



E NORTH

The Northwest Territories Epidemiology Newsletter

IN THIS ISSUE

- 1 Northern Contaminants Program in the NWT
- 2 Editor's Notes
- 3 Chlorination By-Products in Fort MacPherson Drinking Water
- 6 Evaluation of the 2003 *Quit and Win* NWT Contest
- 8 Antimicrobial Resistance in the NWT
- 11 **LETTER** to the Editor
Personal Reflections of a Locum Medical Health Officer
- 12 **HEALTH** online
Go for Green
- 14 **NOTIFIABLE** diseases

Northern Contaminants Program in the NWT

Chris Paci, PhD., Manager, Lands and Environment, Dene Nation

By 1989, persistent organic pollutants (POPs) such as lindane, dichlorodiphenyltrichloroethane (DDT), polychlorinated biphenyls (PCBs), and heavy metals, such as mercury, were consistently reported to being found in traditional/country foods in the Canadian North. As a result there came public pressure to explain to residents, as well as national and international observers, what impacts these contaminants were having on the environmental health of the Northwest Territories (NWT). As a result, the NWT needed to find out more about where these POPs and metals were coming from. The search for answers to these questions turned into a multi-stakeholder research program, the Northern Contaminants Program (NCP).

Established in 1991, the NCP brought together a number of northern Aboriginal governmental organizations, federal and territorial government departments, and academic institutions in search of answers for contaminants in traditional/country foods. In response, the NCP has focused millions of dollars on understanding what contaminants were entering traditional/country foods, the sources and pathways, as well as the effects these environmental contaminants were having on the health of those consuming them.

Dene Involvement in Contaminants Work

The Dene are no strangers to the potential health risks posed by contaminants in the North. Often expressing their views of health by way of their confidence in what the land provides to them, both the general health of the Dene people, and the specific health of Dene individuals have been mirrored by the health of the land. When the land is healthy, so too are the Dene. When the land is sick, no matter what form the sickness takes, this too is felt by the Dene in terms of spiritual, emotional, and physical well-being.

Sickness of the land even surfaces as a political issue which requires organizational representation, as was learnt when environmental contaminants were entering the traditional/country foods of Northern communities. It was at this critical time that the Dene Nation became a key partner in the NCP. In this regard, the Dene have played a key role and have kept a close eye on the extent to which these environmental contaminants were having on the health of the people and the land.

NCP Research

At the national level, the NCP sponsored researchers from both the Centre for Indigenous People's Nutrition and Environment (McGill University) and the Laval University Medical Centre; and also funded federal government scientists from Health Canada, Environment Canada, Indian and Northern Affairs Canada, and the Department of Fisheries and Oceans. Within the NWT, NCP sponsored territorial government researchers in the Departments of Resources, Wildlife and Economic Development, and Health and Social Services. NCP also built capacity of the Dene by providing funds

HOW TO REACH EPINORTH

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Editor's Notes

Jennifer Carey, Managing Editor, *EpiNorth*, Department of Health and Social Services

This Fall issue of *EpiNorth* certainly presented me with some interesting editorial challenges along the way, but if nothing else, it made me appreciate all the more just what it takes and who it takes to get this to its publication stage. So, to the Editorial Board, the contributors in this issue and those that follow, the Communications Specialists and reviewers here at the Department, and the people over at Artisan Press ... a healthy thank you!!

Contributions to this issue have focused on the subject of our health and the environment in which we live; what some would refer to as environmental health. Although the original intention was to publish another small, 8-page issue, the theme of environmental health quickly gained popularity to the point that I even received articles past the contribution deadline. As a result, I present you with an issue double the original length intended.

Chris Paci, Manager of Lands and Environment at the Dene Nation brings us his corporate history of the Northern Contaminants Program and what it has meant for the Northwest Territories. In his article, Chris also provides us with a snapshot of what this program will look like in the future.

Jonathon Ross, student of the MD program at the University of Calgary, and Maria Santos, Territorial Epidemiologist, bring us an overview of the Chlorination By-Products in Fort McPherson Drinking Water. The information presented in their article was the basis of the public meeting that Dr. André Corriveau held in Fort McPherson to help the residents better understand the health effects of trihalomethanes (THMs) that were found in their water.

Miriam Wideman provides us with a discussion about the evaluation of the 2003 *Quit and Win* Contest. In her article, Miriam not only presents us with the key findings of

the evaluation, but she also provides us with an idea of what changes will occur for the next *Quit and Win* Contest which is set to launch in January 2004.

Wanda White, Communicable Disease Specialist, returns again this issue, joined by Maria Santos (her second article for this issue) and Dr. Marie-Claude Lebeau, Chair of the Antimicrobial Steering Committee. In their article, they inform us of how the widespread use of antibiotics impacts the ability to treat and prevent certain infections. The information presented in their overview identifies not only baseline data, but also what is being done to reduce/prevent the emergence of antibiotic-resistant infections.

I remain as a regular contributor to the *Health.online* section and continue with the environmental health theme by providing you with an overview of the *Go for Green* website. In this section, I summarize what *Go for Green* is all about and how its website helps you to get more actively involved in your community while ensuring that your community's environment is preserved.

