



Winter 2011

Peace, love and serenity!

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“ To work together in the
spirit of honor and respect towards a holistic
HIV/AIDS strategy for the First Nations and Inuits of Quebec //

A word from the program officer

In September, Chief Réal McKenzie and I were fortunate to have been invited to give a presentation on the HIV/AIDS situation for Aboriginals in Quebec at a symposium in Chambéry, France. You can read about our adventure on page 3.

Research on sexual behaviour of youth and adults in Quebec First Nation communities is now completed. We are in the process of validating the reports and you will be able to read the results soon. This was a rewarding experience and the research has revealed facts that will help us better focus effective actions to prevent HIV/AIDS and STBBI over the next few years. You will also be able to use the results in your communities and organizations to better define shortcomings needing correction and to better understand the current situation.

Finally, after the holidays, we will be working on a new project as a follow up to the poster against homophobia which was launched last May. We want to offer training in the communities to demystify homosexuality and to give participants the chance to discuss it. We hope this training will help create more healthful and safer environments for gays and lesbians living in the communities.

In conclusion, I would like to offer my best wishes for 2011, filled with happiness, love and health. Collaborating with you on your projects always inspires and motivates me. Please continue to telephone and write me; together we form a great team!

Louise Tanguay

HIV/AIDS Program officer

THE CIRCLE OF HOPE NEWSLETTER

This NEWSLETTER aims to provide an information and communication platform to all the people affected by HIV and AIDS among the Quebec First Nations and Inuits. It also aims to provide an update on the FNQLHSSC HIV/AIDS-related projects. If you wish to subscribe to receive your free copy of the newsletter, or if you wish to publish a text, personal account or open letter, please contact the FNQLHSSC at 418 842-1540. The opinions expressed in this NEWSLETTER are those of the authors and do not necessarily reflect the official positions of the FNQLHSSC.



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Graphic design :
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UPDATE CONTRAINDICATIONS ON HORMONAL CONTRACEPTION

This is to inform you that an update of information on contraindication on hormonal contraception was made. You can view these changes online at the website of the Public Health Agency of Quebec at www.inspq.qc.ca/contraception

For all nurses, it is important to see changes to update your information. The concern communities also require an update of their collective prescription and evaluation forms, since they have also undergone changes.

Please note that training on hormonal contraception is available online at the same address for all nurses and students in technical and nursing.

For more information please contact Louise Tanguay, HIV/AIDS Program Officer, ltanguay@cssspnql.com or by phone at 418 842-1540 ext 223.

HIV/AIDS Symposium in Chambéry, France

Last September 22-23, a symposium was held in Chambéry, France by the Fédération Nationale d'Hébergements VIH et Autres Pathologies (France's federation of hospices for people living with AIDS and other disorders). Mr. Réal McKenzie, the Matimekosh Chief, and I were invited to give a presentation on the situation of Quebec First Nations with regard to HIV/AIDS. Our talk was given in the context of an international stream at the event. Representatives from Afghanistan, Guadeloupe and Costa Rica were also invited to the sessions.

Our presentation included two parts. First of all, Chief McKenzie provided an overview of the First Nations in Québec. He spoke of living conditions, the remoteness of the communities, employment, education, demography and several other subjects so as to increase their knowledge of Quebec First Nations. He spoke at length about young people and the challenges they will face in the future so that First Nations may have better living conditions.

For the second part, my presentation covered HIV/AIDS in Quebec First Nations communities. I talked of the current situation with regard to HIV/AIDS and STBBI, which are a good indicator of a population's sexual health. I also spoke of the factors that make First Nations more at risk of being infected by AIDS and the methods that communities and organizations are putting in place to reduce this risk. I presented the material that has been developed by the FNQLHSSC as part of the fight against HIV/AIDS program as well as the training and other activities that we offer for community workers. Finally, using a case study, I spoke of the realities of an HIV-positive person living in a community and obtaining the services and treatments needed.

The approximately 125 attendees were very interested to learn about the situation of Quebec First Nations regarding HIV/AIDS. The audience was quiet and attentive and we answered many highly pertinent and interesting questions after we finished our presentations.

Participating in this symposium gave Chief McKenzie and me a chance for discussion and sharing that we found very rewarding. Personally, I met many dynamic people who care deeply about improving living conditions for people living with HIV/AIDS, no matter where in the world they live. In many places, the challenges are the same as the ones we find in First Nations communities and these meetings gave us the opportunity to learn about new ways to deal with the subject and to shape the future.

Louise Tanguay, HIV/AIDS Program Officer



RÉAL MCKENZIE, MATIMEKOSH CHIEF



LOUISE TANGUAY, HIV/AIDS PROGRAM OFFICER

Training in the urban environment

Sexuality... Let's talk about it

This year, training sessions were held at the Cree Indian Centre of Chibougamau, the Val-d'Or Native Friendship Centre, as well as the one in Sept-Îles. The two workshops offered are an excellent opportunity for aboriginal youth to discuss and to share thoughts on different subjects related to sexuality, which are sometimes considered taboo and difficult to broach. It's also an opportunity for them to understand that there are several different types of sexually transmitted and blood-borne infections (STBBI) and realize that they don't know all the different means of transmission. In addition, they can learn about the different contraception methods that exist.

