Syphilis: Is Elimination an Option (in Alberta)?

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Medical Director, Alberta Health Services-Edmonton STI Clinic

"A night in the arms of Venus leads to a lifetime on Mercury"
Francisco Delgado
Conflicts of Interest

- None
Objectives

To describe:

- Epidemiology of syphilis in Alberta/Canada
- Evolution of the recent syphilis outbreak in Alberta
- Reflections on the elimination of syphilis in Alberta
Syphilis: etiology

- *Treponema pallidum subsp. pallidum*
- Spirochete
- Identical morphology, antigenic properties and DNA homology to other treponemes which cause yaws, endemic syphilis and pinta (non-sexually transmitted infections endemic to some countries)
Syphilis has been around forever…Famous syphilitics

Genius to madness: Famous (probable) syphilitics
James Joyce, Idi Amin, Al Capone and Lenin.

Ludwig van Beethoven

Christopher Columbus
Fortunately, so have STI Services in Alberta..

- Central STI Services – in place since 1930s
  - Various name changes including Venereal Disease Services, etc
- Syphilis – all stages- notifiable under Alberta’s Public Health Act
- If positive test in Alberta, case file retained until person 100 years old and then to Provincial Archives
- Provincial STI consultant/Medical Director for >30 years – Dr. Barbara Romanowski 1978-1998; myself 1998-2008; Dr. George Zahariadis (Acting) since 2008
Syphilis Epidemiology

- Worldwide distribution
- Historically - most common stage in Canada was late latent syphilis
- Health Canada set goals in 1996 to eliminate syphilis (rates < 0.5 per 100,000) from Canada.

PHAC, 1998
But in mid-1997,

- British Columbia reported an outbreak of syphilis, initially in heterosexuals and then among men who have sex with men (MSM)
Can Syphilis Be Eliminated In Canada?

A number of factors favour the possibility of syphilis elimination. The slow growth rate (division time 33h) and the long incubation period (10–90 days) provide sufficient time to identify recent sexual contacts, allowing preventive therapy before development of clinical diseases\(^{15}\). Cheap and effective therapy for treatment and transmission interruption is achievable with penicillin. For those who are allergic to penicillin, treatment trials with azithromycin are underway and preliminary results are encouraging\(^{16,17}\). Clinically significant antimicrobial resistance has not surfaced and there are no animal reservoirs.
Despite the decreasing incidence of syphilis in Canada, we have to sustain our control effort and be vigilant about the resurgence of syphilis, such as the current outbreak in British Columbia. Enhanced surveillance, screening, prevention, diagnosis and management programs must be developed to preventing such re-emergence in major cities, especially among the disenfranchised\textsuperscript{18}. We must improve our capacity to respond to outbreaks quickly at the regional, provincial, territorial and national levels.

As the number of domestic cases in Canada dwindles, imported syphilis will become increasingly important. More prevention efforts should be targeted at travellers and immigrants as an estimated 12 million syphilis cases occur worldwide\textsuperscript{19}.

Historically, only a handful of locally transmitted infectious diseases (eg. malaria, smallpox, polio) had been eliminated in Canada. A sexually transmitted disease has never been eliminated. We are at a crossroad. Syphilis elimination initiative would not only reduce the
Syphilis: Resurgence in Canada

Regional Outbreaks:

- Halifax: MSM
- Winnipeg: heterosexual
- Toronto: MSM
- Ottawa: MSM
- Montreal: MSM
- Calgary/Edmonton:
  - MSM/heterosexual
  - Congenital (2005)
- Yukon: heterosexual
- Vancouver:
  - 1997-2002: sex trade
  - 2003: sex trade and MSM
  - 2004: MSM
- NWT: heterosexual (2008)
Alberta: The setting…

**ALBERTA**

- Population 3,474,000 (Stats Canada 2007)
- >10% Canada’s population
- 4th largest province
- 2330 hours of sunshine
The great Alberta oil rush

By Peter Day
Presenter, BBC Radio 4 and BBC World Service

Canada is a modest and unassuming place when compared with its great big neighbour to the south. But now it has plenty to boast about: world-beating oil reserves in Alberta which are finally being brought into production after decades of talk.