In the last section of this issue, I present the *EpiNorth* audience with something a little different by incorporating the personal views of Dr. James Talbot. In this *Letter to the Editor* section, Dr. Talbot presents us with a reflection of our public health system as he saw it while acting on behalf of the Chief Medical Health Officer this past summer.

It is my hope that we may be able to incorporate a letter to the editor on a regular basis and encourage each of you to write about your various experiences and/or insights regarding specific issues that arise out of *EpiNorth*, or about healthcare in general.

Helping keep you informed to live healthy and happy lives!

Chlorination By-products in Fort McPherson Drinking Water

Jonathon Ross, M.D. Program, University of Calgary

Maria Santos, Territorial Epidemiologist, Department of Health and Social Services

One of the greatest achievements in public health was the development of highly effective water treatment facilities. Before the twentieth century, potentially life-threatening waterborne diseases (e.g. cholera and typhoid) were common in Canada. With the advent of disinfection, largely chlorine-based, these diseases have essentially been eliminated in our country.

Before Fort McPherson's water source was changed in the fall of 2001, residents frequently complained of the disagreeable taste and smell of the water. More importantly, concerns were raised about the quality and safety of the water as people became aware that they could be exposed to elevated levels of by-products from water chlorination disinfection – levels that some recent scientific studies have linked to increased risk of certain cancers and adverse reproductive outcomes.

Access to safe drinking water is fundamental for good health. Accordingly, such public concerns with the drinking water supply are taken seriously and must be evaluated appropriately. This paper is a condensed version of the full report which reviews what is currently known about the health effects of chlorination disinfection by-products and how this knowledge applies to the situation in Fort McPherson.

Chlorination Disinfection By-products

Chlorination is the method most often used to disinfect drinking water because it is highly effective and cost efficient¹ in inactivating microbial contaminants. Other disinfectants such as UV and ozone can be used, but chlorine or chloramines must still be added to provide a residual disinfectant throughout the distribution

system to prevent re-growth or contamination.

As a highly reactive species, chlorine will also interact with naturally occurring organic matter (e.g. algae) to produce chlorination disinfection by-products (CDBPs). In general, CDBP levels are highest when the source is treated surface water containing more organic matter (e.g. rivers, streams and lakes) and lowest when the source is groundwater.

Levels of CDBPs can fluctuate widely and are dependent on the properties of the water itself (e.g. total organic carbon in the raw water source, bromide concentration, pH, temperature, ammonia, and carbonate alkalinity) as well as the treatment conditions (e.g. disinfectant dose, contact time, and removal of natural organic matter prior to disinfection).²

Trihalomethanes

Over the last decade a few epidemiological studies and critical reviews have noted an association between high levels of CDBPs and small increased risks of bladder cancer, colon cancer and adverse reproductive outcomes.^{3,4,5,6,7,8,9}

Most studies use estimates of trihalomethane (THM)² levels in the drinking water as indicators of the exposure level to CDBPs because they are the most abundant and easiest to measure by-product of chlorination.^{10,11} However, it is still unknown which of the CDBP compound(s) is (are) specifically involved with adverse health outcomes and whether decreases of THM concentrations in drinking water would actually reduce health risks.^{12,13,14,15}

In 1987, the *Guidelines for Canadian Drinking Water Quality* specified a maximum for THM levels of 0.35 mg/L. This guideline was lowered

a THMs comprise four compounds: chloroform (the most abundant of the four), bromodichloromethane, chlorodibromomethane, and bromoform.

to 0.1 mg/L in 1993, to be calculated as an annual average of quarterly samples. Amidst recent studies that suggest a link between CDBP exposure and increased risk for certain adverse health outcomes, the Federal/Provincial/Territorial Committee on Drinking Water (CDW) has launched a review to investigate if the current THM guideline remains protective of human health. A CDBP Task Group was established and is slated to make its final recommendations in October 2003.¹⁶

Water Disinfection in the Northwest Territories

In the Northwest Territories, drinking water quality standards are set by the territorial government and are based on the *Guidelines for Canadian Drinking Water Quality*,¹⁷ developed by the CDW. The Public Water Supply Regulations, made under the authority of the *NWT Public Health Act*, require drinking water to be chlorinated or receive other bactericidal treatment. The regulations also require a chlorine residual throughout the distribution system.

Fort McPherson Water Quality

In Fort McPherson, the original water treatment plant was constructed in 1977. It is assumed that chlorination started at that time. Data from the Department of Health and Social Services show that between 1994 and the fall of 2001, THM levels in treated public drinking water were frequently measured above the limit of 0.1 mg/L. Since the source for the water was changed in 2001, THM levels have not exceeded the current maximum guideline level.

In calculating the exposure to CDBPs, it is estimated that the exposure to levels above the current maximum guidelines for Fort McPherson residents can range from 0-24 years. This range is dependent on how long residents resided in Fort McPherson prior to changing the source of water in 2001. It should also be noted that actual consumption may be lower than predicted due to complaints about the taste and odor.

