents may get in.
- Store food in rodent-proof containers
- Promptly discard or burn garbage. Put it in containers with tight lids and keep at least 100 feet away from cabin.
- Place woodpiles at least 100 feet away from your home or cabin and elevate 12 inches off ground.
- When sleeping outdoors, check campsites for rodent droppings or burrows. Avoid sleeping near woodpiles or garbage areas where rodents live
- Use tents with floors or cover the ground under your sleeping bags.
- Do not disturb rodents or their burrows
- Use only safe water supplies
- Catch and remove rodents
- Use spring-loaded traps baited with peanut butter
- When handling dead rodents, wear rubber gloves that can be disinfected or thrown away.
- Remove all rodents from traps immediately. Place in plastic bags with enough disinfectant (eg. one part bleach to 10 parts water) to thoroughly wet the carcass, and seal the bag. Dispose in the garbage, burn or bury it in the bag in a hole two feet deep.

Cleaning up areas where rodents have been living

- Before occupying abandoned or unused cabins, open them up to air out for at least 30 minutes. Look for signs of rodents in the cabin and disinfect the areas where they have been.
- Clean up areas where there have been rodents or rodent droppings. Mop or wet the area with a bleach solution (50 mls of bleach to 8 litres of water). Do not sweep or vacuum the area until it has been disinfected, as dry sweeping raises dust and increases the chance of exposure.
- Wear protective clothing and rubber gloves that can be disinfected or thrown away. People working in enclosed areas where dust containing rodent droppings may wear appropriate breathing masks.

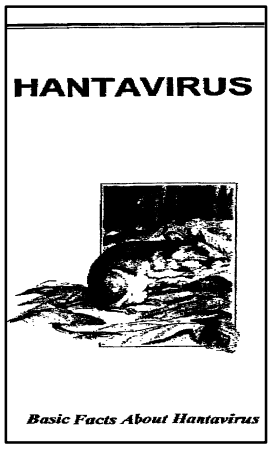
Resources:

To get more information, please contact your local Health Centre, Renewable Resources office, or regional Environmental Health Officer.

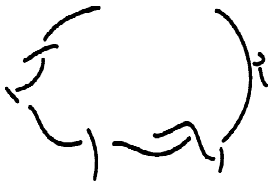
References:

1. Hantavirus: Basic Facts About Hantavirus, NWT Renewable Resources, 1996.
2. Update - BC Centre for Disease Control, May 2, 1996.
3. Health Files: Hantavirus Pulmonary Syndrome (HPS), BC Ministry of Health, Number 36, July 1995
4. Health Files: Getting Rid of Rodents, BC Ministry of Health, Number 37, Summer 1994.
5. Prevent Hantavirus Pulmonary Syndrome, CDC, September 1994.
6. Hantavirus and the NWT, EpiNorth, March 1994.
7. Take basic precautions against Hantavirus, Northern Lifestyles, November 1994, pp. 7-8.

"The best protection against exposure to hantavirus is to prevent all rodents from entering your home or cabin..."



GNWT Renewable Resources has recently produced a pamphlet which outlines basic facts about Hantavirus.



A Salmonella Outbreak at the Legion Pig Roast:

Background

On October 10, 1995, the Chief Medical Health Officer (CMHO) received a call from Stanton Yellowknife Hospital concerning several cases of enteric disorder with symptoms varying between diarrhea, vomiting, chills, fever, cramps, and headache. Several of the patients had mentioned that they had eaten a Thanksgiving dinner at a Pig Roast held by the local Legion in Yellowknife on Saturday, October 7. Out of the 52 people that attended the Pig Roast, 41 became ill, most within 24-48 hours, and six were admitted to the hospital. By early Wednesday, October 11, cultures from stools and swabs of leftover pork started to show Salmonella non-typi. A further 4 people became ill from leftover pork taken to a dinner party the next day.

"A probable case was defined as one who attended the Legion Pig Roast and who displayed any number of symptoms: fever, chilles, headache, diarrhea or vomiting"

Methods

Upon receiving a call about a possible outbreak the CHMO called the Medical Health Officer (MHO) and the Senior Environmental Health Officer. Both the CMHO and MHO met and consulted with the doctor on call at Stanton Hospital Emergency. They reviewed the cases to date and interviewed several of the patients. As of 8:30pm, Tuesday, October 10, eight (8) people had reported sick at Emergency. Arrangements were made for stools and rectal swabs to be taken and for left-over pork to be brought to the Hospital lab. The pork samples were swabbed and sent to the Provincial Lab in Alberta for confirmation and speciation.

Case Definition

A probable case was defined as one who had attended the Legion Pig Roast and who displayed any number of symptoms: fever, chills, headache, diarrhea, or vomiting.

Controls and Environmental Investigation

A list of all Pig Roast attendees and the menu of food items at the supper were collected from the Legion. Any foods that might have been left over were sought to ensure it was not going to be reused. All left over pork was seized and submitted for analysis. All cases and contacts were identified and interviewed and screened for high risk positions, ie. food handler, patient care, day care, elderly care, etc. Instructions were given as to how to prevent getting the organism and spreading it to others. Cases were advised to see their doctor. The Legion staff were instructed and supervised on cleaning and sanitizing all food handling facilities and equipment. Food histories were collected and details of the Pig Roast procedures examined.

Case Finding and Histories

Stool samples were not taken from the initial cases that arrived at the hospital for they were reportedly unable to present. However, under the direction of the CMHO any further patients arriving at the hospital who fell within the outbreak case definition had stool samples and/or rectal swabs collected. A questionnaire was developed and a team of EHO's and Public Health Nurses contacted all individuals on the list. The questionnaire collected data such as: name, sex, age, date and time of onset of illness, type of symptoms (see **Figure 1**), phone and address, occupation, ill or not ill, and foods eaten. A list of foods served was included in the questionnaire. All those who attended the Legion supper were contacted within 24-48 hours, including two who had returned home to Fort Smith and two to Saskatchewan.

When a food history was started, it was soon discovered that the left over pork had been taken to a home dinner party where 18 people gathered to eat Thanksgiving dinner the next day, October 8. Only four of the 18 ate the pork and all four presented with symptoms within 24-48 hours. Of eleven people who were not ill at the Legion dinner, two did not eat pork.

Figure 1:

Frequency Distribution of Symptoms

Symptoms	Percent
nausea	49%
vomiting	41%
diarrhea	89%
cramps	71%
fever	78%
headache	64%
chills	73%
dizziness	31%
weakness	49%
stomach ache	40%

number =41

Food History

By the time the outbreak was reported the only food left was the pork, some sauce and canned whip cream. The sauce was poured over the pig as it was on the spit. No brush was used to apply the sauce. Homemade sauce was made from wine and red peppers. Both the sauce and the whipped cream were submitted to the lab for analysis. Through personal interviews, food histories were obtained from all 56 of the pork consumers. The interviews were completed within 48 hours and included those at the home dinner party. The cook was interviewed to retrieve a complete history of the pig. A flow chart of the pork was then completed.

