

# SEXUALLY TRANSMITTED INFECTIONS AND THEIR EFFECTS ON FERTILITY, PREGNANCY, AND THE NEWBORN

An Environmental Scan of Available Resources and a Preliminary Needs Assessment for Saskatchewan Health Care Providers

Report prepared by the Saskatchewan Prevention Institute
Sexually Transmitted Infections and Their Effects on Fertility, Pregnancy, and the Newborn:
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Saskatchewan Health Care Providers
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Sexually Transmitted Infections and Their Effects on Fertility, Pregnancy, and the

Newborn: An Environmental Scan of Available Resources and a Preliminary Needs

Assessment for Saskatchewan Health Care Providers

#### Introduction

Sexually transmitted infections (STIs) are spread through sexual contact. More specifically, STIs are transmitted through the exchange of body fluids (e.g., blood, semen) or by direct contact with an infected body area (Ochsendorf, 2008). While most STIs can be treated, some can only be controlled (i.e., some are not curable). If left untreated, STIs can lead to a number of long-term health problems including chronic hepatitis and cervical and other cancers. The effects of these infections can also impact fertility and the ability to have a healthy pregnancy and baby (Moodley & Sturm, 2000; Pellati et al., 2008). STIs during pregnancy can cause miscarriage, premature delivery, and uterine infection after delivery. STIs can also affect the newborn in a variety of ways, from minor infections to death (Coonrod et al, 2008; Moodley & Sturm, 2000). <sup>1</sup>

Individuals infected with STIs often do not have symptoms and may have an infection for several years before being diagnosed. One result of this lack of symptoms is a relatively low level of testing for STIs. In turn, low levels of testing result in low levels of treatment for STIs, which increases the chance of longer term effects. Research has indicated that a lack of knowledge and education about STIs and their effects (Quach & Librach, 2008) may be a contributing factor to low levels of testing and treatment.

<sup>&</sup>lt;sup>1</sup> The specific effects of different STIs on fertility, pregnancy, and the newborn are covered in a separate literature review available from the Saskatchewan Prevention Institute.

Because STIs can have such serious consequences on reproductive health, it is important that individuals have access to accurate information to help them make informed decisions. Information regarding the effects of STIs on fertility, pregnancy, and the newborn should be made available to all health care professionals who work with people of child-bearing age. This information should also be made available to the general public, particularly sexually active youth and young adults, who are of child rearing age and who may also have less information about STIs (Quach & Librach, 2008).

Providing this information is particularly important because of the fact that many STIs can be treated, thereby reducing their harmful impacts. Similarly, many of the effects STIs have on pregnancy and the newborn are preventable if the mother receives routine prenatal care, including STI screening early in pregnancy and again close to delivery. Education about the importance of testing and treatment for reducing the negative consequences of STIs may increase requests for testing and treatment. An increase in such requests may then lead to a reduction in the number of STI cases, the number of cases of infertility due to STIs, and the number of babies born with STI-related complications.

#### Report Contents

The current report presents the results of an environmental scan of available education resources focused on the effects of STIs<sup>2</sup>, and their impact on fertility, pregnancy, and the newborn, along with a preliminary assessment of the needs of health and allied health professionals in Saskatchewan for resources in this area. The report is presented in two sections. The first section focuses on Saskatchewan and outlines the types of STI and fertility/pregnancy

<sup>&</sup>lt;sup>2</sup> While it is recognized that HIV is an STI, and that cases of HIV infection are on the rise in Saskatchewan, the services and resources available for HIV are presented in a separate environmental scan available from the Saskatchewan Prevention Institute.

resources currently available and used in Saskatchewan, as well as the types of STI related resources that health care workers in Saskatchewan have expressed a need for. The second section focuses on resources developed outside of Saskatchewan, and details the results of a thorough online search for resources available nationally and internationally, including promising resource types (e.g., website and resource design templates).

#### Purpose of the Report

The environmental scan allows for the identification of existing, effective resources in an effort to prevent duplication of already created resources. The preliminary needs assessment identifies whether there is a perceived need for the creation of resources and, if so, what types of resources would be most useful. In this way, the current report will provide a basis for the adaptation and/or creation of education resources specific to STIs and reproductive health for both the public and health professionals. These resources will be disseminated throughout Saskatchewan and /or made available online, in order to provide education about the impact of STIs on fertility, pregnancy, and the newborn to the general public, health educators, and health professionals. In order to reduce reproduction-related complications due to STIs, the aim of these resources is to increase knowledge about the impact of STIs on reproductive health, with the goal of increasing the use of STI screening during the preconception period and during pregnancy.

#### Methods

The methods used differed between the scan and needs assessment conducted in Saskatchewan and the scan conducted outside of Saskatchewan. Therefore, the methods of each of these parts of the scan are described separately below.

Saskatchewan Environmental Scan and Needs Assessment

For the provincial scan, a preliminary internet search was performed to find Saskatchewan-

based resources that provided information and education specific to the impact of STIs on fertility, pregnancy, and the newborn. Keywords (sexually transmitted infections, sexually transmitted diseases, infertility, pregnancy, Saskatchewan) were entered into the search engine in various combinations.

In addition to the internet search, personal emails, telephone conversations, and visits to appropriate organizations were conducted. These latter methods produced the majority of the data collected provincially. Organizations contacted included provincial heath regions and health authorities, sexual health centres and clinics, physicians' offices providing prenatal care, new parent organizations, and First Nations Tribal Councils and health centers (see Appendix A for a complete list of organizations contacted). The snowball method was also used, such that individuals who were contacted were asked to provide names of people and/or organizations that may have additional information and resources. These people and/or organizations were then also contacted. In the end, at least one person from every health region was contacted.

An interview schedule was created in order to retrieve the necessary information from each person contacted. As can be seen below, both questions specific to the scan (i.e., current resources used) and questions assessing the needs of service providers (i.e., preferred resource formats) were used. Specifically, the interview schedule included the following questions:

- 1. What resources are currently being used to educate about STIs?
- 2. What resources are currently being used to educate about the impact of STIs on pregnancy, fertility and the newborn?
- 3. Are further resources wanted? If so, what format would be preferred? Would online information would be useful?

4. Do you know of additional people we may be able to contact that would be able to assist us with our project?

Additional questions were asked as needed for clarification.

National/International Environmental Scan

The internet was the sole source of information for this part of the environmental scan. Keywords (e.g., sexually transmitted infections, sexually transmitted diseases, fertility, infertility, pregnancy, newborn, resources, education, awareness campaigns) were entered into the search engine in various combinations. The snowball method was also used. Specifically, when another service or education provider was mentioned on an organization's website, then that specific organization was also searched for. The search continued until saturation was reached (i.e., when entering new combinations of search terms no longer returned new results).

# **Summary of Findings**

As was done for the Methods section, the findings will be discussed separately for Saskatchewan and the national/international scan. This is particularly important as the Saskatchewan scan included a preliminary needs assessment component that was not carried out for the national/international scan.

#### Saskatchewan

As previously mentioned, an internet search was first conducted to find Saskatchewan-based resources specific to the impact of STIs on fertility, pregnancy, and the newborn. This search revealed that Saskatchewan-based, online information resources focused specifically on these impacts is scarce. Although websites were located that provide general information about STIs, these websites only provide a brief mention of the impact of STIs on fertility and pregnancy. There was little to no mention of the impact of STIs on the newborn. While five such

websites were located when the search began in May 2010, only three Saskatchewan-based websites are available as of September 2010:

- Sexual Health Centre Saskatoon (www.sexualhealthcentresaskatoon.ca/par/infections .htm);
- Planned Parenthood Regina (www.plannedparenthoodregina.com/); and
- Government of Saskatchewan, Sexual Health section (www.health.gov.sk.ca/stiinformation).

Due to the scarcity of online materials, the majority of the information collected from Saskatchewan came from personal emails, telephone calls, and one-on-one conversations.

During the course of this contact, it soon became evident that Saskatchewan does not have a centralized system or approach to STI education. Instead, it appears that each health region and First Nations Tribal Council and health centre has developed its own approach to STI education. Although the highlights of this part of the environmental scan are discussed below, a detailed table of the approaches and resources used by each organization contacted can be found in Appendix B.

Resources currently used. When people were asked about the resources they currently use to educate about STIs in general, the majority of people stated that they use one-on-one education (84% of responses). Sixty-one percent of people contacted also provide educational brochures, while educational website recommendations are provided by 32% of people. Forty-three percent of those contacted stated that they provide school and community presentations as a way to educate the general public about STIs. Finally, a small number of those contacted (less than 1%) use DVDs and/or games to provide STI education. Other forms of STI education that were mentioned include guest speakers, resource binders, lesson plans, and resource kits created

by the Saskatoon Health Region.