Data from the NWT Cancer Registry show that during the period from 1992 to 2000,¹⁸ a total of 24 cancers were diagnosed in community residents. After adjusting for age, there was no significant difference between the overall cancer incidence rates in Fort McPherson and the Northwest Territories. The overall crude cancer incident rate in Fort McPherson for the same period was almost 30% below the 1996 national average. Upon age-adjustment, however, the incident rate did not differ from Canada. Most importantly there were no diagnoses of bladder cancer (the cancer most strongly linked to CDBPs) in Fort McPherson during that same period. Meanwhile less than six cases of colorectal cancer in Fort McPherson were diagnosed. It is worth noting that colorectal cancer is the most commonly diagnosed cancer among residents in the NWT. As for cancer related deaths in Fort McPherson, thirteen deaths occurred during the period from 1990 to 1999. During this same period, cancer deaths constituted 25% of all deaths in Fort McPherson, and likewise, 24% in the NWT.

Hospital data (1996-1999) and vital statistics (1986-1999) show no significant differences in the rates for spontaneous abortions or stillbirths in Fort McPherson relative to the Northwest Territories. Furthermore, there were no hospitalizations for neural tube defects.

Concerns for future reproductive adverse events in Fort McPherson should be alleviated now that the water source has been changed. However, there must still be vigilance with regard to any changes in cancer patterns that may appear through surveillance methods.

Conclusion

Disinfection of drinking water represents a great and important achievement of public health and has saved many lives and resulted in greatly reduced morbidity. In their pioneering work on the comparison of health risks from untreated surface water versus CDBPs, Regli *et al.* concluded that the risk of death from microbial pathogens

“Concerns for future reproductive adverse events in Fort McPherson should be alleviated now that the water source has been changed. However there must still be vigilance with regard to any changes in cancer patterns that may appear through surveillance methods.”

in inadequately disinfected drinking water was at least 100 to 1000 times greater than the risk of developing cancer.¹⁹ This statistic puts risks in perspective and strengthens the message that future strategies for reducing CDBPs in drinking water must not compromise the efficacy of current disinfection procedures against microbial agents.

Based on the Department's evaluation and the standard criteria for justifying the implementation of preventive health programs,²⁰ population screening in Fort McPherson for bladder and/or colorectal cancer is not warranted at this time. Having said that, it is important to emphasize that preventive measures can reduce the risk of cancer and pregnancy complications. Cessation of smoking will significantly lessen an individual's chance of developing bladder cancer and several other malignancies and diseases. The consumption of a diet high in fiber, fruits and vegetables and low in fat can reduce the risk of colorectal cancer. In addition, folic acid supplementation before conception and during the early weeks of pregnancy can significantly decrease the risk of giving birth to a baby with a neural tube defect.

The Department of Health and Social Services is committed to territory-wide initiatives (e.g. Action on Tobacco - Territorial Strategy on Tobacco Control, Active Living Strategy, Health Pregnancies Program, etc.) that incorporate these and other preventive measures so that all citizens can reduce their risk of cancer and pregnancy complications.

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Evaluation of the 2003 *Quit and Win NWT Contest*

Miriam Wideman, Health Promotion Specialist, Department of Health and Social Services

Quit and Win NWT – the first territory-wide smoking cessation contest – was held in the Northwest Territories from October 1, 2002 to January 6, 2003. The contest was coordinated by the NWT/Nunavut branch of the Canadian Public Health Association (CPHA) and guided by an advisory committee consisting of representatives from health-related organizations.

This health promotion initiative was modeled on similar contests offered in Ontario and Quebec as well as other countries. Most cessation contests have a quit period of up to six weeks in length. *Quit and Win NWT* was unusual in that it had a quit period of three months. This lengthier requirement was established based on research showing a smoker who can last this length of time without a relapse has a greater probability of staying smoke-free over the long-term.

The contest goal was to motivate 3% of the NWT's current daily smokers to register as participants. Additional objectives included promoting the positive aspects of quitting; increasing awareness of the aids and supports available for quitting; increasing awareness of cessation techniques; and providing information and support to contest participants for the duration of the contest.

The Contest

To enter, a participant had to be a daily smoker who had been smoking for one year or more. Smokers who entered the contest committed to quit smoking for the three-month contest period in exchange for a chance to win a prize. Participants entered with a buddy whose role was to encourage and support the smoker in his or her quit attempt.

There were two entry categories: teen (ages 15-18) and adult (ages 19 and over). The grand prize for the adult category was a 1-week, all-inclusive trip for two to Mexico. The grand prize for the teen category was a trip for two to the Calgary Stampede. Several smaller interim prizes were also

drawn. The random draws for teen and adult entries were made on January 6th, 2003. Winners were verified to be smoke-free and prizes were awarded January 22nd during National Nonsmoking Week events in Yellowknife.

Evaluation Methods

The contest evaluation began immediately after the three-month smoke-free period and included both impact and process elements, assessing immediate outcomes of the contest as well as aspects of the contest structure and implementation.

Several data collection tools were used including:

- *Contest entry forms* - these provided baseline information on participants such as years smoked, previous quit attempts and number of cigarettes smoked per day.
- *Telephone interviews* - these were conducted with a cross section of 60 participants using a stratified sampling method.
- *Mail back survey* - a 2 page self-administered, pre-stamped mail back survey was sent to all 562 participants. 120 completed responses were received and 22 were returned as undeliverable. The overall response rate was approximately 20%.
- *Community Health Representative (CHR) interview and focus group session* - a focus group session was held with 15 CHRs and individual post-contest telephone interviews were completed with 14 of those CHRs.
- *Survey of contest organizers* - feedback from advisory committee members and contest coordinator was obtained by a survey.

