

Primary Care and Sexually Transmitted Infections

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PRIMARY CARE AND SEXUALLY TRANSMITTED INFECTIONS

Prevention, Diagnosis and Clinical Management of Sexually Transmitted Infections in the Primary Care Setting

It is important for practitioners to recognize that sexually transmitted infection (STI) risks will vary from person to person and should be viewed as dynamic across the lifespan.

- Only through proper assessment can a patient's risk for STIs be identified.
- Assumptions and inferences about patient STI risk may prove inaccurate.
- Sexually inactive individuals can be made aware of STI risks in the course of routine care.

Primary care providers can incorporate STI primary and secondary prevention in the course of routine patient care by doing the following:

- Assessing and discussing STI risk.
- Informing patients about signs and symptoms of STIs (and lack thereof).
- Helping patients recognize and minimize STI risk.
- Offering patient-centred counselling.
- Offering hepatitis A (HAV) and B (HBV) immunization when indicated.
- Offering STI screening and testing.
- Appropriately treating, following up and counselling infected patients and their partners.

This chapter provides an overview of best practices for the prevention and clinical management of STIs in primary care settings. It includes recommendations for the assessment, counselling, screening, diagnosis and management of STIs, including partner notification and public health reporting.

Effective prevention and management of STIs requires the following elements on the part of the health care practitioner:

1. Assessing the reason for a consultation.
2. Knowing about STI risk factors and epidemiology.
3. Performing a brief patient history and STI risk assessment.
4. Providing patient-centred education and counselling.
5. Performing a physical examination.
6. Selecting appropriate screening/testing.
7. Diagnosing by syndrome or by organism and post-test counselling.
8. Treating.
9. Reporting to public health and partner notification.
10. Managing co-morbidity and associated risks.
11. Following up.

Each of these elements is outlined in more detail below.

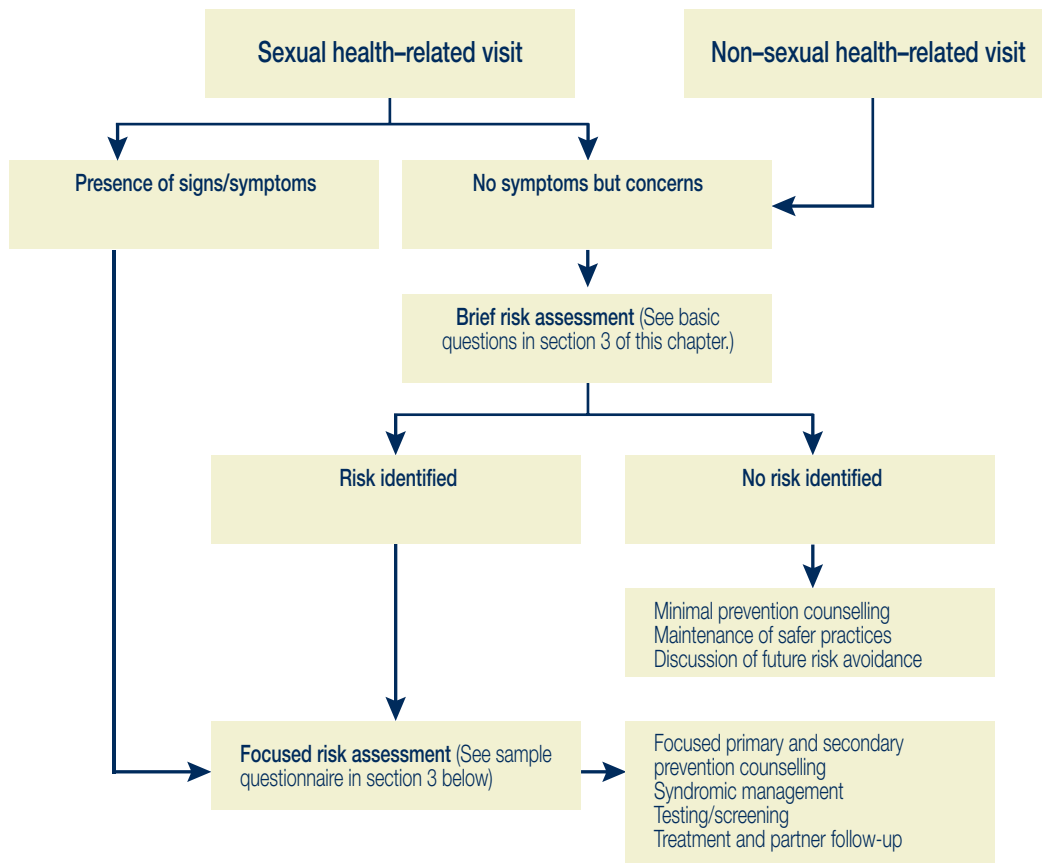
1. Assessing the Reason for a Consultation

Patients may seek medical attention for issues unrelated to sexual health, but they may be at risk for STIs and benefit from interventions to address identified risk factors. For example, consultation for contraception often has implications for STI prevention counselling and STI screening; management of contraception and management of STI risk are closely related.