Alberta is experiencing a huge and expensive oil rush, and Fort McMurray is at the centre of it.

The town is an old trapper post, with no road until the 1960s, though it had a railway. Fort McMurray's population is now a runaway 68,000, and climbing all the time.

Alberta's boom starts to rival China's; Province's growth seen as sustainable

September 15, 2006
The Globe and Mail
By HEATHER SCOFFIELD

Alberta is getting so rich that its boom-and-bust cycle could be a thing of the past, with forecasters saying even lower oil prices are unlikely to end its run of prosperity.

A new study by Statistics Canada shows that Alberta's economic boom is unprecedented in Canada, and has put the province's expansion in a league with China's.
Possible reasons for syphilis outbreak in Alberta

- Rise in unsafe sexual practices worldwide - complacency around HIV/STIs – manifested by worldwide increase in STI
- Influx temporary workers/visitors from other parts of country and other countries to Alberta due to economic boom
- More money (booming economy) = more drugs/alcohol/sex
Infectious Syphilis Cases in Alberta - Historical

Source: AHS STI Services
Reported Infectious Syphilis Rates in Alberta and Canada, 1994 to 2006

<table>
<thead>
<tr>
<th>Year</th>
<th>Canada Rate</th>
<th>Alberta Rate</th>
</tr>
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<tbody>
<tr>
<td>94</td>
<td>0.7</td>
<td>0.3</td>
</tr>
<tr>
<td>95</td>
<td>0.5</td>
<td>0.1</td>
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<tr>
<td>96</td>
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<tr>
<td>97</td>
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<tr>
<td>98</td>
<td>0.5</td>
<td>0.2</td>
</tr>
<tr>
<td>99</td>
<td>0.6</td>
<td>0.1</td>
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<tr>
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<td>0.6</td>
<td>0.5</td>
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<tr>
<td>01</td>
<td>0.9</td>
<td>0.8</td>
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<tr>
<td>02</td>
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<td>4.5</td>
</tr>
<tr>
<td>06</td>
<td>5.1</td>
<td>6.6</td>
</tr>
</tbody>
</table>

**Note:** Includes primary, secondary and early latent stages. National rates for 2005 and 2006 are preliminary.

**Source:** Surveillance and Epidemiology Section, Centre for Infectious Disease Prevention and Control, Public Health Agency of Canada 2006; [http://www.phac-aspc.gc.ca/std-mts/stdcases/casmts/index.html](http://www.phac-aspc.gc.ca/std-mts/stdcases/casmts/index.html) (April 30/07)

**Provided by:** Public Health Surveillance and Environmental Health Branch, AHW.
Note: Including primary, secondary and early latent stages of infectious syphilis.

Source: Communicable Disease Reporting System - Sexually Transmitted Disease (STD) Database as of April 30, 2007.
Provided by: Disease Control & Prevention and Public Health Surveillance and Environmental Health Branches, AHW.
Rates of Infectious Syphilis by Region, Alberta 2006 and 2000-2006 Combined

Note: Includes primary, secondary and early latent stages of syphilis.

Source: Communicable Disease Reporting System - Sexually Transmitted Disease (STD) Database as of April 30, 2007.

Provided by: Disease Control & Prevention and Public Health Surveillance and Environmental Health Branches, AHW.
SEX IN THE CITY

SEX, LUST AND LOVE ISSUE

NEWS: U PASS / 8 • FILM: SEXY MOVIES / 63 • MUSIC: REDDATION / 72
Syphilis Alert

Have you had oral, vaginal, or anal sex in a “one-night stand” or with a casual or anonymous partner?

If so, you may have contracted a sexually transmitted infection called Syphilis.

Your body may not show any signs or symptoms of the infection.

The Capital Health region is experiencing a syphilis outbreak. Contact a physician or the STD Centre at 413.5156 for testing and treatment.