Being able to speak about romantic and sexual relationships with other people allows them to realize they are not the only ones to have questions and uneasiness when it comes to sexual behaviour. Another aspect that is covered which typically does not leave them unaffected is the violence that sometimes occurs in romantic relationships. Often, this starts by minor, trivial actions and they don't always realize that it is violence that they are being subjected to – or causing. However, the fact they are speaking about it brings some participants to self-examination, and who knows, perhaps allows them to better manage these situations.

Awareness building about HIV/AIDS and hepatitis C in prison

This training is offered to Aboriginal inmates in federal penitentiaries. It allows inmates to become familiar with the risks and consequences related to HIV/AIDS and hepatitis C and the different ways it is transmitted. At the same time they have the opportunity to ask different questions on the subject.

Adapting our work to Aboriginal realities

This training course is offered to people who work directly or indirectly with an Aboriginal clientèle, particularly in federal penitentiaries. It allows participants to better understand Aboriginal realities and to demystify them in order to reduce prejudice.

All these training sessions are available for free, simply contact Christine Sioui at 418-842-1540 or by email at this address: cgsioui@csspnl.com.

I look forward to meeting you at one of the training sessions.

Christine

Congress on HPV: Screening and Vaccination for World Health?

INTERVIEW WITH D^r MARC STEBEN

D^r Marc Steben is a medical advisor at the Institut national de la santé publique du Québec (INSPQ). He chaired the **26th International Conference on the Human Papilloma Virus (HPV)** held from July 3rd to 8th, 2010, in Montreal¹.



The goal of this event, which attracted more than 1,800 research scientists and specialists, was to present the scientific knowledge in this field to optimize the **screening** of this sexually transmitted infection (STI) – including through a **Pap test** – and by offering the **vaccine** to more people to better prevent this disease worldwide.

As a member of Merck Frosst's Science Council, Dr Steben first deals with the issues raised during the conference and then draws a **conclusion regarding the HPV vaccination program**, set up two years ago in Quebec².

Regarding the 26th International Conference on HPV...

PasseportSanté.net – What were the conference objectives?

D^r Marc Steben – Knowledge sharing to improve the world health status quickly and concretely. As an example, in his opening speech, the former UN special envoy for the HIV/AIDS situation in Africa, Stephen Lewis, denounced the fact that even though we all have the tools needed to fight HPV, this virus is scourging Africa. This suggests that the life of an African woman is worth less than that of a woman living in a developed country, which is unacceptable. It is time to stop investing solely in research and start taking action in the interest of world health. We must think about and decide on ways to make HPV screening and vaccination evolve, given the limited resources, the economic crisis, the fact that health professionals receive more general training (vs. specialized training) and the competition from other public health problems.

PasseportSanté.net – Who subsidizes this event?

D^r Steben – Pharmaceutical companies such as GlaxoSmithKline, MSD and Roche subsidize 45% of the conference. During the previous congress, held in Malmö, Sweden, no emerging country was represented because the absence of subsidizing pharmaceutical companies rendered the travel expenses too high. We wanted the Montreal conference to be accessible to research scientists from around the world. We must stress the fact that despite the grants awarded, we are totally free to decide on the content of the various conferences. We published studies from large databanks that allowed us to understand the HPV infection. Given the cost, we could not have published some fifteen scientific articles without the support of the pharmaceutical industry. To ensure that their money is spent in the best possible way, these companies should obviously look to work with people who have a vast amount of experience and who know where the problems and issues lie; however, this can be done in total independence.

PasseportSanté.net – Among the various studies presented during the congress, how many question the pertinence of massive HPV vaccination campaigns?

D^r Steben – None, despite the fact that there were no exclusion criteria. The HIV/AIDS situation has evolved tremendously because people with different ideas came to share them during the conventions. I am surprised that people from the media who claim to be experts on the subject do not attend these international conferences to share their knowledge. Science is created through a clash of ideas.

PasseportSanté.net – What will come from this conference?

D^r Steben – Political activism! After signing the Montreal declaration, we hope that the research scientists will commit to motivating their government to invest towards offering better screening and more accessibility to the vaccine to remote populations, both in developing and emerging countries. We will be able to draw a conclusion during the next convention to be held in Berlin (Germany), in 2011.

Regarding HPV infections and preventive vaccination

PasseportSanté.net – Which populations are most affected by HPV infections, in Quebec, and Canada?

D^r Steben – First, the situation affecting the Native population in Canada is similar to that of emerging countries. Also, within large cities like Montreal, there are people living on welfare, who are illiterate, do not adopt healthy life habits and are more prone to suffering from cervical cancer. This situation is unacceptable. The screening programs – the Pap test – and the HPV vaccine helped to dramatically reduce the

rate of infection, condylomae and cervical cancer but there is still so much that we should and must do.

PasseportSanté.net – What conclusion can be drawn from the implementation of Quebec's HPV vaccination program?

D^r Steben – Currently, 80% of girls are being vaccinated, which places Quebec among the best countries worldwide. That said, this result should not suffice. We must improve our cervical cancer screening strategy because strangely, we are still lagging behind on the global scale. An improved screening program, with new practices and guidelines, must be developed next year.

PasseportSanté.net – Do we have a reason to believe that this program was implemented too quickly, as some are saying?

D^r Steben – No. At the time, the 13 countries participating in the clinical trials and their ethical committees deemed that the data available proved the efficiency and safety of this vaccine. Since then, 80 million quadrivalent vaccine doses (efficient against four HPV strains) and 10 million bivalent vaccine doses (efficient against two strains) have been distributed. This means that approximately 30 million women have been vaccinated and no problems have been reported.