When patients present for contraceptive advice, it can be an ideal time to assess and discuss STI risk. The type of STI risk a patient may encounter also has implications for appropriate contraceptive choice.

In some cases, patients may consult to inquire about signs or symptoms related to a possible STI, to request STI testing or to discuss prevention issues. Identifying a person who has STI concerns, who is at risk for an STI or who has an STI provides an opportunity for discussing barriers to risk reduction and means to overcome them.

Figure 1. STI risk assessment in primary care settings



2. Knowing about STI Risk Factors and Epidemiology

Identifying the index of suspicion of STI infection in a patient requires the health care practitioner to understand the epidemiologic trends of STIs, as well as the risk factors associated with STI transmission and infection.

Summarized in Table 1 are the key epidemiologic trends for bacterial and viral STIs in Canada, as well as patient risk factors for STIs.

Table 1. Epidemiology of STIs in Canada

Infection	How common in clinical practice?	Trends in incidence	Most affected
Chlamydia	<ul style="list-style-type: none"> • Most commonly diagnosed and reported bacterial STI • Cases reported in Canada in 2002: 56,241 • Cases reported in Canada 2006: 65,000 (preliminary data)* 	<ul style="list-style-type: none"> • Steadily increasing in Canada since 1997 	<ul style="list-style-type: none"> • Young women aged 15–24 • Young men aged 20–29
Gonorrhea	<ul style="list-style-type: none"> • Second most commonly diagnosed and reported bacterial STI • Cases reported in Canada in 2002: 7,367 • Cases reported in Canada 2006: 10,808 (preliminary data)* 	<ul style="list-style-type: none"> • From 1997-2004 (preliminary data)*, rate has increased by approximately 94% • Quinolone resistance has increased from <1% in the early 1990s to 15.7% in 2005 (national rate)† 	<ul style="list-style-type: none"> • Males account for ¾ of reported cases • Increase in MSM • Young men aged 20–29 • Young women aged 15–24
Infectious syphilis	<ul style="list-style-type: none"> • Previously rare in Canada • Cases reported in Canada in 2002: 463 • Cases reported in Canada 2006: 1,493 (preliminary data)*: 	<ul style="list-style-type: none"> • Dramatic national increases noted since 1997 related to regional outbreaks across Canada 	<ul style="list-style-type: none"> • MSM (HIV positive and negative) aged 30–39 • Sex workers and their clients • Acquisition in endemic regions
Chancroid	<ul style="list-style-type: none"> • Exceedingly rare in Canada 	<ul style="list-style-type: none"> • Stable 	<ul style="list-style-type: none"> • Acquisition in endemic regions
Granuloma inguinale	<ul style="list-style-type: none"> • Exceedingly rare in Canada 	<ul style="list-style-type: none"> • Stable 	<ul style="list-style-type: none"> • Acquisition in endemic regions
Lymphogranuloma venereum	<ul style="list-style-type: none"> • Previously rare in Canada 	<ul style="list-style-type: none"> • Unknown Recent outbreaks in Canada have resulted in the development and implementation of an enhanced surveillance system 	<ul style="list-style-type: none"> • MSM • Acquisition in endemic regions

Table 1. Epidemiology of STIs in Canada (continued)

Infection	How common in clinical practice?	Trends in incidence	Most affected
Human papilloma virus	<ul style="list-style-type: none"> • Very common: 70% of the adult population will have had at least one genital HPV infection over their lifetime 	<ul style="list-style-type: none"> • True incidence not known, as HPV is not a reportable disease 	<ul style="list-style-type: none"> • Adolescent and young adult women and men (but affects women and men of all ages)
Genital herpes (HSV-1 and -2)	<ul style="list-style-type: none"> • Common 	<ul style="list-style-type: none"> • True incidence not known, as HSV is not a reportable disease • Seroprevalence studies indicate rates of at least 20% 	<ul style="list-style-type: none"> • Very common in both adolescent and adult men and women • Women are more affected than men
HIV	<ul style="list-style-type: none"> • Rare in general practice • 2,529 cases reported in Canada in 2004 	<ul style="list-style-type: none"> • 20% rise in number of HIV+ test reports in Canada (2000–2004) 	<ul style="list-style-type: none"> • MSM • Acquisition in endemic regions • Injection drug users • Young women aged 15–19
Hepatitis B	<ul style="list-style-type: none"> • Low to moderate in general practice and varies in different populations • Approximately 700 acute cases per year in Canada 	<ul style="list-style-type: none"> • Acute hepatitis B is twice as high for men than for women • Peak incidence rates are found in the 30–39 age group 	<ul style="list-style-type: none"> • Infants born to HbsAg+ mothers • Injection drug users who share equipment • Persons with multiple sexual partners • Acquisition in endemic regions • Sexual and household contacts of an acute or chronic carrier

HbsAg=hepatitis B surface antigen, HPV=human papilloma virus, HSV=herpes simplex virus, MSM=men who have sex with men, STI=sexually transmitted infection

* Preliminary data is subject to change. Surveillance and Epidemiology Section, Community Acquired Infections Division, Public Health Agency of Canada, published data, 2006.