Yellowknife - October 7, 1995

Frank Hamilton, Senior EHO Mackenzie Regional Health Services

Results

Twelve of the 45 symptomatic cases associated with the outbreak were sampled and found to be positive for Salmonella typhimurium. Except for a couple of possible propagated cases, all cases presented with the case definition symptoms between October 8 and October 10, 1995. Pork samples submitted to the laboratory were positive for Salmonella typhimurium. The sauce and whip cream were negative.

The Epidemic Curve or distribution of cases by date and time of onset is shown in Figure 2 is based on 45 symptomatic cases out of 56 pork consumers associated with this outbreak. Nine who ate the pork at the Legion Roast reported no illness.

From the Sunday, October 8 dinner party, one case had onset on October 9 and three had onset on October 10. The one case on October 13 ate at the Saturday, October 7, 1995 Pig Roast. Her husband had become ill October 9 (Monday). This case was possibly propagated. The couple are in their 70's. The husband was sick first with severe diarrhea. The wife became ill four days later after caring for her husband at home. A second case that was possibly propagated was the October 16th onset case. The spouse had been ill from the dinner on October 10th.

Six of twelve cases who presented to Stanton Emergency were admitted. Four patients stayed in the hospital for two days, one for one day, and one for five days.

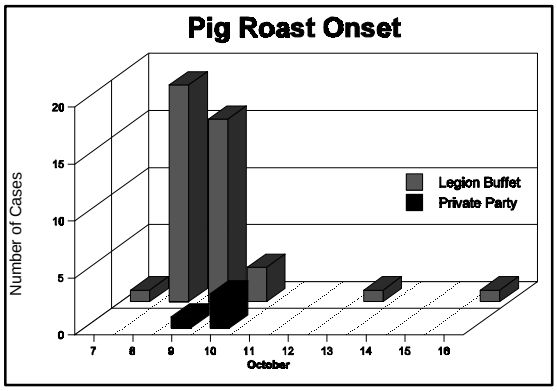
Discussion

The majority of outbreaks of Salmonella are due to food-borne transmission of the organization. This outbreak followed that pattern. As a result, 45 people became ill and six were hospitalized. Most of the 45 cases spent at least 2 days off work. There was possibly two cases of person to person (propagated) spread. The only common factor among the initial cases, that went to Emergency was the pork which they either ate at the Legion Pig Roast or at the Dinner Party the next evening. All those who ate the pork at the home Dinner Party became ill with Salmonella ie 4 out of 18 people. The two food handlers also became ill after eating at the pig roast. Both reported to be in good health prior to the dinner.

41 people out of 52 who ate at the Legion became ill. Of the eleven people who did not become ill at the pig roast, two did not eat pork. With this information and the fact that only those who ate the pork at the Dinner Party the next day became ill, the pork was suspected early on in the investigation. The investigators were very fortunate in getting the left over pork for analysis. Subsequently, all pork samples were positive for Salmonella typhimurium.

There were a number of people interviewed who said the meat was undercooked. Several reported seeing rare pork including red meat that was bloody and pink. Some said they had to pick and choose the meat slices to make sure they did not take any pieces that did not look done. Others said it was difficult to find meat that was well cooked. An interview with the cook revealed some uncertainty on his part as to the doneness of the pig and the cooking time necessary to thoroughly cook the meat.

Figure 2:



Considering the description of the meat by the participants, the cook's uncertainty of the doneness of the pig and the high numbers of Salmonella bacteria found in the cooked meat, it appears the outbreak was simply caused by undercooked pork. Had a meat probe thermometer been used and the cook knowledgeable as to the cooking temperatures necessary to render the meat safe, this outbreak would not have occurred.

"Ensure food handlers are knowledgeable of the times and temperatures necessary to properly cook food."

Recommendations

1. Organizations should use experienced food handlers, preferably certified, if available.
2. A meat thermometer should be used to determine doneness of all areas of the carcass.
3. Ensure food handlers are knowledgeable of the times and temperatures necessary to properly cook food.
4. Discuss thoroughly with a Health Officer prior to holding an event like this.

Acknowledgements

A special thanks to the nursing, laboratory and medical staff at Stanton Yellowknife Hospital for their thorough work in case handling and data collection. Also a special thanks to Yellowknife Public Health who acted promptly and did a wonderfully efficient job with case histories and patient follow up. Thanks to Monica Mandeville for the speedy thorough data input and patient interviews, as well as Chief Medical Health Officer, Dr. Ian Gilchrist and Medical Health Officer, Dr. Andre Corriveau, for it was their comprehensive action and direction at the outset of this outbreak that made this investigation run smoothly and efficiently.

Breast Feeding in the NWT:

In February 1996, findings from the 1993 NWT Breast Feeding Survey were published in a Health & Social Services report called ***Database on Breast Feeding: Survey of Infant Feeding from Birth to Twelve Months"*** The purpose of this report is to provide detailed information on survey respondents within the Northwest Territories. Data in this report is focused on comparisons between regions, ethnic groups and age groups. Comparisons of NWT responses with other regions throughout Canada will be provided in the National report prepared by Health Canada.

"In the 1993 Survey, data was collected on 1153 births...the overal response was 76%"

In 1983, a National Database on Breastfeeding among Indian and Inuit Women was begun to obtain baseline information on breastfeeding rates for planning purposes. Nationally this survey has been conducted every five years, starting in 1983, fol1owing in 1988 and most recently in 1993. The NWT participated in 1983 and again in 1993. For the 1993 survey, the database was modified and expanded to gather more information than in previous surveys. For example, in this survey, data on breastfeeding rates, duration of breastfeeding, types of vitamin/mineral supplementation, use of alcohol before, during and after pregnancy and types of breastfeeding education were collected.

In the 1993 survey, data was collected on 1153 births in the following five regions: Baffin, Inuvik, Keewatin, Kitikmeot and Mackenzie. The response rate ranged from 68.5 to 86.8% in the regions. The overall NWT response rate was 76% (compared to 63.4% in 1983). This compares favourably with preliminary results from the rest of Canada where participation rates are reported to range from 5% in Saskatchewan to 92% in New Brunswick.

Of the respondents, 20% were Dene, 49.8% were Inuit, 3.4% were Métis and 26.8% were Non-Aboriginal. The ethnic distribution of respondents among regions is shown in Figure 1.