STD Centre • 11111 Jasper Avenue • Edmonton, Alberta

For more information, call 1-800-772-2437.

Syphilis poster campaign
Edmonton downtown bars
Jan 24 – Feb 20, 2005
STD Clinic Visits in the CHA by Gender

Syphilis Alert posters displayed Jan. 24 to Feb. 20, 2005
RPR Tests performed by the Northern Alberta ProvLab by Gender

Syphilis Alert posters displayed Jan. 24 to Feb. 20, 2005

* Statistically significant increase in the number of RPR tests among males in the 3-months pre- and post-poster display (i.e., Jan and Feb); p=0.04
Syphilis by Sexual Preference in Alberta Region 3 and 6, 2003-2006 Combined

**Calgary Health (Region 3)**
- MSM, 56, 57%
- Bi, 4, 4%
- Unkn, 7, 7%
- Hetero, 32, 32%

**Capital Health (Region 6)**
- MSM, 24, 8%
- Bi, 13, 4%
- Unkn, 5, 2%
- Hetero, 267, 86%

**Note:** Includes primary, secondary and early latent stages of syphilis. MSM = men who have sex with men only; Bi = men who have sex with men and women; hetero = heterosexual

**Source:** Communicable Disease Reporting System - Sexually Transmitted Disease (STD) Database as of April 30, 2007. **Provided by:** Disease Control & Prevention and Public Health Surveillance and Environmental Health Branches, AHW.
Sex trade an important factor in early part of syphilis outbreak

2005 and 2006:
- Of 43 STW [~11% all 2005/6 cases], First Nations account for 70%. About 27% of First Nation STW are non- Albertans.
- Of 2006 cases, about 16% cases are STW and another 16% cases had sex with STW.
“Kate Quinn* works tirelessly to end street prostitution in Edmonton”
The Edmonton Journal, November 03, 2006

- “Edmonton …’ the Wal-Mart’ of the drug trade … one reason why prostitution is on the increase

- "In 2001, some 250 prostitutes on our streets… But then crystal meth began to creep in and it cheapened other drugs”

- "Today, we estimate the number of prostitutes has doubled to 500."

- “Before the recent resource boom, which has increased figures, Quinn and vice-squad detectives estimated some 10,000 men were cruising city streets looking for sex.”

*Executive Director, Prostitution Awareness and Action Foundation of Edmonton
Condoms distributed by inner city agencies/services to STW for oral sex
Maternal characteristics of mothers delivering infants with congenital syphilis in Alberta, 2005-6

Table 1: Characteristics of 9 mothers in Alberta who each delivered a baby (in 2005 or 2006) with early congenital syphilis

<table>
<thead>
<tr>
<th>Residence</th>
<th>No.</th>
<th>Marital status*</th>
<th>Age group</th>
<th>Sex trade worker</th>
<th>Syphilis test before delivery</th>
<th>Stage of maternal syphilis</th>
<th>Treated during pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edmonton</td>
<td>8</td>
<td>5 partnered</td>
<td>15-40</td>
<td>5 of 8</td>
<td>4 yes</td>
<td>5 primary</td>
<td>7 no</td>
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<td></td>
<td></td>
<td>3 unpartnered</td>
<td></td>
<td></td>
<td>4 no</td>
<td>3 secondary</td>
<td></td>
</tr>
<tr>
<td>Nonurban</td>
<td>1</td>
<td>Partnered</td>
<td>30-35</td>
<td>No</td>
<td>Yes</td>
<td>Primary</td>
<td>No</td>
</tr>
</tbody>
</table>

*Partnered = married or cohabiting (common-law), unpartnered = single or separated.
†Mother tested positive for syphilis 2 months before delivery but could not be located for treatment until the day of delivery.

Singh, A. E. et al. CMAJ 2007;177:33-36
Alberta congenital syphilis cases, 2005-6

- 4/9 cases: the mother did not obtain antenatal care before the onset of labour
- 1 case: the mother tested positive for syphilis but could not be located for several weeks.
- Remaining 4 cases: the mothers tested negative earlier in the pregnancy but acquired the infection later
2 babies with rash, hepatosplenomegaly, anemia diagnosed initially as juvenile myelomonocytic leukemia
In response to observation that many babies with congenital syphilis born to street involved pregnant women, outreach team of RNs and community health representatives (CHRs) formed in Edmonton.