† National Microbiology Laboratory, Public Health Agency of Canada, unpublished data, 2005

Note: For up-to-date epidemiologic information, consult the Public Health Agency of Canada website:

- www.publichealth.gc.ca/sti
- www.phac-aspc.gc.ca/publicat/aids-sida/haic-vsac1204/index.html
- www.phac-aspc.gc.ca/publicat/ccdr-rmtc/05vol31/31s2/index.html

STI risk factors

The following STI risk factors are associated with an increased incidence of STIs:

- Sexual contact with person(s) with a known STI.
- Sexually active youth under 25 years of age.
- A new sexual partner or more than two sexual partners in the past year.
- Serially monogamous individuals who have one partner at present but who have had a series of one-partner relationships over time.
- No contraception or **sole** use of non-barrier methods of contraception (i.e., oral contraceptives, Depo Provera, intrauterine device).
- Injection drug use.
- Other substance use, such as alcohol or chemicals (pot, cocaine, ecstasy, crystal meth), especially if associated with having sex.
- Any individual who is engaging in unsafe sexual practices (i.e., unprotected sex, oral, genital or anal; sex with blood exchange, including sadomasochism; sharing sex toys).
- Sex workers and their clients.
- “Survival sex”: exchanging sex for money, drugs, shelter or food.
- Street involvement, homelessness.
- Anonymous sexual partnering (i.e., Internet, bathhouse, rave party).
- Victims of sexual assault/abuse.
- Previous STI.

3. Performing a Brief Patient History and STI Risk Assessment

General principles

- Information should be requested in a simple, non-judgmental manner, using language understandable to the patient.
- History should enquire about the following:
 - Genital symptoms associated with STIs (discharge, dysuria, abdominal pain, testicular pain, rashes, lesions).
 - Systemic symptoms associated with STIs (fever, weight loss, lymphadenopathy).
 - Personal risk factors and prevention (condom use, vaccination against hepatitis B and, in the case of individuals at risk, hepatitis A).
 - Patient’s knowledge of increased risk of STIs.
 - Other pertinent elements of a general history, such as relevant drug treatments, allergies and follow-up of previous problems.

- A brief risk assessment should aim to quickly identify or rule out major risk factors associated with increased risk of STIs. Use of an STI risk assessment script such as the following may be helpful in rapidly assessing risk:

- “Part of my job is to assess sexual and reproductive health issues. Of course, everything we talk about is completely confidential. If it is OK with you, I would like to ask you a few questions in this area”.
 - Are you sexually active now, or have you been sexually active?
This includes oral sex or anal sex, not just vaginal sex.
 - Do you have any symptoms that might make you think that you have an STI?
(Do you have any sores on or around your genitals? Does it hurt or burn when you pee? Have you noticed an unusual discharge from your penis, vagina or anus? Do you have pain during sex?)
 - What are you doing to avoid pregnancy?
(Do you or your partner use any type of birth control?)
 - What are you doing to avoid STIs including HIV?
 - Do you have any concerns about sexual or relationship violence or abuse?
 - Have you or your partner(s) used injection or other drugs (e.g., crystal meth)?
 - For women also ask:
 - “When was your last menstrual period?”
 - When was your last Pap test?”

Performing a focused risk assessment

Any patient whose current or past history identifies a potential risk factor for STIs should have a more detailed history completed. The focused STI risk assessment questionnaire (Table 2) is intended to serve as a practical guide to assist clinicians in further evaluating an individual patient’s risk factors and behaviours, as well as guiding counselling and testing recommendations.