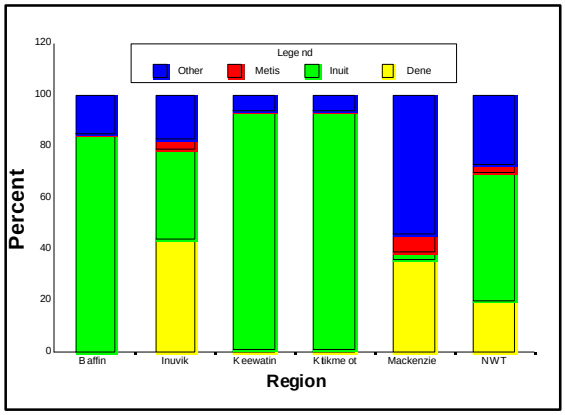


Figure 1*. Distribution of ethnic groups among regions. The total number of infants participating in each region are: Baffin 271, Inuvik 180, Keewatin 165, Kitikmeot 125, Mackenzie 412, NWT 1153.*

Just over 4% of respondents were under 18, with a total of 42.5% being under 25 years of age.

Figure 2 shows the relative youth of Aboriginal mothers; over 40% were under 25, compared to less than 20% of non-Aboriginal.

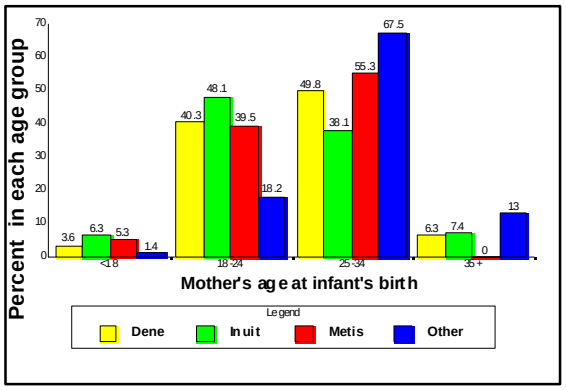


Figure 2*. Age distribution of mothers by ethnicity. The total number of respondents by ethnic group are Dene 227, Inuit 566, metis 36, non-Aboriginal 304.*

Parity status of mothers ranged from 1 to 13, with a mean of 2.4 live births. Despite the relative youth of Aboriginal mothers, 11.5% of Dene, 15.4% of Inuit and 10.5% of Metis had five or more live births. The NWT reports much higher rates of adoption than other jurisdictions in Canada, with 14% of survey respondents indicating the infant was adopted.

The proportion of babies with birthweights over four kilograms was 12.9%, much lower than reported overall in the 1983 (21.6%) and 1988 (21.0%) survey. Gestational diabetes was diagnosed in 2.4% of the mothers during the pregnancy.

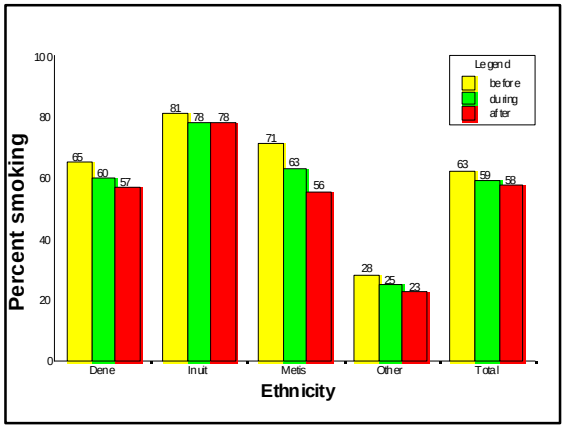


Figure 3*. Smoking status by ethnicity of mother*

Very high smoking rates were reported before, during and after pregnancy. The NWT average during pregnancy was 59%, but exceeded 70% in three of the five regions. Figure 3 illustrates the high rates of smoking among Inuit and Dene mothers.

Highlights from the 1993 Survey

Cynthia Carr, Consultant, Epidemiology GNWT - H&SS

Overall, 74.5% of respondents initiated breastfeeding, 55.9% were breastfeeding at three months, 43.3% at six months and 31.6% at twelve months. Ethnic variations in breastfeeding are shown in Figure 4. The highest proportion of non-Aboriginal mothers initiate breastfeeding but breastfeeding rates drop substantially after six months (perhaps due to mothers returning to work). Inuit women show a high rate of breastfeeding throughout the twelve month period.

In general, breastfeeding was more common if the mother was a non-smoker, was over 25, had less than five children and if the infant was not low birthweight. Among mothers with more than one child, breastfeeding rates were associated with previous experience.

Marked variations occurred in vitamin/mineral supplementation rates among regions. The highest rates were in the Kitikmeot and Keewatin regions where at three months of age approximately 45% of infants were given a supplement. There was little difference in rate of supplementation depending whether the infant was bottlefed (25.4%) or breastfed with at least one bottle per day (26.1%). Solely breastfed infants had the highest rate of supplementation (34.2%).

Variation among regions and ethnic groups was found in reception of breastfeeding education both during pregnancy and following delivery. Reception of education was related to maternal parity in both instances.

Comparisons with the 1983 database data as well as data collected for a study of all infants born in 1973 indicates that while quite substantial changes in feeding practices have occurred over the twenty year period, the largest changes occurred between

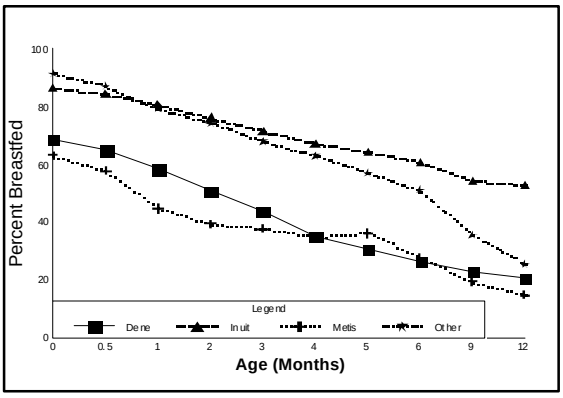


Figure 4*. Breastfeeding by ethnicity. Adopted infants are excluded.*

1973 and 1983. Between 1983 and 1993 there was a slight drop in rates of breastfeeding but there was a dramatic increase in breastfeeding rates is seen between 1973 and 1993 for Dene (from 33.3% to 64.6% initiating breastfeeding) and non-Aboriginal women (from 49.2% to 91.1% initiating breastfeeding). Breastfeeding rates for Inuit women have remained relatively stable over the twenty year period with 61.6% initiating breastfeeding in 1973 compared to 69.7% in 1993. Changes are also seen in the length of time women breastfeed. In 1973 only 4.6% of non-Aboriginal women were breastfeeding at six months compared to 50.9% in 1993. At six months, 5.1% of Dene and 21.4% of Inuit women breastfed in 1973 compared to 24.7% of Dene and 47.7% of Inuit in 1993.

"There was a dramatic increase in breastfeeding rates...between 1973 and 1993 in the Dene..."