PasseportSanté.net – The vaccine is now offered to boys. Is this necessary?

D^r Steben – Once 80% of girls are vaccinated, there is no point in investing in the vaccination of boys as they are indirectly protected.

HPV and infection-related risks

HPV causes anogenital infections that disappear naturally in 90% of cases in less than two years. That said, these infections can cause the appearance of condylomae (genital warts). An infection that goes untreated for some time can lead to cervical cancer.

In Quebec, 325 cases of cervical cancer are reported yearly, a quarter of which are deadly. It is the 13th most popular cancer among Quebecers of all ages and the 2nd most popular among women aged 20 to 44.

In 2008, a vaccination program mainly targeting preadolescents was implemented in Quebec to prevent HPV infections and the risk of cervical cancer.

CATIE-News:

Bite-sized HIV/AIDS news bulletins

Routine HIV testing urged to speed entry to care in Canada and the U.S.

In North America, researchers estimate that about 21% of HIV-positive people are unaware that they have this infection. This is likely because rates of testing for HIV are generally low. People who are not aware that they are HIV positive can miss the benefits of early access to treatment. Indeed, receiving highly active antiretroviral therapy (HAART) relatively late in the course of HIV disease may be too late for some people.

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A giant grouping of many databases, called the North American Cohort Collaboration on Research and Design (NA-ACCORD), has been analyzing health-related information collected from HIV-positive people. Its most recent report focused on nearly 45,000 people and suggests that HIV-positive people are delaying the initiation of HAART until relatively late in the course of HIV infection. This has implications not only for the health and survival of HIV-positive people but also for costs to the health care system.

Study design

Researchers recruited adult participants from clinics in three Canadian provinces—Alberta, Ontario and Quebec—and from states across the U.S. The NA-ACCORD team focused on people who first sought care for HIV infection between January 1997 and December 2007. The average profile of these participants was as follows:

- 19% females, 81% males
- age – 41 years
- HIV risk group – gay and bisexual men 29%; injection drug users 19%; heterosexual 23%; other/unknown risk 28%
- CD4+ count – 288 cells

Results—changes in CD4+ counts

In 1997, the average CD4+ cell count of people who began HAART was 256 cells. By the end of 2007 this figure rose to 317 cells. Although this change appears promising, multiple treatment guidelines in the present era suggest the initiation of HAART when the CD4+ count has fallen below 350 cells, and in some cases at even higher cell counts, depending on co-infections and other complications.

Demographic changes

The HIV epidemic in North America has changed over time, having an impact on different communities. Although gay and bisexual men remain the largest group affected, other communities who have injection drug use or heterosexual sex as their main risk factor have become increasingly at risk for HIV infection. These latter categories include increasing numbers of women and people of colour.

According to the NA-ACCORD researchers, the results of their latest analysis have implications for HIV-positive people and the health care system as follows:

Survival

Delaying entry to care and treatment increases the risk of death from HIV-related complications. Results from several other large data sets suggest that when treatment begins at a CD4+ count of 350 cells or more, the risk of death is decreased. Modern anti-HIV treatments can greatly prolong survival, and early initiation of treatment would help take advantage of this.

HIV transmission

HAART can reduce HIV levels in the blood and sometimes in the genital fluids, potentially reducing the sexual infectiousness of some HIV-positive people at the level of the community (thousands of people). For more information about HAART and its potential impact on the spread of HIV in men, see CATIE News stories from March 25 and March 31, 2010, at www.catie.ca/catieneews.nsf/CATIE-NEWS.

Costs

Alberta-based researchers have documented that the average costs of care for HIV-positive people in the year following a late diagnosis (particularly when CD4+ counts are less than 200 cells) are more than double that of people who seek care when their immune systems are less damaged. As many provinces and states will be grappling with budget deficits in the years ahead, cost concerns are likely to play an increasing role in the rationing of health care.

What to do?

Research is needed to assess the reasons that some people at risk for HIV infection choose to not get tested and enter care later than they should.

One way to help more people become aware of their HIV status is to implement routine HIV testing in health care settings. The U.S. Centers for Disease Control and Prevention (CDC) has released guidelines recommending that all people between the ages of 13 and 64 years get routinely tested for HIV. The CDC has said that such testing should take place as long as patients are told in advance of testing and are given the option of refusing such testing.

This call for more extensive HIV testing in health care settings by the CDC and other health authorities is likely possible in urban areas, but because of concerns around confidentiality, not everyone in small communities or rural areas is likely to welcome routine testing.

In the pre-HAART era, when the benefit of treatment was very limited and drug toxicity was a major problem, the news of a positive HIV test result could be particularly devastating because of a very short life expectancy. Now that more effective, safer and simpler regimens are available and HIV-positive people are generally expected to live near-normal life spans, the NA-ACCORD report calls for the elimination of the following in health care settings:

- legal requirements for informed consent for HIV testing
- need for counseling before an HIV test is done

The NA-ACCORD's report will hopefully spur discussion and debate about the benefits of more extensive HIV testing and early treatment. In the years to come, such a debate will hopefully help overcome barriers to testing and accessing treatment.

Sean R. Hosein

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Source: CATIE – News, April 29, 2010 www.catie.ca

New UNAIDS OUTLOOK report 2010 launched

13 July 2010

Ahead of the XVIII International AIDS Conference to be held in Vienna from 18 – 23 July, UNAIDS has launched its OUTLOOK Report 2010 in Geneva.