Table 2. STI risk assessment questionnaire¹

Category and elements	Important questions to guide your assessment
<p>Relationship</p> <p>Present situation</p> <p>Identify concerns</p>	<ul style="list-style-type: none"> • Do you have a regular sexual partner? • If yes, how long have you been with this person? • Do you have any concerns about your relationship? • If yes what are they? (e.g., violence, abuse, coercion)
<p>Sexual risk behaviour</p> <p>Number of partners</p> <p>Sexual preference, orientation</p> <p>Sexual activities</p> <p>Personal risk evaluation</p>	<ul style="list-style-type: none"> • When was your last sexual contact? Was that contact with your regular partner or with a different partner? • How many different sexual partners have you had in the past 2 months? In the past year? • Are your partners men, women or both? • Do you perform oral sex (i.e., Do you kiss your partner on the genitals or anus)? • Do you receive oral sex? • Do you have intercourse (i.e., Do you penetrate your partners in the vagina or anus [bum]? Or do your partners penetrate your vagina or anus [bum])? • Have any of your sexual encounters been with people from a country other than Canada? If yes, where and when? • How do you meet your sexual partners (when travelling, bathhouse, Internet)? • Do you use condoms, all the time, some of the time, never? • What influences your choice to use protection or not? • If you had to rate your risk for STI, would you say that you are at no risk, low risk, medium risk or high risk? Why?
<p>STI history</p> <p>Previous STI screening</p> <p>Previous STI</p> <p>Current concern</p>	<ul style="list-style-type: none"> • Have you ever been tested for STI/HIV? If yes, what was your last screening date? • Have you ever had an STI in the past? If yes, what and when? • When was your sexual contact of concern? • If symptomatic, how long have you had the symptoms that you are experiencing?
<p>Reproductive health history</p> <p>Contraception</p> <p>Known reproductive problems Pap test</p> <p>Pregnancy</p>	<ul style="list-style-type: none"> • Do you and/or your partner use contraception? If yes, what? Any problems? If no, is there a reason? • Have you had any reproductive health problems? If yes, when? What? • Have you ever had an abnormal Pap test? If yes, when? Result if known. • Have you ever been pregnant? If yes, how many times? What was/were the outcome(s) (number of live births, abortions, miscarriages)?

STI = Sexually Transmitted Infection

Table 2. STI risk assessment questionnaire¹ (continued)

Category and elements	Important questions to guide your assessment
<p>Substance use</p> <p>Share equipment for injection</p> <p>Sex under influence</p> <p>Percutaneous risk other than drug injection</p>	<ul style="list-style-type: none"> • Do you use alcohol? Drugs? If yes, frequency and type? • If injection drug use, have you ever shared equipment? If yes, what was your last sharing date. • Have you had sex while intoxicated? If yes, how often? • Have you had sex while under the influence of alcohol or other substances? What were the consequences? • Do you feel that you need help because of your substance use? • Do you have tattoos or piercings? If yes, were they done using sterile equipment (i.e., professionally)?
<p>Psychosocial history</p> <p>Sex trade worker or client</p> <p>Sexual Abuse</p> <p>Housing</p>	<ul style="list-style-type: none"> • Have you ever traded sex for money, drugs or shelter? • Have you ever paid for sex? If yes, frequency, duration and last event. • Have you ever been forced to have sex? If yes, when and by whom? • Have you ever been sexually abused? Have you ever been physically or mentally abused? If yes, when and by whom? • Do you have a home? If no, where do you sleep? • Do you live with anyone?

STI = Sexually Transmitted Infection.

4. Providing Patient-Centred Education and Counselling

On completing the risk assessment, a number of topics may be identified where sexual health– or STI-related education may be indicated for a given patient. Below are a number of common counselling topics and recommendations for information to share with patients, as well as some tips on how to approach sexual health education/counselling using a patient-centred approach.

Common counselling topics

Serial monogamy

It is important for practitioners to recognize and address the issue of serial monogamy. Serial monogamy consists of a series of faithful, monogamous relationships, one after the other. Although they may “feel safe” and “look safe,” serially monogamous relationships, with known and committed partners, do not themselves provide adequate protection from STIs. Consistent condom use and STI testing followed by *mutual* monogamy are far safer strategies than relying on serially monogamous partners’ apparent safety.

For youth contemplating initiation of sexual activity

Many youth will ask for contraceptive information prior to becoming sexually active. Many young women will begin using oral contraception for cycle control as opposed to contraceptive reasons. Both represent excellent opportunities to counsel on safer sex practices.

- When discussing non-barrier contraceptive options, discussion of safer sex and condom use should occur.
- Promote partner testing prior to becoming sexually active for partners who have already been sexually active.
- Let patients know the benefits of preventive behaviour.

Contraceptive advice

Oral contraceptive prescription is commonly associated with cessation of condom use. It has been documented that prescription of oral contraception is very often associated with the offset of barrier method use and increased incidence of STIs.² Individuals in relationships very often move on from initial barrier protection to oral contraception without the benefit of STI testing. Clinicians need to counsel about alternatives to this risky pattern (e.g., testing before cessation of condom use), particularly when prescribing oral contraceptives.

Plan and motivate prevention and risk-reduction strategies

Acceptance of sexuality

- Individuals must accept the fact that they are or might be sexually active before they can plan for STI prevention. Primary care providers, by their actions, can show understanding of patient sexuality by initiating a non-judgmental, two-way dialogue that will help individuals examine the choices they make related to their sexuality. Examining these choices can be useful in helping patients to proactively plan for risk reduction measures appropriate to their specific situation.