For more information regarding this report, please contact:
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IMMUNIZING FOR HEALTH: ACHIEVING OUR NATIONAL GOALS

Objectives

To present a forum for discussion and information exchange related to the practical aspects of immunization programs in Canada. This will cover issues such as vaccine supply and delivery, education, assessmetn of vaccine programs, regulations and legislations, and global immunization efforts. The conference will look at both programmatic issues. The main focus will be onchildhood immunization. There will also be an examination of progress toward the achievement of recently established Canadian national goals for the reduction of vaccine-preventable diseases of infants and children.

To receive a Registration Package/Abstract Submission Form contact:

Mr. Chuck Schouwerwou, BA, CMP
Conference and Committee Coordinator
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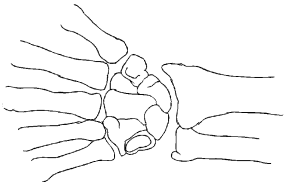
P.L. 0603E1, 3rd Floor, LCDC Building
Tunney's Pasture, Otawa, Ontario, K1A 0L2
Fax: (613) 998-6413

Canadian National Immunization Conference:

The Royal York Hotel
Toronto, Ontario
December 8-11, 1996



A Wrist Injury Audit

"A Colles fracture...is a dorsally displaced fracture of the distal radius occurring typically in an elderly osteoporotic lady who onto an outstretched hand..."

Introduction

Wrist injuries are both common and diverse in nature. They tend to be placed into one of two groups, fractures or sprains. It is generally assumed that most "Colles fractures" do well following closed reduction and six weeks in a cast, and that simple sprains usually resolve without sequelae. This is probably true providing that one is dealing with "Colles fractures"and simple sprains.

A "Colles fracture" as described in 1814 by Abraham Colles is a dorsally displaced fracture of the distal radius occurring typically in an elderly osteoporotic lady who fell from standing (ie. low energy fall) onto an outstretched hand. A fracture occurring outside of this scenario is not a "Colles fracture" and often behaves very differently. A simple sprain is a low energy injury resulting in stretch of a ligament beyond its elastic limit but without overt tearing. It produces swelling localised tenderness, a normal radiograph and generally resolves within 3 weeks with or without immobilisation.

Purpose

To review the nature and evaluate the management of wrist injuries seen in the emergency department of Stanton Regional Hospital during a six month period (July - December 1995).

Method

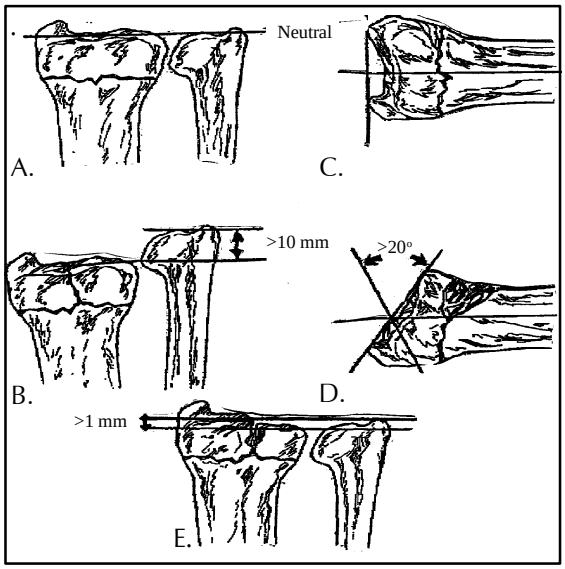
All records coded (ICD-9) as wrist injuries were reviewed. Data were entered from the outpatient record onto the wrist audit forms (see below). The relevant radiology reports and radiographs were reviewed and the findings compared to the recorded diagnosis.

Figure 1: Wrist Injury Study

WRIST INJURY STUDY
All wrist injuries presenting to the Emergency Department.
Name: _____ DOB: _____SEX: __
Date of presentation_____ Community:_____
Date of injury: _____
Mechanism of injury: _____
Recorded diagnosis: _____
Management: _____
Xray taken: Yes No
Xray #: _____
Reduction and casting: Yes No
Referral to specialist: Yes No
Follow up: _____
When:_____
With whom: _____

Radiographic parameters were measured (see Figure 2) as an assessment of the adequacy of reduction.

Figure 2:



A. *Assessment of ulnar variance from the radial articular surface to the articular surface of the head of the ulna is shown. Acceptable reduction is the re-establishment of neutral ulnar variance.*

B. *A fracture with greater than 10 mm ulnar shortening is diagrammed. This fracture is unstable and secondary displacement will occur without operative reduction and fixation.*

C. *Restoration of the articular surface tilt to neutral is the second criterion for an acceptable reduction.*

D. *This fracture pattern is unstable due to the amount of apex volar angulation (>20°) as well as the dorsal comminution that can be seen extending volar to the midaxial line. Operative reduction and fixation is indicated.*

E. *The final criterion for operative reduction and fixation is the presence of an intra-articular step that is greater than 1 mm.*

Results

Within the study period 35 patients were recorded as having wrist injuries. Of these 10 (28.6%) were 26 years old or younger, 9(25.7%) were between 17 and 30, 12 (34.3%) were between 31 and 50, 2 (5.7%) were between 51 and 70, and 2 (5.7%) were over 70.

Radiographs were obtained in 88.6% of cases revealing 17 (48.6%) fractures. The mechanism of injury was a fall from standing in 19 (54.3%), a fall from a height in 3 (8.6%), a sporting injury in 12 (34.3%), and a motorised vehicle accident in 1 case (2.8%).

Stanton Regional Hospital

Dr. Roger Purnell, Orthropedic Surgeon Stanton Regional Hospita l

Referral to, or discussion with, a specialist occurred in 9 (25.7%) cases. Of the remaining 26, 12 (34.3%) were followed by, or were asked to follow up with, a family physician, 11 (3.4%) received no follow up, an 2 (5.7%) were followed up outside of the NWT. One patient (2.8%) was asked to, but did not return for an xray. The patients with fractures (17) were all followed or had follow up suggested.

Of the 17 fractures there were 14 distal radius fractures, 2 scaphoid fractures (one of which also had a contralateral triquetral fracture), and 1 pisiform fracture. Two fractures were missed, one a scaphoid fracture and the other a undisplaced radial styloid fracture. The scaphoid fracture was picked up by the radiologist and the outcome was satisfactory.

Four patients (between 31 and 50 years old) had fractures that healed in less than ideal positions:

- The first patient had an unstable fracture which malunited despite a second reduction and went on to receive a distal osteotomy.
- The second patient had an unstable four-part intra-articular fracture which was treated with a reduction and cast and healed with 7 degrees of dorsal tilt and steps in the articular surface.
- The third patient also had an unstable four-part intra-articular fracture which healed with 25 degrees of dorsal tilt and 7 mm of radial shortening despite surgical intervention.
- The fourth patient had a three-part intra-articular fracture and received 6 casts during the six weeks of treatment. The fracture heralded with 0 degrees of dorsal tilt and a step in the articular surface.