Highlights of Findings

- The contest was well-known and recognized by NWT residents, including non-smokers and smokers who did not enter the contest.
- NWT residents liked the positive focus of the contest (i.e. the emphasis on the health gains of quitting vs. the dangers of smoking).

- The contest exceeded the goal of 3% of current NWT smokers age 15+, attracting 562 participants (approximately 5%).
- Nearly all (90%) of participants were adults. There were only 58 teen entries.
- Almost 80% of participants were from the regional centres (Yellowknife 45%, Fort Smith 6%, Hay River 9%, Inuvik 18%). Only 20% of participants came from smaller communities.
- Based on the telephone interview and mail back survey, it is conservatively estimated that 20% of the contest participants were still smoke-free at five months after the quit date.
- Most participants and CHRs considered the length of the contest appropriate.


Conclusions and Recommendations

Evaluation findings from this first territory-wide contest acknowledged that the contest is a valuable part of a comprehensive approach to smoking cessation and tobacco control. Survey results indicated that the contest achieved a high degree of recognition and was seen as a positive health promoting initiative. The 5 month quit rate of 20% compares very favorably with other cessation initiatives, which tend to be more in the range of 10 - 15%.

There are, however, some aspects of the contest that clearly need to be reassessed and possibly modified. For instance, the contest was not successful in reaching those in the teenage years – the age category in which quitting attempts are typically less successful. Due to time and resource limitations, the evaluation was not able to identify why this was the case and further research should be done before a teen component is attempted again. One possibility suggested by several survey respondents is to focus instead on preventing smoking initiation by rewarding youths who choose not to start smoking.

Greater effort also needs to be placed on promoting the contest at the community level. Individual community participation rates clearly showed where efforts had been made by health staff to promote the contest within their community. Contest organizers need to explore additional ways to involve not only community health workers but also a broader network of partners to promote the contest.

For further information about the Evaluation of the 2003 *Quit and Win NWT Contest*, a copy of the report can be obtained by contacting the contest coordinator at (867) 873-9672 or by email at quitandwinnwt@ssimicro.com.



Quit and Win Smoking Cessation Contest Update

The second Quit and Win contest is being planned. This year there will be some changes – the contest will be for **adults only**, and the **start date will be changed from October 1st to February 14, 2004**. Here are some dates and details. Contest organizers will be sending out more updates on prizes, and ways you can help us promote the contest, in the weeks and months to come.

Contest Dates:

- > January 19 to 25, 2004 – Launch of contest during National Non-Smoking Week
- > February 14 – Start of Smoke-free Period (You will be eligible to enter if you have quit smoking any time between January 1/04 and Feb 14 /04)
- > May 14 – End of Contest
- > May 31 – Announcement of Grand Prize Winner

Contest Rules – You must:

- > Be 19 years of age or older
- > Be a regular, daily smoker for a year
- > Be a resident of the NWT
- > Sign up with a buddy, 15 years of age or older, resident in the NWT

Prizes:

- > One successful quitter will be selected from all eligible participants for the **Grand Prize of a trip for two to a sunny southern destination (last year this was Mexico)**.
- > Smaller regional and interim prizes will also be offered.

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Antimicrobial Resistance in NWT

Wanda White, Communicable Disease Specialist, Department of Health and Social Services

Maria Santos, Territorial Epidemiologist, Department of Health and Social Services

Dr. Marie-Claude Lebeau, Chair of the NWT Antimicrobial Steering Committee

The use of antibiotics to prevent and treat disease is one of the major successes in the history of medicine. Unfortunately, the widespread use of antibiotics has also caused the emergence of resistant strains of bacteria that cause disease.

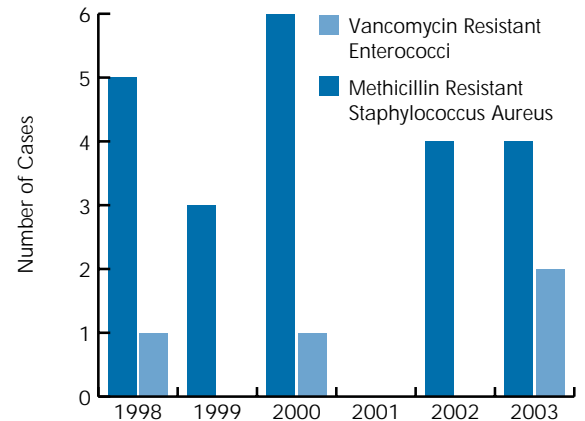
Antibiotic resistance evolves when microorganisms are either exposed to antimicrobial agents, such as antibiotics, or when resistant genes are transferred from one organism to another.¹ This process creates new species, which are labeled by the media as “super bugs”. Basically these new microorganisms have learned to resist and survive antibiotic usage. When full range resistance occurs, health care professionals are no longer able to treat infections successfully.

Vancomycin Resistant Enterococci (VRE) is an example of this resistance pattern. When a susceptible patient becomes infected with a pathogenic strain of the Enterococci species (most are part of the normal flora of the gastrointestinal tract) that is highly resistant to the antibiotic Vancomycin, the likelihood of a successful treatment is low.