- Provide easy-to-apply information:
 - Challenge patients to plan if and how they will discuss STI preventive actions with their partners, or take STI preventive actions unilaterally (e.g., put on a condom), and how they will practice safer sex consistently.
 - Assess whether patients know where they can comfortably obtain condoms in their community, if they know how to use condoms correctly, if they are aware of the signs of STIs and if they know how to seek testing and treatment if needed.

Planning prevention

- Individuals who take STI preventive action need to engage in a number of advance preparations, such as buying condoms, seeking STI/HIV testing and talking about STIs with their health care provider(s). Primary care providers can discuss setting and maintaining personal limits with their patients and identify the most “user-friendly” local STI prevention resources available.
- Health care practitioners can help patients to plan for prevention by openly discussing safer sex using a continuum approach (i.e., masturbation/mutual masturbation, low risk; oral sex, moderate risk for STIs and low risk for HIV; unprotected vaginal or anal intercourse, high risk for STIs and HIV). This can be useful in helping patients understand the risks associated with various activities, make informed choices about the initiation and maintenance of STI preventive actions and deal with possible partner resistance.
- Provide easy-to-apply information:
 - Discuss limiting alcohol or drug intake prior to sexual activity, as they decrease inhibitions and could affect decision-making and negotiation skills.
 - Reinforce that it is not possible to assess the chances that a partner has an STI on the basis of knowing the partner’s sexual history, being in a close relationship with a partner or being monogamous with a partner who has a sexual history and who has not been tested.
 - It is important to tell patients that we do not and cannot routinely test for all STIs (e.g., human papilloma virus [HPV], herpes simplex virus [HSV]), so even if they or their partner’s tests are all negative they may still have an asymptomatic STI.

Safer-sex counselling

Safer-sex counselling as a primary or secondary prevention strategy should include the following at minimum³:

- STI modes of transmission.
- Risks of various sexual activities (oral, genital, rectal).
- Abstinence, mutual monogamy, barrier-method options and availability (male condom, female condom, dental dam).
- Harm-reduction counselling: determining which prevention measures are appropriate and realistic to implement, given the patient’s personal sexual situation(s) (e.g., if practising receptive anal intercourse, always use a condom and extra lubrication, and avoid use of spermicidal condoms).

Statements related to the fact that effective safer-sex practice requires negotiation and is something that should be discussed with partners may be approached by stating: “If you or your partner(s) have ever had another sexual partner, there are a number of options open to you for safer sex. Always using a condom, or getting tested for STI/HIV with your partner followed by mutual monogamy are a few of these options. Do you think any of these might work for you and your partner?”

Proper use of condoms

Reasons for condom failure are most often the result of improper or inconsistent use. For counselling guidelines and instructions on use, see *Appendix A and B*.

Efficacy of condoms in STI prevention

- Although latex and polyurethane condoms are effective in preventing the majority of STIs, including HIV, HBV, chlamydia and gonorrhoea, they do not provide *complete protection* against HPV or HSV infection.
- Natural skin condoms may be permeable to HBV and HIV.

Discussing alternatives

- An allergy to latex may be an issue for some patients; male or female polyurethane condoms can offer needed protection for these individuals.
- The female condom (a polyurethane vaginal pouch) is commercially available and represents an alternative to male condoms or in persons who have a latex allergy for both STI and pregnancy prevention. Female condoms are available in most drug stores and are more expensive than male condoms, approximately \$3.00 each. For instructions on use of a female condom see *Appendix B*.

Female condom use for anal intercourse

Some individuals are using the female condom for anal intercourse, although the manufacturer does not provide recommendations for use in this way. What limited studies have been done on the use of female condoms for anal intercourse have found that there tends to be higher incidence of rectal bleeding and condom slippage in comparison to the male condom.⁴

These studies concluded that modifications, training and research on the clinical significance of safety outcomes are needed for the use of female condoms with anal sex, and redesign of the female condom could increase acceptability and use by men who have sex with men (MSM) and address possible safety concerns.^{4,5}

Warning re: nonoxynol 9

! Spermicidal lubricated condoms are coated with a lubricant containing nonoxynol-9 (N-9), which may provide added protection against pregnancy. N-9 may increase the risk of infection/transmission of HIV and STIs by causing disruptions and lesions in the genital/anal mucosal lining.⁶ N-9 should not be recommended as an effective means of HIV or STI prevention. The best STI and HIV barrier is a latex condom *without* N-9.

- N-9 should never be used rectally. Even low doses used infrequently cause massive disruption of the rectal mucosal lining, which is likely to increase the risk of infection by HIV and other STIs.
- If N-9 is used as an aid to contraception, its benefit should be carefully considered in light of the increased risk of genital lesions and the resulting potential for an increased risk of HIV transmission.