Edmonton's inner city is an area that many of us read about, but never venture into. A walk through the Boyle McCauley area means confronting issues like homelessness, substance abuse, prostitution, crime and poverty.

Yet it's an area that health worker Tracy Pandich identifies with. It's a place where people need help, and she's there to help them.

"It's never the same," says Yellowknife. "The diversity is rewarding. Every day is different because of the range of clientele." Despite work...

Most people avoid Edmonton's inner city. But for these health workers, the streets are ripe with opportunities to help others.
March 9, 2007

Revised

Syphilis outbreak - cases continue to rise in Alberta

Province launches public awareness campaign to prevent future cases

Edmonton ... Albertans are being warned about the risks of sexually transmitted infections, due to a significant rise in the number of syphilis cases.

More than 200 cases of infectious syphilis were recorded in Alberta last year, an increase of almost 40 per cent from the previous year. The outbreak is widespread occurring in teenagers as young as 15 years of age as well senior citizens as old as 81. Also of concern are nine recorded cases of congenital syphilis, born with the infection, in the last two years.

"Syphilis is becoming a very serious problem in Alberta - with the number of cases increasing quickly," said Dr. Ameeta Singh, Infectious Diseases Medical Consultant with Alberta Health and Wellness. "The increasing number of babies being born with congenital syphilis is especially of concern as these children will have health problems and the situation could have been prevented."

The Alberta government is launching an awareness campaign this month to help stop the spread of syphilis and raise public awareness about this preventable disease. Alberta Health and Wellness is working closely with regional health authorities, nurses, and physicians throughout the province to remind all Albertans..."
Alberta won't buy in to syphilis ad campaign

Health Minister Ron Liepert will not support a provincewide syphilis awareness campaign because it might not reach the highest-risk Albertans, who "have to take more responsibility for their own personal health," he said.

BY THE CALGARY HERALD   AUGUST 15, 2008   BE THE FIRST TO POST A COMMENT

Health Minister Ron Liepert will not support a provincewide syphilis awareness campaign because it might not reach the highest-risk Albertans, who "have to take more responsibility for their own personal health," he said.

"You have to remember, 95 per cent of Albertans are not impacted by (syphilis). I'm not necessarily going to subscribe to a provincewide ad campaign that could be communicating more to senior citizens than it is to street workers," Liepert said Thursday after announcing a $36.5 million injection for the Mazankowski Heart Institute.

"Doesn't it make more sense to have a focused campaign -- which we're currently undertaking -- to address those in the high-risk category, than the 95 per cent who are not?"

Liepert's comments came a week after the Journal reported five babies died of congenital syphilis in Alberta since 2005.

After consultation with local agencies in Edmonton, project proposed using peers to reach street involved pregnant women

- But funding an issue:
  - Various provincial and regional agencies approached – unsuccessful
- So… approached Public Health Agency of Canada – funding provided through regional PHAC office

- Collaborative initiative [Women in Shadows project] which was conducted April 2008-March 2012 with Streetworks (Edmonton’s needle exchange program) and Outreach Team
Women in Shadows (WIS) project 2008-2010

- A WIS team (2 peer workers, a registered nurse, and family physician) together with an outreach team of the Edmonton STD clinic
- Recruited street involved women who were pregnant or believed they might be pregnant.
- Information collected included patient demographics, risk factors for STI and BBP, gestational age, referral to services, prenatal STI (done by WIS and other agencies/clinicians), birth outcome, infant status at birth.

Initial target: to reach 15 street involved women in inner city of Edmonton
Homeless and pregnant, women afraid to seek care

Think babies will be seized by Children's Services

Jodie Sinnema, The Edmonton Journal
Published: 9:18 am

EDMONTON - The office of Edmonton's needle-exchange program on some days looks like a prenatal clinic, with mothers taking naps, putting up swollen feet or waiting for rides to medical appointments.