Key findings:

The new UNAIDS Outlook report outlines a radically simplified HIV treatment platform called Treatment 2.0 that could decrease the number of AIDS-related deaths drastically and could also greatly reduce the number of new HIV infections. Evidence shows that new HIV infections among young people, in the 15 countries most affected by HIV, are dropping significantly as young people embrace safer sexual behaviours.

Also in the report, a sweeping new UNAIDS and Zogby International public opinion poll shows that nearly 30 years into the AIDS epidemic, region by region, countries continue to rank AIDS high on the list of the most important issues facing the world.

And an economic analysis makes the case for making health a necessity, not a luxury, outlining the critical need for donor countries to sustain AIDS investments and calling on richer developing countries to invest more in HIV and health.

Source: UNAIDS website: www.unaids.org



CATIE-News:

Bite-sized HIV/AIDS news bulletins

Doctors and patients—the need for better communication

In the early days of the AIDS epidemic, doctors focused on making sense of patients' lab test results along with signs and symptoms so that they could prevent and treat the inevitable life-threatening complications that were the hallmark of AIDS.

In the early days of the AIDS epidemic, doctors focused on making sense of patients' lab test results along with signs and symptoms so that they could prevent and treat the inevitable life-threatening complications that were the hallmark of AIDS.

The availability of highly active antiretroviral therapy (HAART) in 1996 transformed AIDS from an eventual death sentence into a chronic health condition that can be controlled by taking medicines every day. HAART's power is so profound that researchers expect that HIV-positive people who start treatment today will likely have near-normal life spans, particularly in high-income countries with their social-welfare systems.

Now, as we enter the fourth decade of the AIDS pandemic, most doctor-patient visits still revolve around laboratory testing and signs and symptoms. However, in high-income countries most visits deal with the intersection of one or more of the following themes:

- long-term complications of HIV infection, many of which may be related to ongoing inflammation
- aging-related issues
- co-infections and co-existing complications
- the physical, biological and psychological burden of having a chronic health condition
- medication-related side effects

The value of symptoms

Symptoms are critical when it comes to understanding how a person experiences illness. Symptoms, particularly if they are bothersome, can affect patients' adherence to treatment, may impair health-related quality of life and could be a signal of drug toxicity or some other problem.

Given that patients will be on anti-HIV therapy for many years, close attention to their symptoms is an essential part of monitoring for possible drug side effects. If symptoms become bothersome, it is possible that some patients may become frustrated and less adherent as they seek relief.

About Beahiv

Researchers across Canada conducted a study called the Behaviour and Attitudes study, or Beahiv. The main purpose of Beahiv was to compare agreement between patients and their doctors about the presence or absence of symptoms as reported by patients to their doctors at their most recent clinic visit. The survey was administered by the Ipos-Reid survey company and used a previously validated data-collection form.

The survey was done with each patient and his/her physician after a visit to one of 17 survey sites across Canada.

Patients were asked about 22 common symptoms that they might have had in the past month. They were also asked to rank the severity of symptoms. Doctors were asked about any symptoms their patients reported and to also rank the severity of symptoms.

About the doctors

The study team recruited 42 doctors—23 infectious disease specialists, 17 family physicians and two from other specialties.

On average, doctors had about 15 years of experience treating HIV-positive people and most had practices with more than 100 HIV-positive patients.

About the patients

The average profile of the 1,000 patients who participated in Beahiv was as follows:

- 12% females, 88% males
- age – 46 years
- CD4+ count – 504 cells
- 85% of patients were taking HAART
- 69% of patients had a viral load less than 50 copies/ml
- about 60% of people were taking HAART for more than five years
- 51% of people were taking their current regimen for at least three years

The ethno-racial composition of most participants was as follows:

- White – 73%
- Black – 8%
- Aboriginal – 7%
- Asian – 5%
- Hispanic – 4%

The birthplace of participants was as follows:

- North America – 78%
- Europe – 5%
- Africa – 5%
- Asia – 4%
- Caribbean – 4%
- Latin America – 4%

Key findings

- Patients reported between 30% and 76% of the individual symptoms that they were asked about.
- Between 8% and 35% of patients disclosed that their symptoms were bothersome.
- Doctors recognized bothersome symptoms in 0.2% to 11% of cases.

The greatest discordance, or disagreement, between doctors' and patients' reporting of symptoms was in the following areas: memory, sexual problems, intestinal bloating, pain or gas.

The area of least discordance between doctors and patients concerned gynecologic problems.

Why the differences?

Beahiv's findings are robust because there were more than 1,000 doctor-patient pairs. Unfortunately, the study team did not explore potential factors that could account for the differences in reporting patient symptoms.

The results of Beahiv and similar studies underscore an important issue for doctors and their patients:

- Enhanced communication between doctors and patients is needed.

In America

A recent American report on doctor-patient communication reached similar conclusions to Beahiv, suggesting that issues with doctor-patient communication transcend national boundaries. The American researchers involved in that study suggest that a standardized questionnaire or tool that doctors can use when interviewing patients about symptoms might help. Results from a pilot study in that country suggest that doctors became "very aware" of patient symptoms when the tool was used.