Motivational interviewing techniques

Motivational interviewing is an intervention strategy that has been used to promote primary and secondary prevention of STIs. Motivational interviewing strategies are well researched clinician-implemented intervention techniques that may be helpful in encouraging patients to practice safer sexual behaviour.⁷⁻⁹ **Motivational interviewing strategies can be used to enhance safer sex practices and condom use among patients who may require focused counselling.**^{8,9}

Table 3 provides an example of a motivational interviewing script.

Table 3. Motivational interviewing script

(Adapted from techniques suggested in Rollnick, et al.)⁹

Health care provider asks:
<p>“Let me ask you a couple of questions about condoms...”</p> <p>Q1. “On a scale of 1 to 10, where 1 is “not at all important” and 10 is “very important,” how important is it to you to... always use condoms?</p> <p><i>If patient responds with a score of 8 or more, proceed to Q3.</i></p> <p><i>If patient responds with a score of 7 or less, ask: “Why did you say X and not lower?” (This paradoxical question challenges patients to come up with reasons why it is important to use condoms.)</i></p> <p>Q2. “What would it take or what would have to happen for it to become more important to you to use condoms?” (Patients are the world’s foremost experts in what it would take to change their views, and they will tell the clinician what it would take to make condom use more important to them personally. Health care provider and patient can then discuss these responses.)</p> <p>Q3. “On a scale of 1 to 10, how confident are you that you (or you and your partner) could always use condoms?</p> <p><i>If patient responds with a score of 8 or more, ask about and explore possible barriers that could occur and how patient might deal with them.</i></p> <p><i>If patient responds with a score of 7 or less, ask: “Why did you say X and not lower?” (This paradoxical question prompts patients to think about their strengths in managing condom use.)</i></p> <p>Q4. “What would it take or what would have to happen for you to become more confident that you (or you and your partner) could always use condoms?” (Patients again are the world’s foremost experts in what it would take to change their behaviour, and they will tell the clinician what it would take to do so. Patient and health care provider can use this as a context for problem solving around condom use.)</p>

5. Performing a Physical Examination

Physical examination may be embarrassing for some patients. Therefore, physicians should develop a trusting environment:

- Some patients may feel more comfortable having an assistant of the same gender present.
- All patients should be assured that confidentiality will be maintained at all times.

Table 4. Components of a physical examination

Components common to both sexes
<p>General assessment</p> <ul style="list-style-type: none"> • Search for systemic signs of STIs, such as weight loss, fever, enlarged lymph nodes (palpate inguinal lymph nodes) • Inspect mucocutaneous regions, including pharynx • Inspect external genitalia for cutaneous lesions, inflammation, genital discharge and anatomical irregularities • Perform a perianal inspection • Consider anoscopy (or, if unavailable, digital rectal examination) if patient has practised receptive anal intercourse <i>and</i> has rectal symptoms • For prepubertal females and males, see <i>Sexual Abuse in Peripubertal and Prepubertal Children</i> chapter
Components specific to adolescent and adult males
<ul style="list-style-type: none"> • Palpate scrotal contents with attention to the epididymis • When foreskin is present, retract it to inspect the glans • Have the patient or examiner “milk” the urethra to make any discharge more apparent
Components specific to adolescent and adult females
<ul style="list-style-type: none"> • Be sure to separate labia so as to adequately visualize vaginal orifice • Perform an illuminated speculum examination to visualize cervix and vaginal walls and to evaluate endocervical and vaginal discharges. Obtain specimens as indicated in the <i>Laboratory Diagnosis of Sexually Transmitted Infections</i> chapter. • Perform a bimanual pelvic examination to detect uterine or adnexal masses or tenderness • In certain circumstances, such as primary genital herpes or vaginitis, speculum and bimanual examination may be deferred until the acute symptoms have subsided

6. Selecting Appropriate Screening/Testing

- Selecting the appropriate laboratory tests for patients is a crucial step in the diagnosis and management of STIs. The selection of appropriate laboratory tests and biologic samples and specimens should be based on patient history, risk factors and findings on physical examination.

- Be aware of the “I have been tested” syndrome. There are two dimensions to this syndrome:
 - The false sense of security that individuals at risk may develop after multiple STI screenings with repeat negative results. These individuals may develop a sense that “it can never happen to me.” This can be a focus for counselling. (See Providing Patient-Centred Education and Counselling, above.)
 - The individual who has had some form of medical attention (i.e., a physical, been in a hospital, Pap smear, given blood) and thinks they have been tested for STIs. This is an educational opportunity.
- Simply asking a patient if he or she has been screened for STI is not enough. There is a need to be infection-specific and clarify for the individual that routine blood work at an annual exam does not include syphilis or HIV testing, that a pelvic examination does not include testing for chlamydia and gonorrhea and that a routine urine for culture and sensitivity (C&S) does not screen for chlamydia, etc.