For 28-year-old Bridgette Harding, the comfy, worn-out chairs are a lifesaver. She's homeless, eight months pregnant and a crack cocaine user staying at the Hope Mission. She would be wandering the streets from 7 a.m. until 8:30 p.m. without adequate medical care if not for a pilot project running out of the Streetworks office.

Using $95,000 from the Public Health Agency of Canada, a part-time nurse and two street-smart outreach workers find homeless, pregnant women. They help them get medical care and test them for syphilis to prevent the sexually transmitted disease from making their babies sick.

Since 2005, Alberta has seen 14 cases of congenital syphilis -- babies who acquired the infection in the womb. Five infants died and nine require long-term follow-up care. Most of the mothers didn't seek medical care, partly because they didn't trust the health-care system and were scared their babies would be seized by Children's Services.
WIS outcomes

- Prior to the start of the program: estimated that 15 street involved pregnant women would be reached during the first year.
- First year (April 1, 2008 and March 31, 2009):
  - 79 women accessed the services
  - median age 25 (range 16-39)
  - 78% were Aboriginal
  - 24% reported working in sex trade
  - 60% reported street drug use
  - A median of 4.5 (range 1-46) services were provided to each of the women
  - referrals for medical care, family programs, crisis intervention, housing, addictions and mental health, as well as provision of support, prenatal vitamins, milk coupons, and bus tickets.
Capital Health (Edmonton zone) response to syphilis outbreak, 2007

- Primarily targeting inner city/street involved
- Bus shelter posters in downtown/inner city Edmonton
- Distribution of condoms, coasters and posters to bars/inner city agencies/nightclubs
Capital Health: Incentive Testing

- $10.00 to get syphilis test and result – low profile, word of mouth, Edmonton STI Clinic/Boyle McCauley Public Health Outreach

- **April 2007 – November 2008 (20 months):**
  - 931 testing visits were completed on 877 individuals; 55% “new” clients to STI Clinic
  - 10 newly diagnosed infectious syphilis cases were found (6 cases among female sex workers and 2 cases among male sexual contacts of sex workers).
  - 83.8% through one of inner city agencies; 16.2% on street
  - 23.3% sex workers, 12.5% client of STW, 77.1% substance users, 51.3% aboriginal (categories not exclusive)
  - **68.2% return rate for test results**
  - 40 new HCV (+29 PP), 1 new HIV (+8 PP), 22 gonorrhea, 56 chlamydia

Source: Jen Gratrix, AHS, May 5, 2012
Calgary and FNIH response

- Calgary:
  - media campaign 2007
  - Internet – Dr. Read in chat rooms for MSM and youth

- First Nations and Inuit Health-
  development of educational materials –
  distributed to First Nations communities in Alberta
Serology: mainstay of testing for syphilis

Wasserman reaction: first non treponemal test for syphilis reported in 1906: used antigen refined from the liver extracts of neonates who had died from congenital syphilis
Prior to Sept 2007 in Alberta:

- RPR used as screening test for syphilis
- If “at risk” for syphilis, screen with RPR and TPPA
Rationale for change from RPR (Traditional algorithm) as screen

- RPR titers can be slow to rise in early acute syphilis (typically 21 days but up to 6 weeks) and can become non reactive in untreated late syphilis
- Chuck et al (Chuck, 2008) demonstrated that such a change was cost effective in Alberta [CE ratio of $461 per correct diagnosis]
- EIA automated reducing time and labor for screening
Global Recommendations for Syphilis Screening

- Since 1982, WHO has recommended that both a nontreponemal and treponemal test be used when screening for syphilis (WHO, 1982)
- UK guidelines recommend either using EIA or combination of VDRL and TPHA (Young, 2000; Egglestone, 2000)
- Other European guidelines recommend either EIA or TPPA as screen (French, 2009)
In Sept 2007, Alberta switched to syphilis EIA as screen (Reverse Sequence Syphilis Screening [RSSS])
The EIA measures IgM or IgG antibodies against *Treponema pallidum = SCREENING TEST*
- arise during the primary stage
- persist in most cases for the life of the patient.