Out of the 14 distal radius fractures 3 (21.4%) were "Colles fractures" and had good radiographic outcome.

Discussion

There are a number of salient features which emerged from this study. True Colles fractures make up the minority of wrist fractures seen and appear to be well managed. Wrist sprains are common and generally are not followed after the initial visit. It is unknown what proportion of wrist "sprains" are actual intercarpal ligament tears resulting in carpal instability. The problem fracture is that occurring in the young to middle aged adult.

It usually results from a higher energy injury, is frequently both comminuted and intr-articular, and a closed reduction alone often fails to achieve or maintain an acceptable position. The radiology reports on the four problem fractures failed to convey the intra-articular extensor or the sub-optimal position of the reduction.

A study based on retrospective chart review is only as accurate as the recorded data. One can only speculate as to whether the above results reflect what actually occurred. The other drawback to this study is the lack of clinical assessment. While radiographic parameters should not be taken in isolation as a measure of outcome, there is mounting evidence showing a strong correlation between radiographic parameters and both fracture stability and clinical outcome.

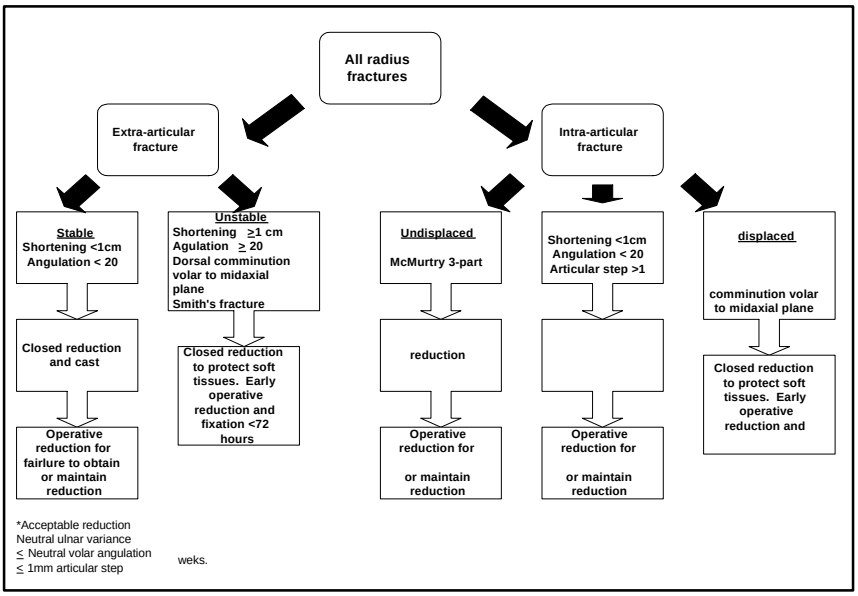
Recommendations

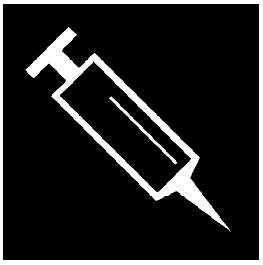
Wrist sprains associated with swelling and limited range of motion should be reviewed at 3 weeks. Those with tenderness and swelling located in the anatomic snuffbox should be cased in a thumb spica cast and reviewed at 3 weeks along with radiographs of the scaphoid. A patient without a significant improvement of their symptoms by 3 weeks despite a normal xray should be referred for evaluation.

An algorithm for managing distal radius fractures is seen in Figure 4. If there is concern over the adequacy of the reduction, an opinion from an orthopaedic surgeon should be sought.

"A patient without a significant improvement of their symptoms by 3 weeks... should be referred for evaluation."

Figure 4: Management of Distal Radius Fractures





Vaccine Storage and Transportation:

Maintaining vaccines at the appropriate temperature from the time they leave the manufacturer to the time of administration is a very important aspect of proper immunization delivery programs. Lack of adherence to the cold chain may result both in lack of vaccine effectiveness, undue vaccine failure, and an increased rate of local reactions after vaccine administration. Damage can be done by exposure the vaccine to heat or freezing, depending of the nature of the product. Recent studies have highlighted major deficiencies in Canada with respect to the cold chain.

"Lack of adherence to the cold chain may result both in lack of vaccine effectiveness, undue vaccine failure and an increase in rate of local reactions..."

General recommendations

1. Practices relating to the cold chain should be reviewed periodically at all levels (ie. every 6 months to 1 year) Where excessive cold chain failures occur, reviews should be more frequent.
2. Vaccines exposed to temperatures outside those stated in the manufacturer's insert or labelling should be stored in a separate, marked container in a well-functioning monitored refrigerator until clear instructions have been received on what to do with them. Because the potency of different vaccines varies depending on the type of temperature exposure, each incident must be evaluated individually.
3. Records should be kept of doses received, including lot numbers for each vaccine shipment, and of wastage after vaccine expiry dates have passed.

Recommendations about storage

1. Vaccines should never be removed from the refrigerator except for the following reasons: withdrawing a dose(s); shipping to clients; or transporting to immunization clinics. The refrigerator door should not be opened too frequently. (The World Health Organization recommends that the door should not be opened more than four times a day).
2. Vaccines should be stored in the refrigerator as soon as they are received.
3. All persons responsible for handling vaccines should know the correct storage temperatures for the various vaccines.
4. Refrigerator dedicated only to vaccine storage should be identified and used only for this purpose. Vaccine refrigerators should not be used to store staff lunches or specimens.
5. If there is an accumulation of more than 1 cm (or 1/4 inch) of ice in the freezer compartment of the refrigerator, defrosting is required. Vaccines should be transferred to a vaccine carrier box or another refrigerator while this is being done. The temperature should be monitored during this contingency period.
6. One person should be identified as responsible for vaccine management. Another individual should also be trained as a back up when the first person is absent.
7. All vaccine storage refrigerators should have a maximum-minimum thermometer or, if large quantities of vaccines are stored, a continuous temperature recording device. All monitoring devices should be certified or calibrated routinely.
8. All refrigerators containing large quantities of vaccine (eg, central vaccine distributing areas) should also be connected to a temperature alarm monitoring system.
9. Two daily temperature readings for the vaccine refrigerator should be taken and recorded--one in the morning when arriving and one at the end of the day--to ensure temperatures remain between 2° C and 8° C. A chart-recording thermometer should also be checked for temperature fluctuations, which may occur between readings. The designated staff person should record and sign off readouts in a log book daily. The designated staff person should ensure that all staff handling vaccines know how to read and interpret maximum-minimum thermometers.
10. All staff handling vaccines should have training about the importance of good vaccine storage and transportation techniques.
11. Vaccines should never be stored on refrigerator door shelves because temperatures are warmer there than n the shelves of the refrigerator.
12. Space should be left between the products in the refrigerator to allowl air to circulate. For freeze-dried products, for which diluent is provided in separate packages, the diluent should be stored at room temperature to conserve refrigerator space (unless the vaccine direction insert specifies that the diluent must be refrigerated).
13. Keep all adsorbed vaccines that should not be frozen away from the freezing element and away from direct contact with ice.
14. Store water bottles at the bottom, the top, and in the door spaces of the vaccine refrigerator, and keep ice packs in the freezer compartment to help maintain a more constant temperature if there is a power failure.
15. Keep a sign near the electric plug outlet for the vaccine refrigerator and the power-breaker box indicating that the power cannot be turned off. Refrigerator plugs should be in a protected area where they cannot be knocked out accidentally. Vaccine refrigerators should have a designated plug outlet that is not required for other appliances.