Similar to the online search, information provided by those contacted suggests that resources specific to the impact of STIs on fertility, pregnancy, and the newborn are minimal in Saskatchewan. When this specific information is provided, it is generally done through one-on-one education (64%), and is generally only provided after a person has tested positive for an STI. Several health care providers and health educators indicated that they offer information specific to the impact of STIs on fertility and pregnancy during school presentations (22%), prenatal classes (9%), and community presentations (2%). Of those people using resources for education specific to the impact of STIs on fertility and pregnancy, 20% currently use brochures, while 9% refer clients to websites.

Need for further resources. When people were asked if further resources are needed, 95% of people indicated that educational resources specific to the effects of STIs on fertility, pregnancy, and the newborn are needed<sup>3</sup>. While the majority of those contacted (73%) stated that online resources would be preferable, others suggested that internet-based resources would be primarily beneficial for professionals. Those contacted suggested that other groups (e.g., at-risk populations, many target populations) often do not have access to the internet. Therefore, they indicated that they would like to have the information resources available online, which could then be downloaded and printed for clients and patients as needed. Importantly, it was stressed on several occasions that the developed resources need to be written in plain language, keeping low literacy levels in mind. Others also suggested that print resources should be in colour and include pictures and diagrams.

Several of the people contacted spontaneously discussed the audience that they believe

<sup>&</sup>lt;sup>3</sup> Only two (3.6%) of the people contacted indicated that additional resources are not needed. Both of these people suggested that there are a lot of excellent resources already available.

should be targeted by developed resources. While youth were the most commonly mentioned target group, other groups were also suggested, including: men/fathers, methadone and detoxification centres, pharmacists, and elders/grandparents. It was suggested that because elders and grandparents are often the teachers of reproductive health in First Nations communities, it is important to have resources designed specifically for their use.

When people were asked to provide additional information about their education needs about STIs and reproductive health, several different categories of responses arose. While the majority of suggestions and requests were about STI education in general, they are also applicable to education about the effects of STIs on fertility, pregnancy, and the newborn. The suggestions and requests made by people include:

- A downloadable PowerPoint presentation that could be used by health care and outreach service providers during school and community presentations.
- Information about current Saskatchewan statistics on STI rates and trends.
- The use of formats that may be accessed more often by students and youth (e.g., the school newspaper, on a Facebook banner).
- The creation of a video lending library.
- A list of questions for clients/patients to ask their health care providers, in order to initiate communication about their sexual and reproductive health.
- A checklist or questionnaire on STIs for health care professionals to use with all of their clients/patients, in an attempt to remove the fear and stigma around STIs.
- A list of agencies and/or experts to refer people to, especially pregnant women.
   In summary, although more information about the specific effects of STIs on fertility,
   pregnancy, and the newborn were viewed as important by the people contacted, these people also

highlighted the need for further resources about STIs in general. In addition to downloadable resources that can be printed for clients, a PowerPoint presentation that could be used for school and community presentations was seen as a particularly helpful resource.

#### National/International

Similar to the findings from Saskatchewan, the online national/international search revealed far fewer resources specific to the effects of STIs on fertility, pregnancy, and the newborn than those found about STIs in general. When specific resources were located, they generally fell into one of three categories: 1. resources focused on fertility (36.2%), 2. resources focused on pregnancy (10.6%), and 3. resources that discussed fertility, pregnancy and the newborn (53.2%). A list of the websites containing this information, along with a brief summary of each website, can be found in Appendix C.

Resources focused on fertility. Much of the information focused on the effects of STIs was located in the context of fertility and, more specifically, in the context of infertility. In other words, information about the potential impact of STIs was located on web pages designed for people who may already be experiencing the negative consequences of infection (i.e., infertility). The focus of this information tended to be on infertility due to pelvic inflammatory disease, of which STIs were listed as a major cause. Chlamydia and gonorrhoea were the STIs most commonly discussed in this context, with some mention also being made of syphilis. Other STIs were not usually discussed. Finally, the focus of the information in this category was on female infertility. The potential impact of STIs on male fertility was rarely discussed.

Resources focused on pregnancy. Although fewer in number than the resources focused on fertility, the available resources focused on the effects of STIs on pregnancy were much more detailed. Of the five websites focused on pregnancy, four provided extensive information about

the effects of each STI on pregnancy, including detailed information about appropriate treatment for STIs during pregnancy. In addition, the Canadian Federation for Sexual Health website includes a quiz with questions about STIs and pregnancy (www.cfsh.ca/files/PDF/STI\_Quiz \_Answers.pdf), and the United States Army Center for Health Promotion and Preventative Medicine website includes a PowerPoint presentation on the effects of STIs on pregnancy (http://chppm-www.apgea.army.mil/dhpw/Readiness/SexualHealthDuringPregnancy.ppt).

Resources focused on fertility, pregnancy, and the newborn. The majority of resources found provided some mention of the effects of STIs on fertility, pregnancy, and the newborn. The amount of information dedicated to each of these topics varied among the websites. Effects on fertility were mentioned most often, followed by effects on pregnancy. The potential effects on the newborn were the least likely to be discussed. When information about each of these potential effects was provided, it was most commonly included as a sub-section within more general information. Examples of applicable section headings included: what if I don't get treated; why does it matter; long-term effects; serious complications/consequences; and risk factors for infertility.

Although the majority of the websites listed in Appendix C only made small references to the effects of STIs on fertility, pregnancy, and the newborn, several websites did give these topics more attention. For example, the Centers for Disease Control and Prevention (www.cdc.gov/std/) provides many resources, including pamphlets, fact sheets, and separate webpages specific to the effects of a variety of STIs on fertility and pregnancy. The Sexuality and U website (www.sexualityandu.ca/adults/sti.aspx), which is administered by the Society of Obstetricians and Gynaecologists of Canada, also provides detailed information for youth, adults, parents, teachers, and health professionals. The information contained under each section is

tailored toward the intended audience. As well, the Center for Community-Based Health

Strategies website (www.neahin.org/resources/docs/STD\_overview.pdf) and the United Nations

Population Fund website (www.unfpa.org/ upload/lib\_pub\_file/362\_filename\_sti\_complete.pdf)

both present useful summary charts that include information about the effects of STIs on fertility,

pregnancy, and the newborn, along with information about symptoms and treatments. Finally,

STDResource.com (http://stdresource.com/) provides some of the most detailed information

about the effects of STIs on pregnancy and the newborn, as compared to many of the other

websites.

Resource formats. The majority of the information located during the national/international scan was located on web pages, in online information articles, and/or in reports; downloadable resources were much less common. Websites that did provide downloadable fact sheets, brochures, and/or pamphlets include the Centers for Disease Control and Prevention, the Government of Alberta Health and Wellness division, STD Awareness, and STD Resource.com. Of all of the resources located, the majority were directed toward health professionals, meaning that resources written in simple language were less common. Simple language was more likely to be found on websites directed toward youth (e.g., Better to Know – Yukon, Teen Source). The inclusion of a glossary of terms and frequently asked questions on some of the other websites made the information more accessible to a lay audience. The chart presentation of information used by two websites (Center for Community-Based Health Strategies and the United Nations Population Fund) was useful for providing information about several different STIs in one location, making this information more accessible. Other useful formats for providing information included videos, STI quizzes (e.g., true/false, myth vs. fact), slideshows, question and answer sections, and fast fact summaries.

#### **Discussion and Recommendations**

The results from the current environmental scan suggest that resources focused on the effects of STIs on fertility, pregnancy, and the newborn are both lacking and needed. This is particularly true in Saskatchewan, where very few resources are available and where the majority of health care professionals contacted (97%) stated that these resources are needed. It also appears that much of this specific information is currently being provided only after people have already been infected with an STI, either through one-on-one education or through websites dedicated to infertility. Therefore, it is unlikely that this information would be found by the general public, unless they are already struggling with the effects of STIs and/or infertility. It is also unlikely that youth would access this information through these venues.

Many of the health care professionals contacted in Saskatchewan stated that resources are particularly needed for youth. Research has shown that the majority of youth do not know that STIs can lead to infertility (Quach & Librach, 2008). Research has also shown that women who were educated about the potential impacts of STIs were more likely to have a lower STI risk profile (e.g., fewer sexual partners, fewer concurrent sexual relationships; Champion, 2007; Jensen, Shain, Holden, et al., 2006). These results suggest that resources should be available that educate people of reproductive age about the correlation between STIs and future fertility. Because of the potential negative impact of STIs on pregnancy and the newborn, women who are planning a pregnancy, or are already pregnant, should have access to both STI testing and accurate information about the effects of STIs.

Overall, the current environmental scan shows that there is a lack of resources that focus on the potential consequences of STIs on reproductive health that are suitable for youth and the general public. This is particularly true for downloadable and/or printable resources (e.g., fact

sheets, pamphlets, brochures). Although information about the effects of STIs is available on some websites, it is rarely the primary focus of the information (e.g., consists of one short paragraph). Further, the information is rarely presented in simple language.