RPR titre tends to parallel disease activity
- useful indicator of response to therapy by observing a fall in titres over time.
- to detect re-infection
- or treatment failure by observation of rising titres.

INNO-LIA measures antibodies to three recombinant *Treponema pallidum* antigens and one synthetic peptide antigen; = SUPPLEMENTARY TEST
Alberta experience

The decline of primary syphilis and rise of late latent syphilis cases after introduction of RSSS by testing volume by quarter, Edmonton, Canada, January 2004 to March 2009

Gratrix et al, Sex Transm Dis 2012
After implementation of RSSS in Edmonton

- No impact on new diagnoses of primary syphilis
- Proportion of LLS cases diagnosed doubled – greater than would be expected for increase in testing volumes
  - 81 (58.3%) cases would not have been identified by traditional algorithm; 18 cases in women of child bearing age
  - Majority of RPR NR LLS cases reported STI screening as reason for testing
- Limitations: majority in foreign born ? misclassified (non venereal trepanematoses)

Gratrix et al, Sex Transm Dis 2012
Alberta loses 4 top public health doctors over salaries

Alberta's health minister says money, and not the government's recent health-care reforms, is to blame for the departure of four of the province's top doctors.

"This is not speaking negatively of the doctors who chose to leave but there is a limit as to what the government of Alberta can pay for certain positions," Health Minister Ron Liepert said on Tuesday morning.

Dr. Karen Grimsrud, the acting provincial health officer, Dr. Gloria
Top doctor rejects health minister’s claims about job departures

Updated: Tue Jun. 10 2008 17:58:16

Amanda Ferguson, ctvedmonton.ca

One Alberta’s top doctors is contradicting Health Minister Ron Liepert’s claims about her controversial departure from her job.

Dr. Ameet Singh, an infectious disease medical consultant, is one of three senior public health doctors whose contract with the province is expiring at the end of August.

Dr. Karen Grimsrud, acting provincial health officer and Dr. Gloria Keays, deputy provincial health officer, are also not returning to their positions in the fall.

Health Minister Ron Liepert confirmed Tuesday that the three are leaving for better-paying opportunities elsewhere.

"All I’m saying is that there were other opportunities for these particular doctors they chose to pursue them just like any other professional," he said.

Yet Dr. Singh said she has not been offered any other job and has no other offers on the table.

"That is not the case," she said. "Maybe he’s not aware of the fact. It’s not all about money. It’s a combination of things."

Health policy expert John Church said the departures indicate a struggle between the top doctors and politicians over the direction of health care.
2008: Major restructuring in Alberta

- Creation of one provincial superboard: Alberta Health Services (AHS)
- Move of STI/TB Services from Alberta Health and Wellness (AHW) to AHS
- Uncertain roles and responsibilities of AHW/AHS
- BUT MOH reimbursed fairly and direct reporting of CMOH to Minister
Subsequent response to syphilis outbreak

- **May 2009:** Re-screening pregnant women at 2 time points in pregnancy (2nd trimester and at delivery)
  - low yield from 2nd trimester re-screen
  - 2nd trimester re-screen discontinued January 2011
- **2011:** Rapid/Point of care syphilis testing (research project Edmonton STI Clinic Outreach)
  - February to December, 2011: treponemal syphilis POC testing (Bioline Syphilis 3.0) using whole blood
  - 685 individuals offered POC testing; 81.5% (n=558) consented
  - Testing venues: inner city agencies, provincial correctional facilities and MSM sites (bath houses/bars).
  - 553 syphilis treponemal POC tests completed, two (0.4%) positive results were new infections (early latent and late latent) treated immediately at the time of POC testing
  - Another 16 (2.9%) positive POC tests cases were previously treated cases of syphilis. Two syphilis POC (0.4) tests were falsely negative
2011: Comprehensive strategy including hard-hitting campaign – primetime TV, radio, internet released..