Canadian National Guidelines

16. Make sure that the refrigerator door is closed when not in use.

17. Vaccine inventory security must be considered when choosing a refrigerator location. If possible, the vaccine refrigerator should be placed in a room with a lockable door to prevent unauthorized handling or refrigerator entry after office hours. If this is not possible, a low traffic area should be considered. Refrigerators with lockable doors should be secured after hours.

18. Procedures in the event of vaccine refrigerator failure should be posted on or near all such refrigerators.

19. If a power outage occurs, the person responsible for vaccine storage or the delegate should put all vaccines into a thermal cold box or a container with ice packs and a thermometer until the vaccines can be transferred to another refrigerator. Large inventory storage units should be equipped with an alarming device for quick response to minimize vaccine loss. If a short power outage is anticipated (less than 1 hour), the storage unit should not be opened. If a longer power outage is anticipated, then plans for transfer are warranted.

20. Educational material on the cold chain should be available in all centres storing vaccines.

21. If a product(s) is(are) known to have been exposed to temperatures outside of the recommended range, the exposed product(s) should be put in a box marked **"DO NOT USE"** and placed in a functioning refrigerator. The types of products exposed should be recorded, as well as the duration and temperature of exposure, and advice on whether these products may be used or returned should be sought immediately.

22. Regular maintenance of refrigerators (cleaning coils, replacing door seals, etc.) should be performed and records kept.

Recommendations about transportation

1. Manufacturers and central pharmacies should place both heat and cold monitors in their shipments of vaccines. Ideally, and if justified by the amount of vaccine shipped, monitoring devices that record shipping conditions should be used.

2. Central pharmacies and manufacturers who make long distance shipments should periodically use electronic monitors to detect possible problems and their location.

3. Shipping boxes for most vaccines should be clearly labelled as containing perishable goods that have to be stored between 2 °C and 8° C and must not be frozen.

4. All transport companies carrying vaccines should be advised that the product is perishable and should be refrigerated immediately on receipt. Guarantee should be obtained that vaccines are kept in a refrigerated container from receipt to delivery.

5. Manufacturers should obtain written documentation from transport companies concerning the handling of perishable products (transportation, warehouse storage conditions, length of time between pick up and delivery, etc). Refrigerated vehicles should be equipped with temperature monitoring devices.

6. If a vaccine shipment has been refused by the person who ordered it, the carrier must know that the shipment requires refrigeration pending resolution of the problem. The manufacturer or point of origin must be notified immediately for disposition of shipment.

7. All vaccines should be transported in an insulated container with an appropriate number of ice packs (except when shipped under refrigerated transit). Insulated containers should have firmly-fitting lids and be constructed from an insulated material. To avoid freezing, vaccines should not be placed directly on the ice pack.

8. Anybody responsible for the shipment of vaccine must ensure that the vaccine arrives at its point of delivery at the proper temperature.

9. Because ice packs removed from the freezer may be very cold, before they are used they should be left at room temperature for a few minutes (1 to 5 depending on the size of the ice pack and the initial temperature) until water or sweat appears on the surface to avoid freezing the vaccines.

10. If evidence of freezing is present when vaccines sensitive to freezing are received (eg. results of temperature measurements), the vaccine must not be used.

11. Oral polio vaccine should preferably arrive with some dry ice still present. If this vaccine arrives with no ice remaining but with the product still cold, it may still be used; however, if the vaccine is warm, it should not be used.

12. Insulated carrier boxes should have documented ability (must be validated) to maintain the appropriate temperature for the anticipated maximum length of time required for the transportation.

13. When vaccines sensitive to freezing are to be shipped in outside temperatures of less than 2° C, they should be shipped in a vehicle in which the temperature should be kept higher than 2° C . If this is not possible and vaccines will be exposed to outside freezing temperatures, one should use ice packs with water at room temperature when packing the vaccine.

Developed by the Childhood Immunization Division, Bureau of Childhood Disease Epidemiology, Laboratory Centre for Disease Control (LCDC)

"Manufacturers and central pharmacies should place both hot and cold monitors in their shipments of vaccines."

Cancer Prevention in the 90's

Eliminate:

***Smoking**

Reduce:

***Fat consumption**

***Obesity**

***Alcohol consumption**

***Exposure to carcinogens**

Increase:

***Consumption of fruits and vegetables**

Utilize:

***Cervical and breast screening**

***Barrier contraceptives**

Adapted from:
A.B.Miller, "Planning Cancer Control Stragegies" Chronic Diseases in Canada, Health Canada, 1992.

Estimates of potiential effects of prevention or early detection on cancer incidence

According to research for the Cancer and Palliative Care Unit of the World Health Organization, a portion of cancer cases in Canada are potentially preventable, given current knowledge of risk factors. Lifestyle choices such as smoking and diet, in particular, have been identified as the predominant determinants of human cancer. The percentage of cancer cases that are potentially preventable was derived by comparing age-standardized cancer rates in Canada to those of countries where populations were largely Caucasian, and where cancer rates for different sites were lowest. It provides an indication of the effect that would be achievable if Canadians were to have the same lifestyle as people in the countries compared.