7. Diagnosing by Syndrome or by Organism and Post-test Counselling

- The results of microbiologic testing are not immediately available in most offices.
- When particular symptoms and signs are present, a syndromic diagnosis may be made and treatment and post-test counselling provided. (See *Syndromic Management of Sexually Transmitted Infections* chapter for a summary table.)
- When microbiologic results are available, treatment and counselling should be directed at specific pathogens; see appropriate chapter(s).

Post-test counselling

Post-test counselling is an integral part of management of the individual with a newly diagnosed STI and should include, at minimum, the following³:

- Organism- or syndrome-specific advice.
- Safer sex practices that can remove or reduce the risk of transmitting the STI to a partner or reduce the risk of re-infection in the patient.
- Treatment information and issues that differ as a function of whether the infection is bacterial (curable) versus viral (manageable).
- Case reporting requirements to local public health unit.
- Partner notification either via the index case, the physician or a public health official, and the implications of partners not being tested or treated.

Post-test prevention counselling can also be a very important educational opportunity for individuals who have presented with STI concerns but tested negative for STIs.

Motivational interviewing strategies, as discussed above, can be effective in promoting risk-reduction behaviour change for patients who have tested positive for an STI.⁷⁻⁹

The difference in motivational interviewing as a primary or secondary prevention strategy is simply in the wording. For example: The health care provider may begin by asking, “I ask all of my patients who are dealing with a sexually transmitted infection a couple of questions. Could you tell me how important it is for you now to always use condoms (or always carry out another relevant STI-prevention/harm-reduction strategy)?” (Follow the motivational-interviewing script in Table 3, above.)

8. Treating

Treatment can be curative in the case of bacterial, fungal and parasitic infections or palliative/suppressive in the case of viral STIs. For more specific discussion about particular issues, see *Syndromic Management of Sexually Transmitted Infections* chapter or infection-specific chapters.

In some provinces and territories free treatment is available for index cases and their contacts for bacterial STIs.

Patients, whether symptomatic or not, should be told not to share their medications with partners and to complete the full course of their prescribed medication, even if their signs and symptoms resolve before they finish their medication. Patients should also be advised that if vomiting occurs more than 1 hour post-administration, a repeat dose is not required.

Patients diagnosed with a bacterial STI or trichomonal infection should be advised that they and their partners should abstain from unprotected intercourse until 7 days after treatment of both partners is complete (e.g., 7 days after single-dose therapy).

9. Reporting to Public Health and Partner Notification

STI reporting requirements and confidentiality

Patients should be advised of the provincial/territorial public health acts and the *Child Protection Act*, which supersede physician/patient confidentiality and require release of personal information without patient consent for all reportable STIs and in cases where child abuse is suspected.

Those working in agencies receiving personal information are bound by ethical, legal and professional obligations to protect the confidentiality of this information. Patients need to be informed that the information will be reported to authorities only as required by law as noted above but will otherwise remain confidential. This is often a crucial concern for young people who come forward for STI care.

Confidentiality applies to all persons, including infected persons, sexual/needle-sharing partners, all youth who are competent to understand their infection and care, and people who may be involved in cases of child sexual abuse.

Partner notification

Rationale

Partner notification is a secondary prevention process through which sexual partners and other contacts exposed to an STI are identified, located, assessed, counselled, screened and treated. Partner notification not only produces a public health benefit (e.g., disease surveillance and control) but dramatically reduces the risk of re-infection for the original patient.

While partner notification is sometimes construed as an exercise in societal vs. individual rights, its aim is clearly to assist people in honouring the individual rights of their partners to know they have been put at risk and to make informed decisions regarding their health and in some instances their life.

A review of the evidence supports several recommendations related to the partner-notification process.¹⁰ There is good evidence to show that partner notification can be an effective means of finding at-risk and infected persons and that health care provider referral generally ensures that more partners are notified and medically evaluated.^{10,11}

Who performs partner notification?

Partner notification may be done by the patient, health care providers or public health authorities. Often, more than one strategy may be used to notify different partners of the same infected person.

- Self- or patient referral: the infected person accepts full responsibility for informing partners of the possibility of exposure to an STI and for referring them to appropriate services.
- Health care provider/public health referral: with the consent of the infected person, the health care provider takes responsibility for confidentially notifying partners of the possibility of their exposure to an STI (without ever naming the index case).
- Contract referral: the health care provider negotiates a time frame with the infected person (usually 24–48 hours) to inform his or her partners of their exposure and to refer them to appropriate services.¹¹

Under certain circumstances (i.e., apparently monogamous relationships) the partner may deduce who the index case is by the process of elimination. The health care provider is still required to maintain confidentiality related to the index case, and no information related to the index case can be released to the partner.

If the index case does not wish to notify partners, or if partners have not come forward:

- Explore impediments/barriers to partner notification (see below).
- If needed, report to public health authorities.