Therefore, due to both the lack of existing resources and the expressed need of health care professionals in Saskatchewan, resources should be developed that focus specifically on the effects of STIs on fertility, pregnancy, and the newborn. (Refer to Appendix D for a list of websites with potentially helpful information for the creation of such resources.) Based on the requests of health care professionals in Saskatchewan, these resources should be made available online in such a way that they can be downloaded and printed for patients/clients. It was also requested that the resources use simple language, colour, and diagrams or pictures. Finally, several requests were made for downloadable PowerPoint presentations. The creation of such a presentation, which could be updated with relative ease, would ensure that accurate information is being shared in presentations. Because public health nurses in the Saskatoon Health Region will no longer provide presentations in schools (personal communication, August 2010), the creation of a presentation resource that can be used by teachers is particularly important.

The results of the current environmental scan suggest that resources specific to the effects of STIs on fertility, pregnancy, and the newborn would be welcomed and used by health care professionals in Saskatchewan. If created resources are accessed by health care professionals and are shared with clients, knowledge about the impact of STIs on reproductive health should increase in Saskatchewan. It is hoped that such an increase in knowledge will lead to a decrease in risky sexual behaviours and an increase in the use of STI screening during the preconception period and during pregnancy, thereby decreasing STI-related effects on reproductive health.

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# **Appendix A: List of Saskatchewan Contacts**

The following is a list of the individuals and organizations contacted in Saskatchewan during the information gathering portion of this scan.

# Ahtahkakoop First Nation, Shell Lake

• Laurie Dodwell - Public Health Nurse; phone: 306-468-2747

#### **Battleford Tribal Council, North Battleford**

- Heather Beatch Community Health Director; phone: 306-937-6700
- Diane Knox Public Health Nurse and Health Educator, Sexual Health Clinic & Battleford Tribal Council; phone: 306-937-6846

# Beardy's First Nation, Duck Lake

• Karen Campbell - Community Health Nurse; phone: 306-467-4402

# Big Island Lake First Nation Health Clinic, Pierceland

• Eunice Stevenot - Community Health Nurse; phone: 306-839-2330

#### **Cowessess First Nation, Cowessess**

• Cheryl Delorme - Maternal and Child Health Coordinator; phone: 306-696-2263

# Cypress Health Region, Shaunavon and Swift Current

• Rana Meinert - Community Health Nurse; phone: 306-778-5253

#### File Hills Qu'Apelle Tribal Council, Fort Qu'Appelle

• Karen Schmidt - Health Educator; phone: 306-332-2639; email: kschmidt@fhqtc.com

# Fishing Lake Tribal Council, Fishing Lake

• Judy Smith - Community Health Nurse; phone: 306-338-2680

# First Nations and Inuit Health, Saskatchewan Branch, Saskatoon

 Brett Low - Regional HIV/STI/BBP Coordinator for First Nations and Inuit Health Saskatchewan Region; phone: 306-934-3035

# Five Hills Health Region, Moose Jaw

- Wanda Campbell Public Health Nurse; phone: 306-694-0296
- Lynn Striha Teen Wellness Clinic Public Health Nurse; phone: 306-691-1506; email: Lynn.Striha@fhhr.ca

#### **Heartland Health Region, Rosetown**

• Mary Pat Fisher - Public Health Nurse, Heartland Health Region; phone: 306-882-6413

#### Keewatin Yatthé Health Authority, Buffalo Narrows

- Crystal Clarke Public Health Nurse; phone: 306-235-5813
- Pat Taylor Primary Care Nurse; phone: 306-235-5800

#### Kelsey Trail Health Region, Hudson Bay

• Margaret Rudychuk - Public Health Nurse Clinical Facilitator; phone: 306-865-2634; email: MRudy@kthr.sk.ca

# Mamawetan Churchill River Health Region, La Ronge

- Melanie Beal Public Health Nurse; phone: 306-425-8535; email: melanie.beal@mcrrha.sk.ca
- Carley Kostyshyn Public Health Nurse, Sandy Bay Health Center; phone: 306-754-5400
- Wendy McPhail Nurse Practitioner and Health Educator; phone: 306-425-4843

# Meadow Lake Tribal Council, Meadow Lake Flying Reserve

• Edna Rediron - Maternal and Child Health Coordinator; phone: 306-236-5817

#### Muskeg Lake First Nation, Muskeg Lake

• Kendra McKay - Community Health Nurse; phone: 306-466-4959

### **Onion Lake First Nation, Onion Lake**

Georgina Clements - Community Health Supervisor; phone: 306-344-2330

# Prairie North Health Region, North Battleford, Lloydminster, Meadow Lake

- Greg Gubee- Public Health Nurse, Sexual Health Center, North Battleford; phone: 306-446-6400
- Debbie Hubert- Public Health Nurse, Lloydminster; phone: 306-820-6213
- Merle Ramshaw Public Health Nurse, Meadow Lake; phone: 306-236-1570

#### **Prince Albert Grand Council, Prince Albert**

• Darlene Diebert - Child & Youth Wellness Development Coordinator; phone: 306-953-7248

# **Prince Albert Health Region, Prince Albert**

- Gloria Duchscherer Director, Clinical & Diagnostic Services, Prince Albert Cooperative Health Centre; phone: 306-953-6284
- Kathy Hunker Nurse Practitioner, Prince Albert Cooperative Health Centre; phone: 306-953-6464
- Pat Marshall, Reproductive Health Nurse, Sexual Health Centre 306-765-6540

#### **Additional Contacts in Prince Albert**

- Kathleen Gamble Office Administrator, Family Futures; phone: 306-763-0760
- Shirley Woods Nurse Epidemiologist, Northern Inter-Tribal Health Authority; phone: 306-953-0670

# Regina Qu'Appelle Health Region, Regina

- Barb Beaurivage Family Nurse Practitioner, Primary Health Care; email: Barb.Beaurivage@rqhealth.ca
- Dr. George Carson Department Head, Department of Obstetrics and Gynecology; phone: 306-766-4368
- Kara Johannson Public Health Nurse, STD Clinic, CD/Sexual Health Program; phone: 306-766-7793
- Gail Rosseker Manager, Maternal Newborn Care and Women's Health Center; email: gail.rosseker@rqhealth.ca
- Laurel Stang Public Health Nurse, Population & Public Health Services; phone: 306-766-7625

#### **Additional Contacts in Regina**

- Jill Arnott Director, University of Regina Women's Center; phone: 306-584-1255
- Jennifer Dickie Nurse, Planned Parenthood Regina; phone 306-522-0902
- Shawn Fraser Executive Director, Carmichael Outreach; phone: 306-757-2235
- Lori Lovas Director, AIDS Programs South Saskatchewan; phone: 306-924-8420
- Nicole Meyer Women's Health Center; phone: 306-766-4649

#### Saskatoon Health Region, Saskatoon

- Carmen Allen Street Outreach Program; email: Cameron.allen@sasktoonhealthregion.ca
- Pam deBruin Disease Control Nurse Clinician, Public Health Services; phone: 306-655-4643
- Diane Fehr Public Health Nurse, Rosthern Health Clinic; phone: 306-232-6001
- Theresa MacKinnon Public Health Nurse, Healthy Mother, Healthy Baby; phone: 306-655-4813
- Marliss Adams Public Health Nurse, Humboldt Public Health Office; phone: 306-682-1204
- Erin Schoenfeld Public Health Nurse, Sexual Health Program; phone: 306-655-4658
- Karina Basset Public Health Nurse, Sexual Health Clinic; phone: 306-655-4642

#### Additional Contacts in Saskatoon

- Karen Hart Nurse Practitioner & Healthy Mother, Healthy Baby Nurse, Nutana Collegiate; phone: 306-655-4565
- Russ Miskey Director, Egadz; phone: 306-931-6644; email: russ@egadz.ca
- Katie Scoular Sexual Health Nurse, Sexual Health Centre; phone: 306-244-7989
- Sheila Watts Nurse, University of Saskatchewan Student Health Center; phone: 306-966-5768
- Melissa Weinberger Case Manager, Bethany Home; phone: 306-244-6758

# **Sun Country Health Region, Weyburn**

- Janice Giroux Public Health Nurse; phone: 306-842-8652
- Lorraine Tremblay Communicable Disease and Immunization Coordinator; phone: 306-842-8627

# **Sunrise Health Region, Yorkton**

- Sandy Murray Public Health Nurse Supervisor; phone: 306-786-0600
- Dr. Melanie Press Women's Wellness Center, Yorkton; phone: 306-782-0665; email: melanice.press@shr.sk.ca
- Candace Wosminity Community Support Worker, Women's Wellness Center; phone: 306-786-0880

#### Additional contacts in Yorkton

 Amber Stromberg - Sexual Assault Community Education and AIDS Saskatoon Satellite Office Coordinator; email: strom2am@gmail.com