VRE contributes to higher morbidity and mortality rates in those infected. Since 1998, four cases of VRE have been reported to the NWT Communicable Diseases Registry (see Figure 1) and were acquired in southern hospitals. Incidence of this disease has been associated with hospitalization for renal transplants as well as within cardiac intensive care and in other tertiary care units. These cases were exposed to other patients receiving numerous antibiotics due to the acuity of their illnesses and who had become colonized or infected with VRE.

Another organism that is showing rising rates of resistance is *Staphylococcus aureus* (*S. aureus*).

Figure 1: Methicillin Resistant *Staphylococcus Aureus* and Vancomycin Resistant Enterococci in the NWT: 1998-2003



As shown by Figure 1, between 1998 and 2003, 21 cases of Methicillin Resistant *Staphylococcus aureus* (MRSA), a *S. aureus* infection resistant to cloxacillin and oxacillin, have been reported. Cases of MRSA have been imported to the NWT by patients who were referred to southern hospitals. Also, secondary transmission of MRSA has been identified due to exposure to known MRSA patients in their own home. More disturbing is the fact that several patients have become infected with MRSA in their own community, with each patient having received many courses of antibiotic treatment. Although MRSA infection can usually be treated, patients who are very ill will have difficulty tolerating the treatment.

In the NWT, twenty-one percent of isolates of Pneumococcal infection are fully resistant to penicillin.¹¹ This is of concern because resistant organisms exchange their resistant genes with other species. Pneumococcus may also become

resistant to Vancomycin, a third line antibiotic used only when all other drugs have failed.

Another approach to reduce Pneumococcal resistance is the use of vaccines to prevent the infection in the first place. The NWT already has a targeted vaccine program to prevent some Pneumococcal infections, but both the NWT Antimicrobial Steering Committee¹ and the NWT Advisory Committee on Immunization are hoping to broaden its use to further limit the spread of these infections. These Committees have recommended establishing a new Pneumococcal immunization program using Prevnar® which is a special formulation of Pneumococcal vaccine for children and can be used to prevent many strains of Pneumococcal disease in young children. The program is expected to be established in the next fiscal year (2004-2005), and become part of the routine immunization program for children less than two years of age.

Establishing a Strategy to Combat Antimicrobial Resistance

The mandate of the NWT Antimicrobial Steering Committee is to oversee, facilitate and ensure the development, promotion, implementation, monitoring and evaluation of a NWT wide strategy to reduce/prevent the emergence of antibiotic-resistant microorganisms and limit/control their transmission. To meet this mandate the following objectives were developed:

1. Develop guidelines for antibiotic-resistant microorganisms detection and surveillance.
 2. Implement Standard of Practice Guidelines to reduce antibiotic use.
 3. Develop infection control standards that are recommended for the prevention and control of antibiotic-resistant microorganisms in NWT institutions.
 4. Develop a communication strategy to promote the activities relating to antibiotic-resistant microorganisms control and prevention to senior policy and decision makers, health care providers, organizations and the general public.
 5. Advocate and promote the 'buying in' by various health care professional groups and organizations in adopting the antibiotic-resistant microorganisms strategies and committing resources for its implementation.
- The first three objectives have been developed and are currently being implemented as follows:
- New screening guidelines for antibiotic-resistant microorganism detection have become policy in all NWT hospitals. Consistent adherence to this policy is imperative to prevent secondary transmission of VRE and MRSA.
 - New regulations have been passed to make VRE, MRSA, Invasive Pneumococcal disease and other resistant organisms that cause diseases reportable to the Chief Medical Health Officer.
 - New clinical practice guidelines have been developed for common infections such as otitis media, pharyngitis, and rhinosinusitis in adults and children. These guidelines are in the process of being approved and distributed to all health care professionals in the NWT through the Clinical Practice Information Committee.
 - The NWT Antimicrobial Steering Committee has approved and recommended *Bugs and Drugs* (2002) as the NWT standard guide for treatment of all infections. The Hospital Standards Regulations make it mandatory for all health care facilities to have infection control programs in place.



¹ Antimicrobial resistance is of great concern both nationally and within the NWT. The NWT Antimicrobial Steering Committee is a committee made up of representatives for physicians, specialists, nurses, pharmacists, dentists, communicable disease consultants, medical health officers, infection control officers, microbiologists, laboratory technologists, and communication officers.

The NWT Antimicrobial Steering Committee is now kicking off a *Smart Use of Antibiotic Campaign* as a way to get buy-in to fight antimicrobial resistance. Targetting health professionals and the public, this campaign includes:

- enhanced education for school children and general public (bookmarks, posters, bathroom signage and handwashing awareness);
- public service announcements;
- radio and TV interviews with the Chair of NWT Antimicrobial Steering Committee; and
- direct communication with health care providers regarding new Clinical Practice Guidelines, antibiotics usage, and professional publications.



Prevention is the best defense against germs

- Use soap and warm water
- Scrub your hands very well
- Wash between fingers, wrists, under fingernails, back of hands
- Rinse well
- Dry your hands with a paper towel
- Remember to turn off the water using a paper towel instead of your nice clean hands!