Preliminary evaluation:
- 15% increase in STI clinic visits
- Increase in test volumes for syphilis and other STI/HIV with increase in cases/rates

Syphilis campaign (May 16-June 12 TV ads, Billboards; June 6-July 13 Plenty of Syph)
Alberta: Infectious Syphilis - Cases & Rates- by Year

Source: Karen Sutherland, AHS STI Services

Preliminary data 2011: 88 cases as of Jan 13, 2012
From 2005-2011, 30 congenital cases in Alberta, 11 deaths
• 22 in Edmonton with 6 deaths, last case Edmonton born March 2010

Source: Karen Sutherland, AHS STI Services ** = prelim data
Sexual Preference, Calgary & Edmonton - 2010

Source: Karen Sutherland, AHS STI Services
Albertans can’t trust Tories to reduce STI rates

May 24, 2011

Alberta's NDP Opposition leader Brian Mason says the PC government’s announced STI campaign is too little, too late for people infected since the Tories shut down a syphilis campaign in 2008.

“I called for an inquiry into the handling of the syphilis crisis back in December 2008. The PCs ignored that call, and since then many adults and babies have likely been infected. It’s undue and unnecessary suffering because the PCs delayed action,” says Mason. “What does this government say to people infected – and the parents of babies infected unnecessarily since 2008?”

Former health minister Ron Liepert admitted in November 2008 he shut down a syphilis awareness campaign without explanation. He told a legislature committee at the time that Albertans should “know who their partner is sleeping with.” In the months leading up to the admission, three top public health officials with Alberta Health and Wellness unexpectedly resigned. Dr. Stan Houston, an infectious disease expert at the University of Alberta, said at least one doctor left the system because of a “toxic environment” of ministerial interference.

http://albertandp.ca/news/details/albertans_cant_trust_tories_to_reduce_sti_rates
Alison Redford’s PCs win majority in Alberta election


Alberta’s economic boom is back
Province leads country in growth in 2011

### Possible to eliminate syphilis?

<table>
<thead>
<tr>
<th>Factors favouring syphilis control</th>
<th>Factors adversely affecting our ability to control syphilis</th>
</tr>
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</table>
| Slow growth rate and long incubation allow time allowing time to contact sexual partners | Inability to reach partners due to:  
  - Anonymous, casual partnering  
  - Sex trade  
  - Widespread use of internet to arrange sexual contact |
| Cheap and effective treatment with penicillin | Penicillin needs to be given by injection; cannot be given easily to those with serious allergy  
  Only effective single dose oral agent (azithromycin) has developed resistance |
| Political and public health support for prevention and control | Lack of commitment and sustained resources for prevention and control. Inability to respond promptly to resurgence. |
Reflections

- STIs have never been eliminated in Alberta/Canada but potential to reduce infectious syphilis rates to <0.5/100,000 and to eliminate congenital syphilis
- Global “condom/safer sex” fatigue
- More money (booming economy) = more drugs/alcohol/sex = more STIs
Acknowledgments

- Edmonton STI Clinic
  - Barb Anderson
  - Penny Parker
  - Josh Bergman
  - Jen Gratrix
  - Outreach team

- PHAC
  - Dr. Tom Wong
  - Gaya Jayaraman
  - Sabrina Plitt

- AHS STI Services
  - Karen Sutherland

- Calgary STI Clinic
  - Dr. Ron Read

- ProvLab (Alberta)
  - Previously Dr. Peter Tilley, Dr. Jutta Preiksaitis, Dr. Bonita Lee
Acknowledgments

- Dr. Barbara Romanowski
Acknowledgments

- My friends, colleagues and mentors in the Division of Infectious Disease University of Alberta especially the best Program Director a girl could ever hope to have…

Dr. Mark Joffe
"We want to tell people that, just like ice hockey or fencing, you don't have sex naked. You should wear a condom."

Roger Staub, Head of the Swiss Health Office’s AIDS prevention

Questions?