# Touchwood Agency Tribal Council, George Gordon First Nation, Punnichy

• Colleen Prisciak - Public Health Nurse; phone: 306-835-2020

# Appendix B: The Resources and Approaches currently used to Provide Education about STIs in Saskatchewan

Location and Individual (Job Title) Contacted	Resources used to educate about STIs	Resources used to educate about the impact of STIs on fertility/pregnancy/ newborn	Additional resources wanted	Preferred online format	Preferre d print format
Ahtahkakoop First Nation	n, Shell Lake				
Public Health Nurse	<ul> <li>1 on 1 education</li> <li>Brochures <sup>1, 2, 3</sup></li> </ul>	<ul><li>1 on 1 education</li><li>"Women &amp; HIV" brochure</li></ul>	X	X	X For clients
<b>Battleford Tribal Council</b>	/				
Public Health Nurse and Health Educator	<ul> <li>1 on 1 education</li> <li>Websites <sup>a, b, g</sup></li> <li>School presentations</li> <li>DVDs</li> <li>Created games</li> </ul>	• 1 on 1 education	X	X	
Beardy's First Nation Hea		ie .		I	l .
Community Health Nurse	<ul> <li>1 on 1 education</li> <li>Websites <sup>a, i</sup></li> <li>Brochures from First Nations and Inuit Health</li> </ul>	• 1 on 1 education	X	X	
Big Island Lake First Nat					T
Community Health Nurse	<ul><li>1 on 1 education</li><li>DVDs</li></ul>	<ul><li>School presentations</li><li>Prenatal classes</li></ul>	X	X	
Cowessess First Nation, C	Cowessess			1	l
Maternal and Child Health Coordinator  Cypress Health Region, S	<ul> <li>Brochures <sup>1</sup></li> <li>School/commun ity presentations</li> </ul>	Crumont	X		X
<u> </u>	• 1 on 1 education		X	X	X
T ubiic Healin Nurse	• 1 on 1 education	• 1 on 1 education	A	A	Λ
File Hills Qu'Appelle Trib	bal Council, Fort Qu'	Appelle		L	I
Health Educator	<ul><li>1 on 1 education</li><li>School presentations</li><li>Created games</li></ul>		X	X	
Fishing Lake Tribal Cour	· · · · · · · · · · · · · · · · · · ·				T
Community Health Nurse	<ul><li>1 on 1 education</li><li>Brochures</li></ul>	<ul><li>1 on 1 education</li><li>Prenatal classes</li></ul>	X	X For professionals	X For clients
First Nations and Indian	I			·	
Regional HIV/STI/BBP	<ul> <li>School presentations</li> <li>Developing a resource binder and tool kit</li> </ul>	<ul> <li>School presentations</li> <li>Developing a resource binder and tool kit</li> </ul>	X		

Location and Individual (Job Title) Contacted	Resources used to educate about STIs	Resources used to educate about the impact of STIs on fertility/pregnancy/newborn	Additional resources wanted	Preferred online format	Preferred print format
Five Hills Health Region,	Moose Jaw		•		1
Public Health Nurse	<ul><li>1 on 1 education</li><li>School presentations</li></ul>	• 1 on 1 education	X	X	
Teen Wellness Center Public Health Nurse	<ul> <li>1 on 1 education</li> <li>Brochures 1,2</li> <li>Websites</li> <li>School presentations</li> </ul>	<ul> <li>1 on 1 education</li> <li>Brochures<sup>2</sup></li> </ul>	X	X	
<b>Heartland Health Region</b>	, Rosetown				
Public Health Nurse	<ul><li>1 on 1 education</li><li>School presentations</li></ul>	<ul><li>1 on 1 education</li><li>School presentations</li></ul>	X		
Keewatin Yatthé Health A	Authority, Buffalo N	arrows			
Primary Care Nurse	<ul><li>1 on 1 education</li><li>Canadian Guidelines on STIs</li></ul>	• 1 on 1 education	X	X For professionals	
Public Health Nurse	• Brochures <sup>1, 3</sup>		X	X	
Kelsey Trail Health Region		I			
Public Health Nurse, Clinical Facilitator in consultation with other Public Health Nurses	1 on 1 education	• 1 on 1 education	X	X	
Mamawetan Churchill Ri	ver Health Region, l	La Ronge			
Public Health Nurse			X	X	
Public Health Nurse Sandy Bay Health Center	<ul> <li>1 on 1 education</li> <li>Brochures <sup>1</sup></li> <li>Website <sup>c</sup></li> </ul>	• 1 on 1 education	X	X Can be printed for clients	
Nurse Practitioner/ Health Educator	<ul> <li>1 on 1 education</li> <li>Websites b</li> <li>School presentations</li> </ul>	<ul><li>1 on 1 education</li><li>School presentations</li></ul>	X		X

Location and Individual (Job Title)	Resources used to educate	Resources used to educate about the impact of STIs on fertility/pregnancy/newborn	Additional resources	Preferred online format	Preferred print
Contacted  Meadow Lake Tribal Contacted	about STIs	wanted	format		
Maternal and Child	• 1 on 1	Prenatal classes	X		X
Health Coordinator	education • Brochures	Trendud classes			
Muskeg Lake First Natio	n, Muskeg Lake				
Community Health Nurse	• 1 on 1 education	• 1 on 1 education	X	X	X For at risk
	<ul> <li>Brochures <sup>1</sup></li> <li>Canadian Guidelines on</li> </ul>				populations
	STIs • Websites a, h				
Onion Lake First Nation	Onion Lake				•
Community Health Supervisor  Prairie North Health Reg Public Health Nurse, Sexual Health Center,	<ul> <li>1 on 1         education</li> <li>Brochures</li> <li>School and treatment center presentations</li> <li>North Battle</li> <li>1 on 1         education</li> </ul>	• Prenatal classes  ford, Lloydminster, Meadow • 1 on 1 education • School presentations	X / Lake X	X For professionals	X For clients
North Battleford	<ul> <li>Brochures <sup>1</sup></li> <li>Websites <sup>a</sup></li> <li>School presentations</li> </ul>	•			
Public Health Nurse, Lloydminster	<ul> <li>1 on 1         education</li> <li>Resources         from North         Battleford         Sexual Health         Center</li> </ul>	Use "Baby's Best Chance" resources with prenatal patients	X		
Public Health Nurse , Meadow Lake	<ul> <li>1 on 1</li> <li>education</li> <li>Brochures <sup>1</sup></li> </ul>	• 1 on 1 education	X		X
<b>Prince Albert Grand Cou</b>		t			
Child & Youth Wellness Development Coordinator	<ul> <li>1 on 1 education</li> <li>DVDs/Videos</li> <li>Brochures</li> <li>School presentations</li> </ul>	School presentations	X	X	

Location and Individual (Job Title) Contacted	Resources used to educate about STIs	Resources used to educate about the impact of STIs on fertility/pregnancy/newborn	Additional resources wanted	Preferred online format	Preferred print format
Prince Albert Health Reg	ion & other Prince		1		
Nurse Practitioner, Prince Albert Cooperative Health Center	<ul> <li>1 on 1         education</li> <li>Brochures <sup>1, 2, 3</sup></li> <li>Websites <sup>a</sup></li> <li>Resources from pharmaceutical companies</li> </ul>	<ul> <li>1 on 1 education</li> <li>Websites <sup>a</sup></li> </ul>	X	X	X For at risk populations
Reproductive Health Nurse, Sexual Health Centre	<ul> <li>1 on 1         education</li> <li>Brochures <sup>1, 2, 3</sup></li> <li>Outreach         services</li> <li>School         presentations</li> </ul>	• 1 on 1 education	X	X Can be printed for clients	
Office Administrator, Family Futures	• Fact sheets from Saskatchewan Prevention Institute	Fact sheets from     Saskatchewan Prevention     Institute	X	X Can be printed for clients	
Nurse Epidemiologist, Northern Inter-Tribal Health Authority	<ul><li>1 on 1 education</li><li>School presentations</li></ul>	1 on 1 education     School presentations	X		X
Regina Qu'Appelle Healt	_	1	G 1.1 .	I	_
Family Nurse Practitioner	<ul> <li>1 on 1         education</li> <li>Brochures¹</li> <li>SOGC         resources</li> <li>BMJ Point of         Care &amp;         Nursing         Reference         Center         resources</li> </ul>	<ul> <li>1 on 1 education</li> <li>Brochures<sup>1</sup></li> <li>SOGC resources</li> <li>BMJ Point of Care and Nursing Reference Center resources</li> </ul>	Stated that there are a large number of excellent resources already available.		
Head of Department of Obstetrics & Gynecology	<ul> <li>Brochures <sup>5</sup></li> <li>SOGC resources</li> <li>Websites <sup>a</sup></li> </ul>	<ul> <li>Brochures <sup>5</sup></li> <li>SOGC resources</li> <li>Websites <sup>a</sup></li> </ul>			
Public Health Nurse, STD Clinic, CD/Sexual Health Program	<ul> <li>1 on 1         education</li> <li>Brochures <sup>2</sup></li> <li>Outreach         services</li> <li>Developed         own client info         sheets</li> </ul>	1 on 1 education using Canadian Guidelines on STIs as a guide	X	X	