Establishing a Baseline for Patterns of Antibiotic Use

In order to establish baseline antibiotic use in the NWT, the NWT Antimicrobial Steering Committee did a preliminary survey in which the number of daily dosages for antibiotics distributed throughout pharmacies in Yellowknife and Fort Smith were calculated to profile antibiotic use patterns (see Figure 2). Through these calculations, it became apparent that Penicillins, macrolides/lincosamides and tetracyclines were the most frequently distributed antimicrobials. Among the penicillins, amoxicillin is the most frequently used in Yellowknife and Fort Smith whereas among the macrolides, clarithromycin was the most common.

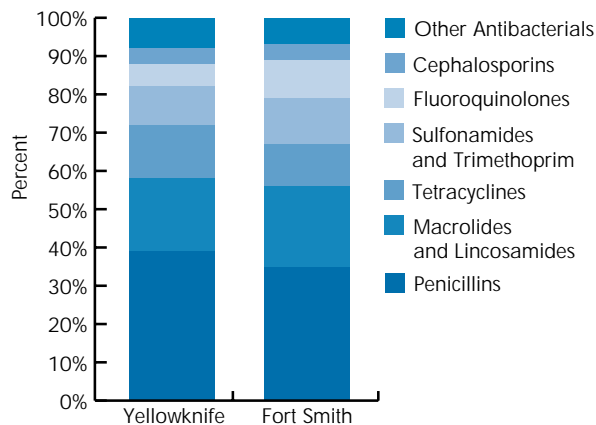
This preliminary survey also indicates that antibiotics is in a high use in the NWT and are contributing to changes in our environment. Fighting antibiotics resistance through common practices to prevent disease, such as hand washing and the use of vaccines, is therefore very important. With the help of the public and health care practitioners within the health and social services system, the NWT Antimicrobial

Steering Committee will promote the judicious use of antibiotics and infection control practices, and will also continue to monitor resistance patterns and antibiotic use. These actions will not only help save lives but will also decrease costs to our health care system.

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- Personal Communication, Dr. Edith Blondell-Hill, 2003

Figure 2: Percent Distribution of Defined Daily Dosages for Antimicrobials Present in Yellowknife and Fort Smith



Source: Data for Yellowknife and Fort Smith are based on the NWT Pharmacy Antimicrobial Survey (2001)

LETTER to the Editor

Personal Reflections from a Locum Medical Health Officer

Dr. James Talbot, Edmonton, Alberta

What a wonderful time I had this past summer acting on behalf of the Chief Medical Health Officer (CMHO) while Dr. Corriveau was on his annual vacation! The staff within the Health and Social Services system was consummately professional, helpful and knowledgeable – making it easy for a rookie CMHO to look good. The work was very satisfying, covering a wide spectrum of important public health issues from evacuation plans for Norman Wells, to communications strategies for West Nile Virus, to safe water initiatives for remote communities.

Firstly, I must admit that, despite warnings, I was totally unprepared for how beautiful the setting was. The ancients believed that everything could be divided into earth, air, water, and fire. If there is a more pleasing combination than Precambrian shield pink and green granite; spruce-scented and unpolluted air; cold, crystal Great Slave Lake water; and shimmering Northern Lights, then I have not found the four divisions that the ancients referred to.

Beautiful setting aside though, I am still puzzled about what is it with those ravens. Not only do they have some kind of hip-hop swagger I have never seen before, but they also have the manners of a street gang and are the size of an NFL lineman. The mysteriousness of these birds further startled me one day as I put out a bin of shiny used beer cans to take for recycling. Realizing I had forgotten to place the newspapers in the bin, I went back to get them only to return to a missing recycling bin. The entire recycling bin had disappeared! I suspect the ravens.

Now on to the work I accomplished and observed while acting as CMHO...

Many aspects of the Department of Health and Social Services impressed me. First, there was very little work assigned that did not have direct relevance to protecting or improving health. Everyone who has ever had the misfortune to work in a place that mistakes activity for importance appreciates how deeply satisfying it can be to work in a place that does not.

Second, the organization is very horizontal. In business terms this means there are very few layers between the customers and the people who can serve them, including the Chief Executive Officer. Horizontal organizations stay focused on satisfying the customer and tend to be more nimble and responsive than vertically organized ones. All of you were unfailingly polite and helpful on the phone and have an intimate understanding of the difficulties of working in public health's front lines, whether it is at Yellowknife Public Health, Stanton Hospital, or Fort McPherson Health Centre. I also had the distinct impression that anyone in the NWT who thought Public Health could benefit from their opinion would not hesitate to give it – asked or not – to anyone including the Minister and Deputy Minister. Most ministries I am familiar with are relatively isolated and somewhat defensive about the real-world concerns of front-line public health staff. Good for you for staying in touch and making a difference!

Third, the mutual respect and teamwork you exhibit is inspiring. I always wanted to work with a team that achieved by using one another's strengths and compensated for one another's weaknesses, but have only rarely found that kind of team away from the field of sports. Too often mutual suspicion and turf protection (doctor vs.

nurse, health promotion vs. health protection) get the upper hand and hobble the team. In my short time in the Northwest Territories, I was blown away by how well everyone worked together and how quickly a response could be put together by a team comprised of such key players as Communication Specialists, Environmental Health Officers, Public Health Communicable Disease Nurses, Information Technology Analysts, the Assistant Deputy Minister and the Deputy Minister.