Cancer site	Action	Percentage of cancer incidence potentially preventable
Lung	Eliminate smoking Reduce occupational exposure to carcinogens	60%
Prostate	Reduce fat consumption	78%
Breast	Reduce fat and increase vegetable consumption Reduce obesity (postmenopausal women) Screen women aged 50 to 69	70%
Colorectal	Reduce fat and increase vegetable consumption	77%
Lymphoma	Reduce exposure to herbicides and pesticides	86%
Bladder	Eliminate smoking and reduce dietary cholesterol Reduce occupational exposure to carcinogens	73%
Body of the uterus	Reduce obesity Benefit from the protective effect of oral contraceptives (women aged 20 to 54)	82%
Stomach	Reduce nitrite in cured meats and salt-preserved foods, and increase fruit and vegetable consumption	52%
Leukemia	Reduce exposure to radiation and benzene	70%
Oral	Eliminate smoking and reduce alcohol consumption Increase fruit and vegetable consumption	68%
Pancreas	Eliminate smoking Reduce sugar and increase vegetable consumption	64%
Melanoma of the skin	Reduce unprotected exposure to sunlight	77%
Kidney	Eliminate smoking Reduce fat consumption	67%
Brain	Reduce occupational exposure to carcinogens	70%
Ovary	Reduce fat consumption Benefit from the protective effect of oral contraceptives (women aged 20 to 54)	53%
Cervix	Eliminate smoking Encourage use of barrier contraceptives Screen women aged 20 to 69	62%

Measles Elimination Program Update

Around the NWT

Around the NWT, the mass vaccination program using MR (Measles-Rubella) which began in April has been going well. As of mid-May 1996, the Health Protection Unit received the following reports from the regions:

Overall, there has been a good participation in the program, with some communities reporting up to 95% coverage. Receiving consent forms back from high school students is one common problem that has been identified.

The Inuvik, Keewatin and Kitikmeot regions report being close to 75 % completed. Due to numbers of immunizations and other factors, the Baffin and Mackenzie regions are a bit further behind, but well on their way. Some communities have completed their blitz.

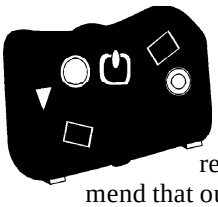
Here's a look at what's happening across the country...

Around Canada

Province	Program			Reports of Measles-1996 (to May 11th)
	2nd MMR	Catchup		
NWT	18 months	19 months to Grade 12	MR	0
Yukon	18 months	Grades 1-12	M	2
BC	18 months	18 mths to Gr.12	MR	5
Alberta	School entry	No catchup		6 (all imported)
Saskatewan	MR @ preschool	Grades 6-8	MR	1
Manitoba	School entry	Prim. grades	MR	0
Ontario	School entry	Ktg to Gr. 13	M	162
Quebec	18 months	19 months to Grade 12	M	25 (2 imported)
New Brunswick	No 2nd dose	No catchup		0
Nova Scotia	School entry	No catchup		0
PEI	School entry	Gr. 1 to 12	M	0
Newfoundland	18 months	No catch up		0

Total: 208

Site-Seeing (on the Internet)



Are you boggled by all the talk of the Internet, home pages and web sites? If you are (and even if you're not), this new feature will highlight different health related web sites which we recommend that our readers check out. We encourage you to let us know if you find any informative sites, so we can pass them on to our readers.

Now pack your bags, fasten your seat belts and...

Destination: http:/www.hlthss.gov.nt.ca

Where are we?

GNWT Department of Health and Social Services (Division of Policy, Planning and Evaluation) - WWW Home Page

What's there?

(1) EpiNorth (Mar/April 1996 issue and future ones)
(2) Link to the GNWT home page
(3) Access to Department of Health & SS public documents

Where does it link to?

(1) Health Related Sites - There are currently links to 31 health-related sites
(2) Other GNWT department sites
(3) Canadian Pages - Check out the "Canadian Home Page" for postal code searches across the country and listing of Canadian dollar exchange rates. The is also a link to the "Canadian WWW Central Index."
(4) Guides to Internet Use
(5) Home pages for the other provincial governments

Overall rating:

This is a *visually appealing* site which is *easy to navigate* within and provides *great links* to other sites. For those new to the "Net", you should have no trouble getting to other destinations from here.

Any roadblocks?

You will need the Adobe Acrobat to read EpiNorth and other public documents on the web.

Download Adobe Acrobat:
www.adobe.com/acrobat

Notifiable Diseases by Region for March & April 1996

	DISEASE	Month	Cummulative		REGIONS (YTD - 1996)				
		Mar & Apr 1996	1995 YTD	1996 YTD	Baffin	Fort Smith/ Mackenzie	Inuvik	Keewatin	Kitikmeot
Vaccine Preventable Diseases	H. influenzae B	1	1	2	0	0	0	2	0
	Measles								
	Mumps	1	0	1	0	0	0	1	0
	Pertussis	3	2	7	1	2	0	4	0
	Rubella								
Enteric Diseases	Amoebiasis								
	Botulism		1						
	Campylobacteriosis	3	3	7	1	5	0	1	0
	ClostridiumPerfringens								
	E.Coli 0157:H7								
	Food Poisoning								
	Giardiasis	5	10	9	1	3	0	4	1
	Salmonellosis	3	3	6	0	2	0	3	
	Shigellosis								
	Tapeworm Infestation		1						
	Trichinosis								
Sexually Transmited Diseases	Chlamydia	175	248	329	104	103	37	49	36
	Gonnorhea	25	38	41	28	9	2	0	2
	Syphillis								
Viral Hepatitis	Hepatitis A	1	0	1	0	0	0	0	1
	Hepatitis B	1	1	1	0	1	0	0	0
	Hepatitis C	5	6	10	0	10	0	0	0
	Hepatitis, Other	1	0	1	0	1	0	0	0
Other Systemic Diseases	Brucellosis								
	Chickenpox	101	383	171	29	133	0	3	16
	Malaria								
	Meningitis/Bacterial	0	1	1	0	0	1	0	0
	Meningitis/Pneumonococcal								
	Meningitis/Unspecified		2						
	Meningitis/Viral Infection		1						
	Rabies Exposure								
	Tuberculosis	7	6	20	3	15	1	1	0

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

March 1996

Campylobacteriosis, 1: Yellowknife.

Chickenpox (varicella), 43: Yellowknife 19; Fort Simpson 14; Pangnirtung 3; Hall Beach 2; Arctic Bay 1; Gjoa Haven 1; Hay River 1.

Chlamydia, 88: Yellowknife 8; Cape Dorset 7; Fort Rae 7; Inuvik 6; Gjoa Haven 5; Igloolik 5; Lac La Martre 5; Hay River 4; Pond Inlet 4; Iqaluit 3; Rankin Inlet 3; Baker Lake 2; Coral Harbour 2; Fort Liard 2; Fort Providence 2; Fort Smith 2; Pangnirtung 2; Pelly Bay 2; Rae Lakes 2; Saniqiluaq 2; Aklavik 1; Arctic Bay 1; Arviat 1; Cambridge Bay 1; Clyde River 1;Fort Good Hope 1; Fort McPherson 1; Fort Resolution; Fort Simpson; Hall Beach 1; Kugluktuk 1; Tuktoyuktuk 1; Whale Cove.