Location and Individual (Job Title) Contacted	Resources used to educate about STIs	Resources used to educate about the impact of STIs on fertility/pregnancy/newborn	Additional resources wanted	Preferred online format	Preferred print format
Regina, continued	2 2 2 2	2020110, p2 0g0, 7210 11 20 21 21 21 21 21 21 21 21 21 21 21 21 21	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	10111111	10111100
Manager Maternal Newborn Care & Women's Health Center, Regina General Hospital	• 1 on 1 education • Brochures <sup>1,4</sup>	<ul> <li>1 on 1 education</li> <li>Brochures<sup>1</sup></li> </ul>	X	X	
Director , University of Regina Women's Center	<ul><li>1 on 1 education</li><li>Brochures<sup>1,5</sup></li></ul>	Brochures <sup>1,5</sup> (some mention impact on fertility)	X	X	
Nurse, Planned Parenthood Regina	<ul> <li>1 on 1         education</li> <li>Brochures¹</li> <li>Websites a</li> <li>Nursing         students         created         pamphlets</li> <li>School/         community         presentations</li> </ul>	<ul> <li>1 on 1 education</li> <li>School presentations</li> </ul>	X	X	X
Executive Director, Carmichael Outreach	• 1 on 1 education • Posters	• 1 on 1 education	X		
Director, AIDs Programs South Saskatchewan	<ul><li>1 on 1 education</li><li>School/ community presentations</li></ul>	• School/ community presentations	X	X	X
Women's Health Center	• 1 on 1 education	• 1 on 1 education	X		X
Saskatoon Health Region	and other Saskatoo	n contacts			
Disease Control Nurse Clinician	<ul> <li>Compiled a resource binder of reproductive health best practices that fits with Saskatoon Public Schools health curriculum (includes brochures, DVDs and online sources)</li> <li>Created a two page document "STIs at a Glance"</li> </ul>	• 1 on 1 education • "STIs at a Glance"	X		

Location and Individual (Job Title) Contacted	Resources used to educate about STIs	Resources used to educate about the impact of STIs on fertility/pregnancy/newborn	Additional resources wanted	Preferred online format	Preferred print format
Saskatoon, continued  Public Health Nurse, Rosthern Health Clinic	<ul> <li>1 on 1         education</li> <li>Resource kits         created by SHR</li> <li>School         presentations</li> </ul>	<ul> <li>1 on 1 education</li> <li>School presentations</li> </ul>	X	X	
Public Health Nurse, Healthy Mothers, Healthy Babies	<ul> <li>1 on 1 education</li> <li>Brochures <sup>1,2</sup></li> <li>School presentations</li> </ul>	<ul><li>1 on 1 education</li><li>School presentations</li></ul>	X	X	
Public Health Nurse, Humboldt Public Health Office	<ul> <li>1 on 1 education</li> <li>Resource kits created by SHR</li> <li>School presentations</li> <li>Websites h</li> </ul>	<ul><li>1 on 1 education</li><li>School presentations</li></ul>	X	X	
Public Health Nurse, Sexual Health Program	<ul> <li>Created 3         resource         binders with         lesson plans for         grades 4-6, 7-8         and 9-12         (housed at         Public School         Board office)</li> <li>Resource kits         created by SHR</li> </ul>		X	X	
Public Health Nurse, Sexual Health Clinic	<ul> <li>1 on 1         education</li> <li>Brochures<sup>1,2,5</sup></li> <li>Resource kits         created by SHR</li> <li>School         presentations</li> <li>Websites <sup>a,h</sup></li> </ul>	<ul> <li>1 on 1 education</li> <li>Brochures<sup>1,2,5</sup></li> <li>Resource kits created by SHR</li> <li>School presentations</li> <li>Websites <sup>a,h</sup></li> </ul>	X	X	
Nurse Practitioner, Nutana Collegiate	<ul> <li>1 on 1 education</li> <li>Brochures <sup>2</sup></li> <li>School presentations</li> </ul>	• 1 on 1 education	Maybe		

Location and Individual (Job Title) Contacted	Resources used to educate about STIs	Resources used to educate about the impact of STIs on fertility/pregnancy/ newborn	Additional resources wanted	Preferred online format	Preferred print format
Saskatoon, continued			<b>T</b> 7	<b>X</b> 7	<b>T</b> 7
Director, Egadz Youth Center	<ul> <li>1 on 1 education</li> <li>Brochures <sup>5</sup></li> </ul>	1 on 1 education provided to teen moms at My Home program	X	X	X
Sexual Health Nurse, Sexual Health Centre	<ul> <li>1 on 1 education</li> <li>Brochures <sup>1,2,3</sup></li> </ul>	<ul> <li>1 on 1 education</li> <li>Brochures <sup>7,8</sup></li> </ul>	X	X	
	Websites a     Own website     (www.sexualhea     lthcentresaskato     on.ca/)	• Websites <sup>a</sup>			
Nurse, University of Saskatchewan Student Health Center	<ul> <li>1 on 1 education</li> <li>Brochures <sup>1,2,3</sup></li> <li>Created games</li> <li>Have awareness days that are advertised on campus</li> </ul>	<ul><li>1 on 1 education</li><li>Brochures 1</li></ul>	X	X	
Case Manager, Bethany Homes	Guest speakers		X	X For staff	X
Sun Country Health Regi	on, Weyburn				
Public Health Nurse	<ul><li>1 on 1 education</li><li>School presentations</li></ul>		X	X	
Communicable Disease & Immunization Coordinator	<ul> <li>1 on 1 education</li> <li>Brochures 1,2</li> <li>Canadian Guidelines on STIs</li> <li>Websites</li> <li>School presentations</li> </ul>	• 1 on 1 education	X	For professionals and schools	X For schools

Location and Individual (Job Title) Contacted	Resources used to educate about STIs	Resources used to educate about the impact of STIs on fertility/pregnancy/newborn	Additional resources wanted	Preferred online format	Preferred print format
Sunrise Health Region, Y		ial Yorkton contacts	V	v	v
Public Health Nurse Supervisor	<ul> <li>1 on 1 education</li> <li>School presentations (created kits)</li> <li>DVDs</li> </ul>		X	X For professionals	X For at risk populations
Physician, Women's Wellness Centre	<ul> <li>1 on 1         education</li> <li>Brochures<sup>1, 2,3</sup></li> <li>Lunch and         Learn sessions</li> <li>Public &amp;         school         presentations</li> <li>Websites <sup>a</sup></li> </ul>	Healthy Beginning Book	X		
Community Support Worker, Women's Wellness Centre	<ul> <li>1 on 1         education</li> <li>Brochures <sup>1, 2,3</sup></li> <li>Teen &amp; Youth         group         presentations</li> <li>School         presentations</li> <li>Teen Wellness         evening</li> <li>Websites <sup>a</sup></li> </ul>	• 1 on 1 education	X	X	
Community Sexual Assault Educator	<ul> <li>Brochures <sup>1, 2,3</sup></li> <li>Websites <sup>a, d</sup></li> <li>University online library databases</li> </ul>	• Websites a, d	X	X	
Touchwood Agency Triba Public Health Nurse George Gordon First Nation	Brochures	y	X	X	

# Appendix B Legend

Brochu	res used	Website	es recommended
1.	Ministry of Health Fact Sheets	a.	www.sexualityandu.ca
2.	STI brochure created by CATIE (often referred	b.	www.teachingsexualhealth.ca
	to as Public Health Agency of Canada brochure)	c.	www.cdc.gov
3.	CATIE brochures	d.	www.catie.ca
4.	Basic Facts about HIV & AIDs	e.	www.allnationshipe.ca/resources
5.	Planned Parenthood – Take Care Down There	f.	www.youthco.org/cms
		g.	www.intheknowpeel.ca/
		h.	www.phac-aspc.gc.ca/id-mi/az-index-eng.php#st
		i.	www.onehealth.ca

# Appendix C: List of National/International Websites Containing Information about the Effects of STIs on Fertility, Pregnancy, and/or the Newborn

# Websites focused on the Effects of STIs on Fertility

#### 1. About.com: Women's Health

(http://womenshealth.about.com/cs/stds/a/sextrandisfacts.htm)

- an article providing facts about STIs, including the effects on fertility

# 2. American Congress of Obstetricians and Gynaecologists

(www.acog.org/publications/patient\_education/bp077.cfm)

- pamphlet on pelvic inflammatory disease, which discusses the effects of STIs on fertility
- discusses the causes, long-term effects, risk factors, symptoms, diagnosis, treatment, and prevention of pelvic inflammatory disease. STIs are discussed as a common cause, with the focus being on gonorrhoea and chlamydia
- includes a useful glossary of terms