If I was going to leave a thought for the future it would be from a great book about stress reduction called *Wherever you go, there you are* by Jon Kabat-Zinn. In it he quotes the practical American philosopher, Henry David Thoreau from his book *Walden* to illustrate the importance of taking time during the day-to-day pressures of our jobs to spend time growing.

“There were times when I could not afford to sacrifice the bloom of the present moment to any work, whether of the head or the hand.

I love a broad margin to my life.

Sometimes, in a summer morning, having taken my accustomed bath, I sat in my sunny doorway from sunrise till noon, rapt in a reverie, amidst the pines and hickories and sumacs, in undisturbed solitudes and stillness, while the birds sang around or flitted noiselessly through the house, until by the sun falling in at my west window, or the noise of some traveler’s wagon on the distant highway, I was reminded of the lapse of time.

I grew in those seasons like corn in the night, and they were far better than any work of the hands would have been. They were not time subtracted from my life.”

In closing, I would like to say that the time I spent in the Northwest Territories was not time subtracted from my life even though the ravens were not the same birds that “flitted noiselessly” around Thoreau’s house. Lastly, I leave you with this observation: each of you should take some time every day to grow “like corn in the night”.

Jennifer Carey, Evaluation Specialist, Department of Health and Social Services

The environment in which we live often affects our health. People are choosing to drive more and walk less. Our rural landscapes are continually transforming into urban skyscrapers and suburban dwellings. Smog levels and UV rays are increasing with each passing year.

With less physical activity and an increase in urban development, Canadians are recognizing an increase in obesity, high blood pressure, adult-onset diabetes, osteoporosis, stroke, depression, and colon cancer. As a result, communities are having to focus more and more on finding opportunities that promote active lifestyles among their residents while ensuring that the environment in which they live remains sustainable.

For this issue, I provide a review of the *Go for Green* website found at www.goforgreen.ca which not only “encourages outdoor physical activity that protects, enhances or restores the environment”¹, but also has “community-driven solutions that make a positive contribution to Canadian society”.

What is Go for Green?

Recognized as the Active Living & Environment Program, *Go for Green* is a non-profit, charitable organization whose vision is to promote and improve the health of Canadians as well as the health of the environment. At the heart of the *Go for Green* organization are the following programs that promote physical activity without harming the environment:

- Active Transportation;
- Active and Safe Routes to School;
- International Walk to School Day and Week;
- TrailPaq;

- Ice Dreams;
- Winter Green;
- Gardening for Life; and
- Go for Green Prescription.

Go for Green offers these programs across Canada and provides its website as the gateway to attaining the tools and resources necessary to get your community involved in these activities.

The Go for Green Website

When you type in the website’s domain name, you are presented with the option of choosing to view the website in either English or French. Once you enter the home page of your chosen language, however, you are presented with a site



that is not as visually appealing as most home pages found on the Internet. Instead, *Go for Green's* homepage reflects a Table of Contents format, housing direct links to programs, tools and resources that make up the Active Living and Environment Program. Compared to other Internet sites that overload their homepages with information, this home page was simple and focussed on information that is key, rather than 'nice to know'.

What is great about this website is the amount of information provided from within. Not only does each program link inform you of what the program is about, but it also provides you with the tools and resources necessary for getting involved (to include registration), media messages and packages related to the program (to include media contacts), and links to other related sites.

What I thought was different about this program, however, is the link to the '*Go for Green*' *Prescription*. In partnership with Health Canada and the College of Family Physicians of Canada, *Go for Green* collaborated on a design and distribution of a new prescription - your '*Go for Green*' *Prescription*. The prescribed medicine is being able to get two things accomplished in one - being physically active in the outdoors while helping to create a healthier environment. The prescription itself asks you to commit to such activities as leaving the car at home and walking to work/school, helping to clean a local park or school, hiking with a parent/friend, and using the stairs. The prescription also offers suggestions for places to get active in, such as arenas, recreational parks, work, and fitness centres. And even if you're not sure what is available in your community, or still need help getting started, the '*Go for Green*' *Prescription* also offers you contact information and ideas to ensure you get the right medicine that suits your needs.

Go for Green in the NWT

Everyone in the NWT should know that even though people use the expression 'offered across Canada', the Territories themselves do not always find themselves on that map. Browsing through the *Go for Green* website, however, you quickly realize that this is not the case for the Active Living and Environment Program.

As part of *Go for Green's* TrailPaq program, the NWT Department of Municipal and Community Affairs inventoried and assessed trails in every region of the NWT², registering a total of 33 trails on the TrailPaq website. Moreover, the NWT is also involved in the Ice Dreams program, having registered three outdoor rinks in Hay River, and also maintains its presence in the Commuter Challenge program, gaining more success each year with N'dilo landing 1st place nationwide in 2003 for the under 1,000-population base and Yellowknife landing 4th place overall in 2002.

For more information on *Go for Green* initiatives in the NWT, contact the NWT Representative, Gary Schauerte, Manager of Sport and Recreation, Department of Municipal and Community Affairs, at (867) 920-6192.

REFERENCES

- 1 www.goforgreen.ca - any information quoted within this article will be referenced from this website unless otherwise stated.
- 2 Made possible with sponsorship from the Government of Canada and Compaq computers.