In the future

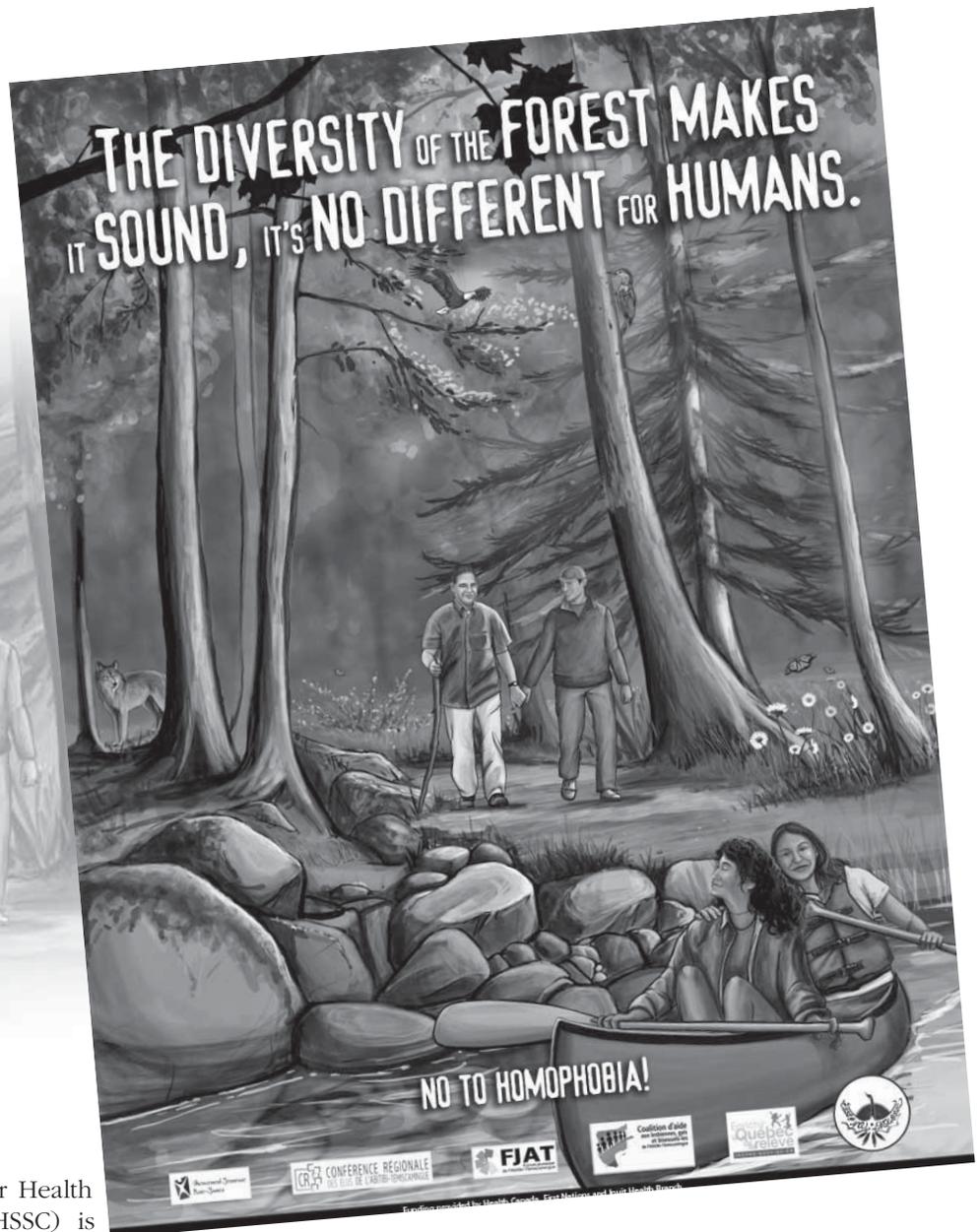
Beahiv may pave the way for further research to investigate communication between doctors and HIV-positive patients. In the long-term, such research could lead to improved care for patients and better utilization of and reduced costs to the health care system. Also, because understanding patients' symptoms is a critical part of care, the Beahiv study may point the way for similar research to understand doctor-patient communication in other health conditions, including cancer, cardiovascular disease, diabetes, liver complications and osteoporosis.

Sean R. Hosein

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Source: CATIE web site: www.catie.ca



The First Nations of Quebec and Labrador Health and Social Services Commission (FNQLHSSC) is pleased to present you with the new poster on the theme of homosexuality. This poster was developed in the framework of an inter-regional collaborative agreement that focuses on the health, wellness and quality of life of lesbians, gays and bisexuals. The organizations that are parties to this agreement are the following: the *Forum jeunesse de l'Abitibi-Témiscamingue*, the *Mouvement jeunesse Baie-James*, the *Conférence régionale des élus de l'Abitibi-Témiscamingue*, the *Coalition d'aide aux lesbiennes, gais et bisexuels-les de l'Abitibi-Témiscamingue* and the FNQLHSSC.

With the help of the message displayed on the poster, ***“The diversity of the forest makes it sound, it’s no different for humans”***, the targeted objective is to fight against homophobia in the Aboriginal communities. The poster illustrates the diversity of the forest and makes a connection between diversity in terms of relationships between individuals and the importance of each element in the natural balance.

Why fight against homophobia?

According to studies, the negative attitudes surrounding homosexuality stigmatize the individuals and accentuate the problems of a psychological nature, such as psychological distress, a higher suicide rate, greater vulnerability with respect to alcohol and drugs and an increased risk of being a victim of violence. These consequences can have an impact on the life of a person and could be avoided through the openness and support on behalf of the members of the community.