#### 3. **Better to Know – Yukon** (www.bettertoknow.yk.ca/stis)

- good website for youth, as it is colourful and uses plain language
- does not discuss the effects of STIs on pregnancy or the newborn, but does have some information about the effects on fertility
- also includes information on prevention, common STIs and their symptoms, getting tested and getting treated

# 4. Body and Health Canada

(http://bodyandhealth.canada.com/channel\_health\_features\_details.asp?health\_feature\_id =57&article\_id=102&channel\_id=2048&relation\_id=36904)

- focuses on infertility in terms of chlamydia and gonorrhoea
- discusses other STIs as well, but does not discuss their effects on fertility, pregnancy, or newborns

# **5.** Center for Young Women's Health (www.youngwomenshealth.org/)

- information about STIs is presented in the context of pelvic inflammatory disease (www.youngwomenshealth.org/pid.html). Information about STIs is not included under "General Reproductive Health"
- provides link to a video about PID (www.youtube.com/hopkinschildrens#p/u/4/1/GuXF 8vpujQ)

# **6. Fertility Community** (www.fertilitycommunity.com/fertility/future-fertility-play-now-pay-later.html)

- article entitled "Future Fertility: Play Now, Pay Later?"
- discusses the importance of protecting future fertility and the impact of STIs.
- uses simple language, targeted at youth

- 7. Fertility Expert (www.fertilityexpert.co.uk/SexuallyTransmittedInfections.html)
  - focuses on gonorrhoea, chlamydia, syphilis, and infertility
  - STIs are not a large focus of this website (e.g., no downloadable resources on STIs, no case studies referring to STIs)
  - STIs are not discussed as a cause under "Fertility Issues"
- **8. Getting Pregnant** (www.gettingpregnant.co.uk/stds.html)
  - discusses STIs in the context of female infertility; male infertility is not discussed in relation to STIs
  - includes some basic information about the main types of STIs
- **9.** How to Make a Family (www.howtomakeafamily.com/services/fc/std.htm)
  - useful disclaimer: "In no situation do we ever recommend that fertility diagnosis or treatment be undertaken without the oversight of a qualified medical practitioner. Please use the enclosed information as quick reference and for discussion aids with your practitioner."
  - tag line: "The best way to protect future fertility is by avoiding STIs altogether."
  - information focuses on both male and female infertility
- **10. International Planned Parenthood Federation** (www.ippf.org/en/Resources/Guidestoolkits/Infertility.htm)
  - STIs are only discussed in relation to infertility and pelvic inflammatory disease
  - provides tips for care providers about preventing the damaging effects of STIs on fertility (e.g., counsel about prevention, encourage testing and treatment)
- **11. Livestrong.com** (www.livestrong.com/article/12468-stds/)
  - discusses effects of STIs on fertility of women; no mention is made of effects on male fertility
  - also makes a brief mention of ectopic pregnancy being a complication of STIs
  - provides links to videos about ectopic pregnancy, cervical cancer, and infertility
  - also provides links to videos about STIs in general, specific STIs, and pelvic inflammatory disease
  - a related page (www.livestrong.com/article/13924-std-information/?\_f=mlt&\_d= d=2) includes important statistics about STIs
- 12. Newfoundland and Labrador Planned Parenthood (www.nlsexualhealthcentre.org/)
  - provides general information about STIs and provides links to downloadable and printable pamphlets. The pamphlets were created by the Newfoundland and Labrador Planned Parenthood. Information about the effects of STIs is located in the pamphlets under the heading "What happens if it is left undiagnosed?"
  - effects on fertility are only discussed in pamphlets on chlamydia and gonorrhoea

- **13. Planned Parenthood USA** (www.plannedparenthood.org/teen-talk/safer-sex-stds-25032.htm)
  - website is divided into Teen Talk, Tools for Parents, and Tools for Educators. Information on STIs is primarily found in Teen Talk. The other two sections provide more general information about sexual and reproductive health (e.g., Tools for Educators does not have any resources on STIs.)
  - Teen Talk section includes videos (e.g., HPV and you, condom demonstrations, etc.), Ask the Experts section, and clinic locator
  - each of the more common STIs has its own page, with specific Ask the Experts questions/answers. People can also pose their own questions.
  - although the effects on pregnancy and the newborn are not discussed, effects on fertility are briefly discussed under "Complications of Chlamydia." Effects on pregnancy are discussed briefly for gonorrhoea. These effects are not discussed for other STIs.
  - The website is not very user-friendly, in that if you want to get specific information about an STI, you have to click through several pages. Once you are on the specific page, you have to click each question (e.g., what is it, what are symptoms, is there treatment, etc.) to get the information.

# **14. Protect Your Fertility** (www.protectyourfertility.org/)

- contains information on their "Protect Your Fertility!" campaign. This campaign targets men and women in their twenties and early thirties to inform them that decisions they make now can impact their fertility later in life.
- very good website design with fast facts at the top, selection buttons along the side, and links to additional information
- includes public service announcements, posters, and brochures
- \* NOTE: Although this website was accessible in May and June of 2010, it is no longer available as of September 2010. The campaign was created by the American Society for Reproductive Medicine, which is a professional society representing the infertility industry. Other websites suggest that the campaign was controversial for this reason, which may be why the campaign is no longer available online.

#### **15. Shared Journey: Your Path to Fertility** (www.sharedjourney.com/define/std.html)

- includes information about STIs and fertility, along with more general information about STIs
- focuses on both male and female fertility

#### 16. The Body; The Complete HIV/AIDS Resource

(www.thebody.com/content/art2301.html)

- includes an STI summary table, which lists: the cause of the STI, if it is linked to cancer, if it is deadly, if it leads to infertility
- the only two STIs listed as resulting in infertility are chlamydia and gonorrhoea

# **17. Women's Health Zone** (www.womenhealthzone.com/womens-reproductive-health/know-more-about-stds-that-can-cause-infertility/)

- written in plain language that is directed to the audience

- although the information focuses primarily on the effects on fertility, mention is also made of STIs impacting the health of newborns
- includes an article 'Teens May not Know Risk Factors for Infertility' (www.womenhealthzone.com/womens-reproductive-health/infertility/teens-may-not-know-risk-factors-for-infertility/) highlighting the fact that youth are unaware of the effects of STIs on fertility

# Websites focused on Effects of STIs on Pregnancy

#### 1. About.com: Pregnancy and Childbirth

(http://pregnancy.about.com/od/sexuallytransmitt/STDs\_Pregnancy.htm)

- provides a list of links to information about the effects of different STIs on pregnancy. These are separate webpages, not fact sheets or printable resources.
- provides a link to an article providing extensive information on the effects of STIs on and during pregnancy (http://womenshealth.about.com/od/pregnancyrelatedissues/a/stdspregnancy.htm), along with detailed information about the consequences of STIs on the newborn
- provides a link to an information article on the effects of syphilis on pregnant women and infants (http://womenshealth.about.com/cs/pregnancy/a/syphinpregancy.htm)

#### 2. Canadian Federation for Sexual Health (www.cfsh.ca)

- has an STI quiz, with questions about pregnancy and fertility (www.cfsh.ca/files/PDF/STI\_Quiz\_Answers.pdf)
- has an information sheet on STIs (www.serc.mb.ca/content/dload/download.2008-07-04.4661189248/file), but it does not discuss effects on fertility or the newborn. Instead, contains one line about mothers being able to pass STIs to their babies.

# **3.** March of Dimes (www.marchofdimes.com/professionals/14332\_1226.asp)

- provides information about STIs and pregnancy, directed toward researchers and professionals
- has specific information about each STI, including how to deal with it and treat it during pregnancy

# 4. MedicineNet.com, Pregnancy: Sexually Transmitted Diseases

(www.medicinenet.com/sexually\_transmitted\_diseases\_and\_pregnancy\_stds/article.htm)

- includes detailed information about how various STIs can affect pregnancy, as well as information about treatment during pregnancy
- also includes information about symptoms, prevention, a glossary, and an index of STIs

# 5. United States Army Center for Health Promotion and Preventative Medicine

(http://chppm-www.apgea.army.mil/dhpw/Readiness/SexualHealthDuringPregnancy.ppt)

- PowerPoint presentation on the effects of STIs during pregnancy. Specifically, the slides list the STIs, their effects on pregnancy, and the treatment options during pregnancy.
- also presents information about sex before and after delivery

#### Websites focused on Effects on Fertility, Pregnancy, and the Newborn

- 1. American Social Health Association (www.ashastd.org/learn/learn\_overview.cfm)
  - has separate pages for each STI, including Fast Facts, Questions and Answers, and Support. The individual pages also include videos with people discussing the specific STI. The resources have been developed based on published studies.
  - information about fertility, pregnancy, and the newborn is found under the Question and Answer section of these pages
  - each specific page also has a built-in "was this information helpful for you?" button
  - a lot of additional information is provided about Herpes through the Herpes Resource Center (www.ashastd.org/herpes/herpes\_overview.cfm). This information focuses a lot on pregnancy, how herpes can be spread to an infant, and the effects of herpes on an infant.
  - also provides information about STI testing, statistics, and using a condom