Continued from page 1

to hire technical staff and building bridges between traditional and scientific knowledge. All research has been published in academic journals – to increase the value and knowledge of contaminant related impacts in the North – and results disseminated to all Northern communities in all languages and in terms of Dene understandings. In addition, Denendeh^a Contaminants Tours have been completed for the sole purpose of contaminants education and communication in most NWT communities.

The findings of the first five years of NCP sponsored research were published in 1997 as the first *Canadian Arctic Contaminants Assessment Report*. This report provided a good overview of the contaminants coming to the NWT from elsewhere, acknowledging which heavy metals, POPs, and radionuclides were found in traditional/country foods. In 2003, the second assessment, *Canadian Arctic Contaminants Assessment Report 2* was published, providing greater insight on the state of environmental health.

One finding which impacted the aboriginal people of the NWT the most was the acknowledgement that, for Denendeh, “traditional foods are healthy” and relatively free from long-range contaminants. A note of caution is that the cumulative impacts and mixtures of contaminants, as well as new and emerging contaminants and local point source contamination (e.g. Arsenic trioxide at Giant Mine in Yellowknife), have not been studied to a significant extent by the NCP. Therefore, traditional foods are only healthy as far as health and consumption advisories have not been issued.

The Future of NCP

Funded by the NCP, the NWT Environmental Contaminants Committee is a multi-agency body that meets monthly to discuss contaminant issues. Chaired by the Contaminants Division of Indian and Northern Affairs Canada, and the Lands and Environment Division of the Dene Nation, the Committee continues to adapt to the challenges of environmental health. The Committee, for example, has secured additional funding from Environment Canada’s Northern Ecosystem Initiative to continue to examine local contaminant concerns.

Currently, the NCP is refining its research priorities to focus mostly on ‘high risk’ communities, rather than long-range contaminants and their impacts on the environmental health of all Aboriginal populations in the NWT. Changes to the NCP will reflect the financial withdrawal of both Health Canada and Environment Canada; an increased focus on the consumers of high Arctic marine ecosystems; and a stripped down investment in research, education and communication on contaminants issues for the NWT. There have been discussions regarding the logistics of revisiting communities that were involved with the original maternal and cord-blood study¹ to see if there are any longitudinal trends for key selected communities across the north. However, it will not be known until 2004 if the NCP will be renewed for multiple years in order for this research to go ahead.

“One finding which impacted the aboriginal people of the NWT the most was the acknowledgement that, for Denendeh, ‘traditional foods are healthy’ and relatively free from long-range contaminants.”

REFERENCES

- 1 Walker, Jody, Jay Van Oostdam, and Ed McMullen. GNWT. Department of Health and Social Services. *Human Contaminant Trends in Arctic Canada: Northwest Territories and Nunavut Environmental Contaminants Exposure Baseline*. Final Technical Report. March 2001.

a The Dene name for their traditional territories that form the bulk of the NWT.

NOTIFIABLE diseases

for the Northwest Territories (NWT) July 2003 - September 2003^a

		July - September 2003	Cumulative Totals 2003
		NWT	NWT
<i>Vaccine Preventable Diseases</i>	Hepatitis B	0	0
	Haemophilus Influenzae	0	0
	Influenzae A	0	1
	Influenzae B	0	5
	Pertussis	0	1
<i>Sexually Transmitted/ Bloodborne Diseases</i>	Chlamydia	143	429
	Gonorrhoea	46	157
	Hepatitis C	2	13
	Hepatitis, Other	0	0
	Syphilis	0	0
<i>Diseases by Direct Contact/ Respiratory Route</i>	Chicken Pox	6	58
	Invasive Group A Strep	1	5
	Invasive Group B Strep in neonates	0	0
	Invasive Pneumococcal Disease	5	6
	Legionellosis	0	0
	Listeriosis	0	0
	Meningitis, Other Bacterial	0	0
	Meningitis, Unspecified	0	0
	Meningitis, Viral	0	0
	Meningococcal Infections	0	0
	Respiratory Syncytial Virus	5	30
	Tuberculosis	3	8
<i>Enteric, Food and Waterborne Diseases</i>	Botulism	0	0
	Campylobacteriosis	2	6
	Cryptosporidiosis	0	0
	E.Coli 0157:H7	0	1
	Giardiasis	2	4
	Hepatitis A	0	0
	Salmonellosis	1	5
	Shigellosis	0	1
	Tapeworm Infestation	0	0
	Trichinosis	0	0
<i>Vectorborne/Other Zoonotic Diseases</i>	Yersinia	0	0
	Brucellosis	0	0
	Malaria	0	0
<i>Antibiotic Resistant Microorganisms</i>	Rabies Exposure	1	1
	Methicillin-resistant Staph.Aureus	1	3
	Vancomycin-resistant Enterococci	0	2

NWT HIV Infections Reported from 1987 to 2003

Total	<i>Age Group at Diagnosis</i>								<i>Gender</i>		<i>Risk Category</i>					
	0-9	10-14	15-19	20-29	30-39	40-49	50-59	60+	Female	Male	MSM ^b	MSM/ IDU ^c	IDU	Hetero-sexual	Perinatal	Blood Products
23	1	0	0	4	12	5	0	1	2	21	11	1	5	4	1	1

a Statistics are based on currently available data and previous data may be subject to change
 b Men who have sex with men
 c Injection Drug User