We would like to invite you to perform a gesture towards improving the life of lesbians, gays and bisexuals, by putting posters on display in the busy areas in your community.

To obtain posters, please contact the FNQLHSSC at (418) 842-1540.

News Items

Discovery Made by Two Montreal Research Scientists

A VACCINE TO REPLACE THE TRIPLE THERAPY

BY REINE CÔTÉ

Montreal doctors have made a major breakthrough in the AIDS research by developing a vaccine that could eventually replace the triple therapy for HIV carriers.

Montreal doctors have made a major breakthrough in the AIDS research by developing a vaccine that could eventually replace the triple therapy for HIV carriers.

The news was made public last Wednesday at the AIDS Vaccine 2009, in Paris, by Dr Jean-Pierre Routy, one of the partners of this discovery.

For Routy, who has also been an AIDS research scientist at the Centre de santé universitaire McGill since 1988, this is a true sign of hope.

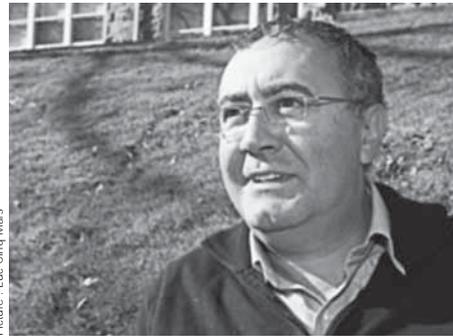
The vaccine is a customized immunotherapy developed from the virus of each carrier and the immune cells that have already been improved by the triple therapy. This formula, customized for each patient, helps cells fight off the HIV, thus preventing the virus from further damaging the immune system.

Dr Routy and his colleague from the Université de Montréal, Dr Rafick Sékaly, bet that by using the patient's virus in the vaccine meant for him, the body could become stronger and control the virus itself.

"The vaccine is customized for each person, like haute couture. Our approach is unique worldwide", insists Dr Routy.

Encouraging Results

For the past 14 months, 16 HIV carriers from Montreal tried the vaccine, with the approval of Health Canada, and the doctors are



Picture : Luc Cinq-Mars

DR JEAN-PIERRE ROUTY,
ONE OF THE PARTNERS
OF THIS DISCOVERY

satisfied with the results. Dr Routy even confessed to 24H that each patient's virus had diminished by 80%.

"Although these are preliminary results, they are encouraging", admits Dr Routy, adding that his patients were thus able to stop their triple therapy.

According to Dr Routy, he and his colleague, Sékaly, are the only research scientists to have thought of using such an approach.

"For now, this is still a long and costly experimental technique but we hope that it will eventually be a totally innovative and accessible treatment in the future."

A Costly Vaccine

More clinical trials need to be done before marketing the vaccine developed in the American laboratories of ARGOS Therapeutic. Each dosage could cost approximately \$50,000 and would have to be renewed periodically.

AIDS remains one of the deadliest infectious diseases on the planet. Two million people died from it in 2008 alone. In Montreal, 20,000 people are HIV positive.

Detecting HIV earlier: Advances in HIV testing

How soon after a potential exposure can someone know their HIV status? Well, it all depends on the type of test used. This article will take you on a tour of the different types of HIV tests available and will walk you through how long it takes for each test to tell you accurately if someone has HIV.

Since the early days of the HIV epidemic, HIV tests have improved considerably. We now have multiple methods to test for HIV infection, and today's testing technologies are getting better at detecting new infections. This has led some HIV testing experts to suggest that we can detect the vast majority of HIV infections much earlier than many people realize. This article will review the scientific evidence on the early detection of HIV to help guide our messaging about HIV testing.

Why is it valuable to detect HIV infections as early as possible?

There are two major reasons why it is valuable to detect an HIV infection as soon as possible after it has occurred:

1. Early detection is good for people getting tested for HIV.

HIV tests that provide an accurate result sooner after infection may significantly reduce the anxiety of "not knowing" that many people feel after they think they may have been exposed to HIV.

For those who test HIV-positive, testing early may give them a better sense of how and when they were exposed to HIV. It may also provide them with greater opportunities to access services and support that will help manage their health and well-being. Another distinct advantage of early diagnosis is that people can access anti-HIV treatment before their immune systems have been severely damaged, which can also improve their long-term health outcomes.

2. Early detection can help prevent new HIV infections.

Research demonstrates that almost half of new HIV infections may come from individuals who have been newly infected.¹ This may be because people who are newly infected have significantly higher levels of the virus in their blood and genital tracts, which may make HIV transmission more likely to occur.^{2,3,4,5} People who are newly infected are also more likely to be unaware of their HIV status. Diagnosing HIV infection early allows a person to make more informed decisions (such as practicing safer sex and using drugs in a safer way). Research shows that when aware of their status, most HIV-positive people do take steps to prevent HIV transmission.^{6,7,8,9}

Being able to detect new HIV infections earlier is not only beneficial to people seeking testing and to the service providers offering testing services, but may also play a significant role in preventing further transmission of HIV within the population.

The HIV antibody test

Once a person becomes infected with HIV, a number of steps must take place before an HIV antibody test can detect infection. First, the virus infects more and more cells in the person's body. The person's immune system then responds by producing HIV antibodies, which are proteins that circulate in the blood to try to fight the HIV infection. It is these antibodies that the HIV antibody test detects, NOT HIV itself. If there aren't enough antibodies created by the body when

the test is given, the result will be negative despite the person being infected with HIV.