# 2. AmplifyYourVoice.org

(www.amplifyyourvoice.org/main.cfm?actionId=globalShowStaticContent&screenKey=t abContent&htmlKey=issuessexuallytransmitteddiseaseshf&s=amplify)

- contains basic and easy to understand information about common STIs (description, "hangouts," transmission, treatment, prevention)
- contains small references to the effects on fertility, pregnancy, and the newborn
- includes a list of STI information hotlines

#### **3. Be Smart, Be Well** (www.besmartbewell.com/std/index.htm)

- provides information about STIs, symptoms, effects on fertility/pregnancy/newborn under "Why does it matter"
- has the following sections: what is it, why does it matter, what can I do about it, resources. There are corresponding videos and resources for each section. The majority of the resources are ones from the Centers for Disease Control and Prevention.
- includes people's videotaped stories, but the stories do not focus on fertility, pregnancy, or the newborn
- trademarked 3-part slogan "Habits2Have: 1. Keep it in perspective. 2. Recognize symptoms. 3. Get tested." More information is then provided under each of the habits, along with additional habits (e.g., talk to your healthcare provider, talk to your teens, be choosy)

# 4. Center for Community-Based Health Strategies

(www.neahin.org/resources/docs/STD\_overview.pdf)

- an STI overview chart which includes information on symptoms, treatment, possible side effects (effects on fertility, pregnancy, and the newborn are listed here), and US population trends as of 2000
- presents the important information in an accessible format

#### 5. Centers for Disease Control and Prevention (www.cdc.gov/std/)

- excellent website with many resources (fact sheets, pamphlets, courses, links to their campaigns)
- provides graphic slide shows of STI symptoms for clinical/educational use (PowerPoint format)
- has many fact sheets, including one on pregnancy and STIs (www.cdc.gov/std/pregnancy/STDs-and-pregnancy-fact-sheet.pdf). The focus is on contracting an STI during pregnancy, but it also has a lot of information about the impact of STIs on pregnancy and the newborn.
- in addition to the fact sheet, there is an 8 page, coloured pamphlet on STIs and pregnancy (www.cdcnpin.org/stdawareness/the-facts/english/07\_STDs\_preg\_revd.pdf).
- has a separate page dedicated to STIs and pregnancy, with information about effects on pregnancy and the newborn, treatment options, etc. (www.cdc.gov/std/pregnancy/STD Fact-Pregnancy.htm)
- also has a separate page dedicated to STIs and fertility with links to the following fact sheets: chlamydia, gonorrhoea, pelvic inflammatory disease, and STIs and pregnancy (www.cdc.gov/std/infertility/default.htm)
- has separate fact sheets on STIs. Information about the effects on fertility is listed under "What happens if I don't get treated?" This information is presented separately for men and women.
- the chlamydia fact sheet includes information about infertility, effects on pregnancy and effects on the newborn (www.cdc.gov/std/chlamydia/ChlamydiaFactSheet-lowres-2010.pdf)
- provides access to numerous resources (picture cards, curriculums, presentations), clinical courses, and a course for non-clinicians called "STD Overview for Non-Clinicians Online" (www.cdc.gov/std/training/Non-cliniciansSTDs.pdf)

# **6. Communicable Disease Control Branch** (www.dh.sa.gov.au/pehs/ygw/chlamydia-pehs-sahealth-2009.pdf)

- a fact sheet on chlamydia, including the effects of chlamydia on men, women, and infants
- includes information about infertility for both sexes

# 7. Epigee Health and Fitness (www.epigee.org/guide/stds.html)

- discusses the link between STIs and infertility through pelvic inflammatory disease
- provides basic information on the main page, and then has links to more in-depth information on the side (e.g., About, Symptoms, Testing, etc.)
- discusses effects on fertility, pregnancy, and the newborn, but only for chlamydia and gonorrhoea
- because the website contains so many ads and sponsored links, it is very difficult to navigate

# **8. Family Health International** (www.fhi.org/en/topics/sti.htm)

- includes information about effects on fertility, pregnancy, and the newborn. The information on pregnancy and the newborn is sparse, included as bullet points under "Serious Consequences."

- has an HIV Counselling and Testing for Youth Manual (www.fhi.org/NR/rdonlyres /ej65tihwf67rqvrols2jthyz6iabvzjuywyyidw5tueto4dtrigqyf4ijbs6s62dirobbjnnil4odj/You thVCTmanualch24.pdf). This manual includes information about helping young people learn about STI prevention.

# **9. Government of Alberta, Health and Wellness** (www.health.alberta.ca/health-info/STI-STD.html)

- contains basic information about STIs, along with links to resources on other websites (e.g., Government of Alberta, Public Health Agency of Canada, and CATIE)
- includes specific information about certain STIs, with a section "Are there special concerns for pregnant women?"
- provides an STI Teaching Outline and Resource Guide. The teaching guide includes student learning activities (true/false STI quiz, dot game to show STI transmission, role plays, case studies), a resource guide (government services, community resources, audiovisual, print resources, websites), and a glossary
- includes a low literacy pamphlet that briefly discusses fertility, pregnancy, and the newborn (www.health.alberta.ca/documents/STI-Keep-healthy-and-learn.pdf)

# **10. Infertility Awareness Association of Canada** (www.iaac.ca/content/sexually-transmitted-diseases-stds-and-infertility)

- an article which contains a description of each STI, along with a description of the effects on fertility, pregnancy, and the newborn

# **11. MayoClinic.com** (www.mayoclinic.com/health/sexually-transmitted-diseases-stds/DS01123)

- well laid-out website with tabs along the left which include: definition, symptoms, causes, risk factors, complications, preparing for your appointment, tests and diagnosis, treatment and drugs, coping and support, prevention
- tabs along the top include: basics, in-depth, multimedia, expert answers, expert blog, resources, what's new
- has separate pages for the most common STIs (chlamydia, syphilis, genital warts, gonorrhoea, herpes, trichomoniasis), related links, and references. Information about infertility, effects on pregnancy and the newborn is found on each STI's specific page, under "Complications."
- some information about STIs and infertility under the Fertility section, under "Risk Factors"

# 12. MedicineNet.Com, Sexually Transmitted Diseases in Women

(www.medicinenet.com/sexually transmitted diseases stds in women/article.htm)

- an article providing information about the most common STIs, including what they are, their symptoms, diagnosis, and treatment
- includes information about the effects on fertility, pregnancy, and the newborn

#### **13. Peel Public Health** (www.peelregion.ca/health/sexuality/sti/)

- although the consequences of STIs (infertility, effects on pregnancy and the newborn) are not a focus of this website, it does state that permanent damage can result if STIs are left untreated
- also states that STIs can be passed from mother to baby during pregnancy, at the time of delivery, and through breastfeeding

# **14. Public Health Agency of Canada** (www.phac-aspc.gc.ca/index-eng.php)

- contains information on STIs under "Disease Profile" (www.phac-aspc.gc.ca/tmp-pmv/info/std-eng.php)
- briefly mentions the effects on fertility, pregnancy, and the newborn
- specific information about each STI is then provided on a separate page

# **15. Sexuality and You** (www.sexualityandu.ca/adults/sti.aspx)

- This website is administered by the Society of Obstetricians and Gynaecologists of Canada (SOGC), and is designed to provide credible and up-to-date information and education on sexual health.
- excellent website design, with sections for youth, adults, parents, teachers, and health professionals. The information under each section is similar, but is targeted in language (and sometimes content) to the audience (e.g., more technical information is included under "Health Professionals").
- has a lot of catchy phrases (e.g., Spread the word, not the disease)
- has a section called "Hear Our Stories." The stories are all told by youth and cover three different STIs (1. HPV/genital warts, 2. gonorrhoea, 3. male case of HPV). The stories discuss STI prevention in a youth-friendly way, but they do not talk about the effects on fertility, pregnancy, and the neonate.
- each page has a list of Fast Facts, which summarizes: what it is, symptoms, how it's spread, treatment, possible consequences, prevention

#### **16. STD Awareness** (www.cdcnpin.com/stdawareness/index.htm)

- very well laid-out website. The index is on the side, with a checkmark indicating the page you are currently on.
- provides free-to-order brochures with basic STI information presented in plain language (the brochures are created by the Centers for Disease Control and Prevention), including information on the effects of STIs on fertility, pregnancy, and the newborn. This information is presented separately for males and females.
- also has a pamphlet on STIs and pregnancy. The information is not very detailed, but it does state that STIs can be passed to baby, that women should be tested, and how to lower the risk of contracting STIs during pregnancy
- provides a list of publications and reports, which are more technical

#### **17. STD Resource.com** (http://stdresource.com/)

- website was developed and is maintained by the British Columbia Centre for Disease Control
- slogan "Sex can be one of life's great pleasures, especially when you know the facts and can make choices to protect yourself."