Giardiasis, 4; Chesterfield 1; Kimmirut 1; Pelly Bay 1; Yellowknife 1.

Gonorrhea, 10; Yellowknife 3; Artic Bay 1; Cambridge Bay 1; Clyde River 1; Iqaluit 1; Pangnirtung 1; Rae Lakes 1; Resolute Bay 1.

Hepatitis A, 1: From Rankin Inlet.

Hepatitis C, 1; From Yellowknife.

Pertussis, 2: Arviat 1; Fort Rae 1.

Salmonellosis, 2: From Arviat.

Tuberculosis, 4: Hay River 1; Iqaluit 1; Lutselk'e 1; Yellowknife 1.

April 1996

Campylobacteriosis, 2: From Yellowknife.

Chickenpox (varicella), 58: Yellowknife 22; Hay River 16; Fort Simpson 10; Gjoa Haven 5; Jean Marie River 5.

Chlamydia, 87: Pangnirtung 9; Cape Dorset 7; Rankin Inlet 6; Yellowknife 6; Iqaluit 5; Pond Inlet 5; Fort McPherson 4; Arviat 3; Baker Lake 3; Broughton Island 3; Gjoa Haven 3; Kugluktuk 3; Aklavik 2; Fort Liard 2; Fort Providence 2; Fort Simpson 2; Iglookik 2; Kimmirut 2; Lac La Martre 2; Clyde River 1; Coral Harbour 1; Deline 1; Fort Rae 1; Fort Resolution 1; Fort Simpson 1; Fort Smith 1; Grise Fiord 1; Hall Beach 1; Hay River 1; Inuvik 1; Paulatuk 1; PellyBay 1; Resolute Bay 1; Sanikiluaq 1; Snare Lakes 1; Whale Cove 1.

Giardiasis, 1: From Saniqiluaq.

Gonorrhea, 15: Iqaluit 6; Yellowknife 4; Cape Dorset 3; Igloolik 1; Resolute 1.

Hepatitis B, 1: From Yellowknife.

Hepatitis C, 4: Yellowknife 3; Jean Marie River 1.

Hepatitis, other, 1: From Fort Rae.

H. influenzae B meningitis, 1: From Saniqiluaq.

Mumps, 1: From Baker Lake.

Pertussis, 1: From Yellowknife.

Salmonellosis, 1: From Yellowknife.

Tuberculosis, 3: Cape Dorset 1; Fort Rae 1; Iqaluit 1.

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.

Erratum:

An error has been noted in the Jan/Feb issue of EpiNorth, Volume 8, Issue 1, page 5 - Reported Tuberculosis Cases. TB Cases By Region 1994 - Keewatin should read "13" rather than 0. The annual total stated "65" is correct.

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:

Hepatitis B: Ontario

Provincial and territorial public health authorities in the Toronto area are investigating a recently identified cluster of at least 30 hepatitis B cases linked to having EEGs. The use of reusable subdermal EEG electrodes possibly may have contributed to transmission. The Ontario Ministry of Health has recommended that reusable subdermal electrodes not be used for EEGs. Letters have been sent to the 13,000 patients who have had EEGs at the 4 clinics since 1990; these letters urge patients to be tested for hepatitis B markers. A scheme for tracking the resulting testing has been put in place. Patient and physician "hotlines" have been set up to answer questions. The College of Physicians and Surgeons of Ontario will soon distribute expanded infection control guidelines for EEG, EMG and sleep disorder clinics. To date, there is no evidence of transmission of other bloodborn pathogens, eg. HIV and hepatitis C virus. *Source: LCDC, Ontario Ministry of Health*

CJD: UK (Update)

The total number of confirmed or suspected new variant CJD (Creutzfeld-Jakob Disease) cases recorded in the UK has risen to 14; 4 of whom lived in the town of Ashford, Kent. A veterinary surgeon for Ashford diagnosed the first cases of BSE in cattle in 1985. All the recent cases were under 40 years of age. In addition a 29 year old mechanic from Lyons, France has recently died from what appears to be the new Variant-CJD, and 2 suspected cases have been reported in Germany.

Source: Quarantine Health Services (WHO)

Meningitis: Nigeria, Chad, Burkina Faso

As of mid March, Nigerian health authorities reported that the total number of cases of meningococcal meningitis recorded during the current epidemic period had reached 17,668 with 2550 deaths. Cases have been recorded in 15 states. The first cases of meningitis were reported in January and numbers increased during February and early March.

In addition outbreaks of cerebrospinal meningitis have been declared in 3 prefectures in the west African country of Chad. As of March 11, 1996 244 cases with 19 deaths had been recorded. A further 8252 cases and 722 meningitis deaths have been reported by health authorities in Burkina Faso. The national Ministries of Health in collaboration with the WHO, UNICEF and a number of NGOs have sent medical teams to affected areas to assist in the evaluation and control of outbreaks.

Source: WHO

Rabies: Ecuador

Health authorities in Ecuador report a total of 17 cases of human illness this year (as of April 19, 1996). Control activities including destruction of street animals and vaccination of pets continue. *Source: Quarantine Health Services (PROMED)*

Fatal Febrile Illness: Nepal

A fast spreading illness characterized by an initial high fever and headache has been reported in western Nepal. Nepalese health authorities claim that more than 200 people have died in Achnam, Bajura and Jajarkot districts. *Source: Quarantine Health Services (Pinkerton Risk Assessment Service)*

Diphtheria: Eastern Europe

The diphtheria epidemic which started in the Russian Federation in 1990 and spread rapidly to other newly independent states of the former Soviet Union continues to increase and to provide a threat to the health of their populations. Between January 1 and April 30, 1995 approximately 20,000 cases of diphtheria were reported in all the newly independent states of the former Soviet Union. More than twice the number reported for the same period in 1994. A key factor in the resurgence of this disease in this part of the world appears to be the decline in vaccination programs together with population migration. The WHO predicts that by the end of 1995 100,000 to 200,000 cases of diphtheria may have occurred in the newly independent states and their neighbouring countries. *Source: Quarantine Health Services*

AIDS/HIV: Worldwide

As of December 15, 1995, the WHO global program on AIDS has reported 1,292,820 AIDS cases in 193 countries. This represents a 26% increase from the 1,025,073 cases reported in the beginning of 1995. In 1995, after a country by country review of HIV/AIDS data, the WHO has revised its estimates of the 1994 adult HIV prevalence to 16.9 million infections. Using these revised prevalence estimates and allowing for under-diagnosis, incomplete reporting, and reporting delay, the WHO provisionally estimates that 6 million adult and pediatric cumulative AIDS cases have occurred as of late 1995. As new data have been incorporated, and more detailed estimations have been made, these estimates should not be compared with previously published estimates of cumulative AIDS cases.

Source: Quarantine Health Services (WHO)