In order for an HIV antibody test to detect an HIV infection, two conditions must be met:

1. HIV antibodies must be present in the person's blood.

The amount of time it takes for the immune system to create HIV antibodies after HIV infection varies based on genetics, how transmission occurred (e.g. sex vs. shared needles), the amount of virus the person was exposed to, whether they underwent post-exposure prophylaxis (when someone takes a combination of anti-HIV medications within 72 hours of exposure to reduce the chances of becoming infected), and numerous other factors. For more on PEP, see [Can we prevent infection with HIV after an exposure? The world of post-exposure prophylaxis \(PEP\)](#).

2. The HIV antibody test must be sensitive enough to detect the antibodies.

Newer testing technologies can now detect HIV antibodies when there are lower concentrations in the blood and hence are able to detect an HIV infection much sooner.

The “window period” refers to the maximum amount of time it may take for a person's body to create HIV antibodies after HIV infection. HIV antibodies must be present in order for the HIV antibody test to accurately detect HIV antibodies in someone's blood. If someone is “in the window period,” there is a chance that even though they may have been infected with HIV, the test won't be able to detect the infection and will give a negative result.

HIV antibody tests are the most widely used HIV tests. One of the main reasons they are so widely used is that once HIV antibodies are present in a person's blood, they will be there for the rest of that person's life (provided their immune system is functioning properly). This means that following the window period, an HIV antibody test will always give a positive result for someone who has been infected with HIV. This is important as many people are not diagnosed until several years after infection.

Older HIV antibody tests were significantly less able than newer tests to detect low levels of HIV antibodies in a person's blood, which is why in the past the window period was set at 6 months.

Across Canada, all labs use newer, more sensitive antibody tests (this includes rapid (point-of-care) HIV tests). For more on rapid HIV testing, see [A rapid approach to community-based HIV testing](#). Research shows us that with these new tests, as many as 95% of people who test positive will do so within 34 days of exposure to HIV.¹⁰ However, for the remaining 5%, the window period for these HIV antibody tests is generally accepted to be three months so as to ensure people who take longer to develop antibodies are not overlooked. This means that if someone tests negative for HIV antibodies during the window period, they should be re-tested three months after possible exposure, to fully rule out HIV infection.

There are some rare exceptions which may require someone to retest up to six months after exposure:

- People who have a severely impaired immune system may take longer to develop HIV antibodies.
- People who have taken post-exposure prophylaxis (PEP). This is a one-month course of anti-HIV drugs that, if started within 72 hours of potential exposure, may reduce the risk of HIV infection. If PEP does not successfully prevent HIV infection in someone, the presence of the PEP drugs may still reduce HIV replication until the drugs are finished. This may delay the time it takes for a person's body to create HIV antibodies. For more on PEP, see [Can we prevent infection with HIV after an exposure? The world of post-exposure prophylaxis \(PEP\)](#).

It should be noted that if someone tests positive with an antibody test, the result should always be confirmed using a Western blot test to rule out the possibility of a false-positive result.

Tests that directly detect HIV

There are a number of technologies that detect HIV itself. However, at this time, these tests are not offered uniformly throughout Canada or within provinces and territories. It is important to do some research and find out which testing

services are available for your clients to help ensure effective messaging for someone who thinks they have recently been exposed to HIV.

The two most commonly used tests that detect HIV directly are the p24 antigen test and the HIV nucleic acid amplification test (NAT).

The HIV p24 antigen test

The HIV p24 antigen test, the most widely available of the two, is designed to detect a protein (the p24 protein) associated with HIV. The p24 antigen test can detect the p24 protein on average 10 to 14 days after infection with HIV.^{2,3,11,12} One drawback of this test is that levels of the p24 protein peak at around three to four weeks after exposure to HIV and are usually not detectable after five to six weeks (and sometimes even earlier). A positive p24 test means that someone is HIV-positive. However, a negative p24 test can mean three things:

- the person is HIV-negative
- the person is HIV-positive but that the test could not detect the p24 protein because the person was infected more than four to six weeks earlier
- the levels of p24 antigen are too low to be detectable with current technologies.

Currently, the most advanced tests combine a p24 antigen test and an antibody test. While combination tests are available in some regions across Canada, they are not yet available everywhere. These tests are seen as beneficial because they combine the early detection abilities of the p24 antigen test with the accuracy of the newer antibody tests. It should be noted that a rapid (point-of-care) version of these tests is not yet available.

The HIV NAT test

The HIV NAT test is a very sensitive test designed to detect HIV RNA in blood. RNA is the viral equivalent to human DNA. The NAT test is able to detect HIV RNA as early as seven to 14 days after infection with HIV.^{2,3,11,12} Unlike the p24 test, the NAT test will always give a positive result as long as there is HIV in someone's blood.

NAT testing is currently being offered in six clinics in British Columbia as part of a five-year study called the Acute HIV

Infection Study (<http://www.acutehivstudy.com>). One of the objectives of this study is to investigate the impact of new testing technologies on gay men's testing practices.

When are p24 antigen tests and HIV NAT tests used?