- well-organized site with the following tabs: Concerns and Risks, STDs/STIs (symptom checker and descriptions), Staying Safe, Special Interest, STI Clinic Locations, FAQs, and Misconceptions
- provides more in-depth information than the majority of websites provide
- each STI has a separate page with the following information: what it is, how you get it, symptoms, treatment, what if you don't get treated, how common, what testing involves (men and women), effects on pregnancy (for chlamydia, hepatitis b, hepatitis c, syphilis, herpes), related conditions, whether it is reportable, and links. These pages provide some of the most specific information about effects during pregnancy and on the newborn, compared to the majority of other websites.
- some of the specific information pages provide links to pelvic inflammatory disease. This information focuses primarily on infertility.
- also has a brochure "What we all need to know about STIs" (http://stdresource.com/brochures/pdfs/STI\_english\_20100323.pdf). This brochure contains basic STI facts, stated plainly. Also mentions that there can be effects on fertility, pregnancy, and the newborn.

# **18. Student Sexuality Information Service** (http://people.brandeis.edu/~ssis/sti/index.html)

- provides straightforward, plain language information about STIs
- has a listing of STIs, which can be clicked to get further information. Each detailed page has: male/female symptoms, how it is transmitted, what may happen if you don't get treated (the effects on fertility, pregnancy, and the newborn are discussed here) where to get tested, and whether it is treatable.

### **19. Suite101.com** (http://infertility.suite101.com/article.cfm/sexually\_transmitted\_infection)

- an article on the impact of STIs on fertility, pregnancy, and the newborn. Headline:
- "How sexually transmitted infections are damaging people's fertility and affecting the health of babies. How you can protect yourself."
- focuses on the effects of chlamydia, gonorrhoea, and syphilis
- provides the information in a very straightforward way

#### **20. Teachingsexualhealth.ca** (www.teachingsexualhealth.ca)

- has sections for parents, teachers, and students
- Parent section has fact sheets for each STI, including some information on the effects on fertility, pregnancy, and the newborn.
- Teacher section includes resources, instructional methods (e.g., role play and how to facilitate that to educate about sexual health), and a teacher's lounge section (contains a lot of useful information for teachers, e.g., how to deal with difficult questions).
- Student section provides links to other resources (many of which are not written in plain language), and an "Ask a Question" option.
- includes a 40 page booklet on STIs (www.health.alberta.ca/documents/sex-prevent-STD-STI.pdf), and a list of regional agencies and the services they offer

#### **21. Teen Source** (www.teensource.org/pages/3002/STDs.htm)

- completely focused on and targeted toward the teenage population. The information is presented in a simple and factual way, while also being very interactive.
- breaks the STIs into curable vs. incurable
- presents the following information for each STI: Symptoms, Long-term Effects, Treatment
- effects on fertility (male and female), pregnancy, and the newborn are briefly discussed under long-term effects
- has a question and answer section

# **21. Terrence Higgins Trust** (www.tht.org.uk/informationresources/otherstis/)

- well-designed webpage, with all the STIs listed on the main page, along with the most important information pertaining to each STI. You then click to get further information.
- information on the effects of STIs on fertility and pregnancy is included under `why get treated.` This information is only included under chlamydia and gonorrhoea. No information is provided about effects on the newborn.
- slogan "there's nothing sexy about sexually transmitted infections"

# 22. United Nations Population Fund

(www.unfpa.org/upload/lib\_pub\_file/362\_filename\_sti\_complete.pdf)

- 28 page booklet entitled "Sexually Transmitted Infections: Breaking the Cycle of Transmission"
- contains a chart of the most common STIs, their symptoms, complications and treatment. The listed complications include those pertaining to fertility, pregnancy, and the newborn.
- although the language used is generally technical/professional, the chart provides a very useful summary

# 23. U.S. Department of Health and Human Services, Office on Women's Health

(www.womenshealth.gov/faq/sexually-transmitted-infections.pdf)

- a pamphlet of frequently asked questions about STIs, including information about their effects on pregnant women and newborns
- provides more detailed information about the effects on the newborn than the majority of other websites
- also provides information about the effect of STIs on breastfeeding

# **24. World Health Organization** (www.who.int/mediacentre/factsheets/fs110/en/)

- provides in-depth information about the effects of STIs on fertility, pregnancy, and the newborn
- effects on pregnancy and the newborn are discussed further in (http://whqlibdoc.who.int/publications/2007/9789241595858\_eng.pdf)
- the language used tends to be less simple than that used on other websites

# **25. Yale Medical Group** (www.yalemedicalgroup.org/stw/Page.asp?PageID=STW000935)

- an article on chlamydia's link to infertility
- also includes a short section on the effects on pregnancy and the newborn

# Appendix D: List of Potentially Helpful Websites for the Creation of Resources Related to STIs

#### 1. Advocates for Youth

(www.advocatesforyouth.org/index.php?option=com\_content&task=view&id=478&Item id=177)

- a selected list of sources and materials designed to help non-profit organizations create public education campaigns to prevent pregnancy, HIV, and sexually transmitted infections among youth
- resources are divided into 1) organizations and web sites; and 2) print materials. Print materials are further divided into those focused on creating a campaign, garnering publicity, and working with the media.

# **2. Engender Health** (www.engenderhealth.org/pubs/courses/index.php)

- offers online, self-instructional courses for health care providers, supervisors, students, and trainers. Each self-instructional course is divided into different modules, each of which includes interactive exercises and quizzes, case studies, as well as educational materials that can be printed for use in health-care programs. Each course can also be downloaded for offline use, and the sexual and reproductive health courses can also be ordered on CD-ROM.
- one of the mini-courses in Reproductive Health is on STIs
- NOTE: The mini-course on STIs is currently unavailable as it is being updated.

# **3. National Coalition of STD Directors** (www.ncsddc.org/upload/wysiwg/documents/IG-FINAL.pdf)

- outlines promising practices for using the internet for STI prevention
- provides guidance for developing internet-based programs for partner notification, outreach, and health communication

# **4. Public Health Agency of Canada** (http://www.phac-aspc.gc.ca/index-eng.php)

- includes information focused on educating parents so that they are better able to discuss sexual health with their children. Program is called "Talk to Me Sexuality Education for Parents" (www.phac-aspc.gc.ca/publicat/ttm-pm/sti-eng.php). Content of the program and examples are provided.
- also has a self-learning module for medical professionals to "enhance their knowledge and skills regarding STI screening and diagnosis, management and treatment, partner notification and prevention measures" (www.phac-aspc.gc.ca/slm-maa/index-eng.php). Provides a series of cases as well as a clinical slide gallery.

#### 5. Rural Center for AIDS/STD Prevention

- tips for creating HIV/STI education messages for adolescents (www.indiana.edu/~aids/factsheets/factsheets6.html
- provides information about behaviour change models for reducing HIV/STI risk (www.indiana.edu/~aids/factsheets/factsheets3.html)
- tips for evaluating HIV/STI education programs (www.indiana.edu/~aids/factsheets/factsheets4.html)

#### **6. Sex etc.** (www.sexetc.org)

- a well-designed website focused on youth
- the glossary feature (difficult words are bolded and can be clicked to get the definition) is very helpful
- includes personal stories, forums, polls, frequently asked questions, and links to other resources
- the quizzes are an interesting way to address common myths and to present information that people may not know

# **7. Sexualityandu.ca, Health Professionals** (www.sexualityandu.ca/professionals/sti-5.aspx)

- provides suggestions to physicians for teaching their patients about STIs. The focus is on female patients, including those who have been abused. It summarises recent research about the important aspects of STI counselling that clinicians can use to identify at-risk patients and affect positive changes.

# 8. The Republic of Uganda, Ministry of Health

(http://aim.jsi.com/Docs/sti\_training\_manual.pdf)

- a training manual for trainers of health workers, including a section on community education around STIs

#### 9. World Health Organization, Sexual and Reproductive Health

(www.who.int/reproductivehealth/topics/rtis/evidence/en/index.html)

- provides guidelines for care for STIs (e.g., essential care, practice, management, and inservice training modules for STI management workers)
- information is directed toward service providers and health care professionals

#### 10. World Health Organization, Regional Office for the Western Pacific

(www.wpro.who.int/internet/resources.ashx/HSI/docs/STI\_Briefing\_Kit\_for\_Teachers\_2 001.pdf)

- publication titled "Sexually transmitted infections: a briefing kit for teachers"
- a resource designed for educators who work with young people, in order to provide them with accurate information on STIs and their consequences, as a first step toward prevention
- contains key information on STIs, as well as suggestions for providing STI education.