In places where p24 antigen tests or HIV NAT tests are available, these tests are often used for individuals who have recently had a high-risk exposure and are either (a) in the three-month window period of the antibody test, or (b) experiencing symptoms of a new HIV infection (most often flu-like symptoms, including a fever, diarrhea, rash and/or sore throat). The p24 antigen test is also used when indeterminate results are obtained from an HIV antibody test (the test couldn't give a clear answer).

Seroconversion symptoms

It is also important to talk about the symptoms of seroconversion when we talk about testing. Educating clients about the symptoms of seroconversion may increase the likelihood that they will get tested if they experience symptoms. Seroconversion symptoms can occur from two to four weeks after infection and may include flu-like symptoms, such as fatigue, fever, sore throat, swollen lymph nodes, headache, loss of appetite or skin rash. This illness usually lasts less than two weeks although it can last as long as 10 weeks. If a client has had a recent high-risk encounter and experiences any of these symptoms, they should be encouraged to have an HIV test. Depending on the time since infection, the antibody test may not give an accurate result. However, if available, the p24 antigen test will be able to give an accurate result two to four weeks following infection and the NAT test will be accurate in as little as seven to 14 days after infection.

What does all this mean for front-line workers?

The early detection of HIV is important because people who are newly infected are very infectious and may inadvertently transmit HIV to others. There is still a lot of misunderstanding about how soon one should get tested after potential HIV exposure. Many people still believe they have to wait three months. However, new and improved testing technologies are continually decreasing the amount of time it takes for a new HIV infection to be detected.

In the case of clients at high risk of HIV, testing can be done as early as one month after exposure for standard antibody assays and rapid point-of-care tests. Clients who test positive will know for certain they are HIV-positive. Of those who test negative, 95% are in fact negative. It is important to realize that up to 5% of people who test negative at one month could later test positive at three months. It is important to ensure that people testing negative at one month are advised to return for repeat testing once the three-month window period is covered.

The p24 antigen test and the HIV NAT test could be used to test for HIV in people who think they were recently exposed to HIV. These tests are useful for people who think they have recently seroconverted. As these tests may not be readily available in all cities and towns across Canada, it may be useful to find out when and where these new and improved testing technologies will be offered in your area.

Par Len Tooley

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Quebec Guide for the Screening of Blood-Bourne and Sexually Transmitted Infections - Supplement – HIV Screening in the Service Points Using Basic Screening Kits



The document *Supplement – HIV Screening in the Service Points Using Basic Screening Kits* is a supplement to the *Quebec Guide for the Screening of Blood-Bourne and Sexually Transmitted Infections* and a reference tool for all health professionals who wish to integrate the use of basic screening kits in their HIV screening activities, wherever they practice, and for all those participating in the screening of blood-bourne and sexually transmitted infections including the offer for HIV screening using basic screening kits. It defines the standards of good practice in this field.

Appendices

Appendices I to XI present tools developed to support the service points and professionals. Some of them can be adapted to the needs of the community.

Appendix I: Adapted Pre-Test Counseling Record

Appendix II: Adapted Pre-Test Counseling Record – Non Reactive Results

Appendix III: Adapted Pre-Test Counseling Record – Reactive Results

Appendix IV: Resources

Appendix V: Report Templates

Appendix VI: Quality Assurance Program at a Glance

Appendix VII: Standardized Operating Procedure Template

Appendix VIII: HIV Screening at the Service Points Using Basic HIV Screening Kits – Logbook

Appendix IX: Quality Control – Logbook

Appendix X: Incident Report

Appendix XI: Temperature of the Room in Which Basic HIV Screening Kits are Kept

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You can read the guide on MSSS website at:

<http://www.msss.gouv.qc.ca/documentation/index.php>



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Our mission:

Improve the physical, mental, emotional and spiritual well being of First Nation and Inuits individuals, families and communities in respect of their local autonomy and culture. By helping the communities that wish to initiate, develop and promote comprehensive health & social programs and services as designed by First Nations and Inuits organizations recognized by our First Nations and Inuits.

The role of the FNQLHSSC is to assist Quebec and Labrador First Nations and Inuits communities and organizations in the defence, maintenance and the exercise of their inherent rights IN HEALTH AND SOCIAL SERVICES as well as to help them in the realization (delivery) and the development of THESE programs.

- 1 To ensure services shall be available to assist as requested by First Nations and Inuits communities and MEMBER organizations of the FNQLHSSC in exercising our inherent rights and autonomy to design and control health and social services delivery to members of our respective nations.
- 2 Upon request from First Nations and Inuits communities to promote SUCCESSFUL community models and to provide technical support to First Nations and Inuits organizations for health and social services innovative and traditional practices, research, development and training.
- 3 In respect of existing community practices and needs, to maintain AND IMPROVE communication and consultation with First Nations and Inuits communities and MEMBER organizations of THE FNQLHSSC in order to ensure that health and social services programs are adapted to our needs.
- 4 To promote, facilitate and support the exchange of information and ideas between First Nations and Inuits communities and MEMBER organizations of the FNQLHSSC on all aspects of health and social services development initiatives.
- 5 Upon request, to support and assist First Nations and Inuits communities and MEMBER organizations of the FNQLHSSC to ensure recognition of our full jurisdiction and/or authority over health and social services.
- 6 To support the development of capacity building within First Nations and Inuits communities and member organizations of the FNQLHSSC to be able to take on increased health and social services responsibilities at the community level.

You may, at any time, address your comments or suggestions concerning the NEWSLETTER's content at
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