Barriers to partner notification

- **Actual or feared physical or emotional abuse that may result from partner notification (e.g., conjugal violence): health care provider/public health referral may be the best option in these cases so as to protect the index case. If there is a threat to patient safety, public health officials should be notified of this so that proper safety precautions are taken to protect the index case. Safety always trumps the notification process.**
- Fear of losing a partner due to a STI diagnosis (blame/guilt): discuss the asymptomatic nature of STIs and the benefits of asymptomatic partner(s) knowing that they may be infected.
- Feared legal procedures: cases need to be advised that their identity is protected at all times, and unless their records are subpoenaed, no information can be released.
- Fear of re-victimization on the part of sex crime victims: health care provider/public health referral may be the best option for notification of partners in these cases.
- Anonymous partnering is a significant barrier to partner notification: wherever possible, encourage patient referral.

Note:

Actual or suspected child sexual abuse must be reported to your local child protection agency. The *Child Protection Act* supersedes all other acts and requires health professionals to release the names of any named contacts of a minor to the Children's Aid Society for further investigation.

All persons named as suspects in child sexual abuse cases should be located and clinically evaluated; prophylactic treatment may or may not be offered and the decision to treat or not should be based on history, clinical findings and test results (See *Sexual abuse in Peripubertal and Prepubertal Children* chapter).

Novel partner-notification practices

With changing trends in STI rates and transmission, research is being conducted to look at the feasibility of alternative methods of partner notification. One such method is the use of expedited patient-initiated treatment of sex partners. The index case is given medication, together with safety information and contraindications, to give to partners for presumptive treatment without assessment to reduce gonorrhoea or chlamydia reinfections and to increase the proportion of partners treated. Although still controversial, this method may be beneficial in high-risk and hard-to-reach populations.^{11,12}

Practice points to maximize partner notification

- Request a notification form for STIs from the local public health unit or call the communicable disease reporting line for assistance.
- Develop a notification plan, including which partners will be notified by whom.
- Refer to Table 5 for recommendations on partners to notify and the recommended trace back period for reportable and non-reportable STIs.

Table 5. Partner notification reference chart

Infection/syndrome	Reportable	Trace-back period*	Who to notify/ evaluate	Special considerations
Chlamydia (LGV and non LGV serovars)	Yes	60 days	SP/NB	<ul style="list-style-type: none"> • If no sexual partner(s) in the last 60 days, trace back to last sexual partner • Partner notification is not required in most provinces and territories as a public health measure but is highly recommended for NGU, MPC, PID and epididymitis
Gonorrhea	Yes	60 days	SP/NB	
Chancroid	Yes	14 days	SP	
Non-gonococcal urethritis	No	60 days	SP	
Mucopurulent cervicitis	No	60 days	SP	
Pelvic inflammatory disease	No	60 days	SP	
Epididymitis	No	60 days	SP	
Primary syphilis	Yes	3 months	SP/NB	
Secondary syphilis	Yes	6 months	SP/NB	
Early latent syphilis	Yes	1 year	SP/NB	
Late latent syphilis/ stage undetermined	Yes	Variable	SP/NB/ CMC	
Genital herpes	In some jurisdictions	Current/ future	SP/NB	<ul style="list-style-type: none"> • Partner notification is not required as a public health measure but is highly recommended

CMC=children of maternal case;
 LGV=lymphogranuloma venereum;
 MPC=mucopurulent cervicitis;
 NB=newborns of infected mothers;

NGU=non-gonococcal urethritis;
 PID=pelvic inflammatory disease;
 SP=sexual partners

* Trace-back period refers to the time period prior to symptom onset or date of specimen collection (if asymptomatic).

- The length of time for the trace-back period should be extended:
 - 1) to include additional time up to the date of treatment
 - 2) if the index case states that there were no partners during the recommended trace-back period, then the last partner should be notified
 - 3) if all partners traced (according to recommended trace-back period) test negative, then the partner prior to the trace-back period should be notified.

Table 5. Partner notification reference chart (continued)

Infection/syndrome	Reportable	Trace-back period*	Who to notify/evaluate	Special considerations
Trichomoniasis	In some jurisdictions	Current	SP	No need to test partners; treat as for index case
Human papilloma virus	No	Current/future	SP	Partner notification is not required as a public health measure. Patients should be encouraged to notify their sexual partners, but there is no proof that this will lower the risk to the partner
Acute hepatitis B	Yes	Variable	SP/NSP/HC/NB/CMC	All unvaccinated/non-immune contacts should be notified. May benefit from PEP ¹³ Newborns must receive HBIG and vaccine post-natally ¹³
Chronic hepatitis B	Yes	Variable	SP/NSP/HC/NB/CMC	All unvaccinated/non-immune contacts should be notified. May benefit from PEP ¹³ Newborns must receive HBIG and vaccine post-natally ¹³
HIV/AIDS	Yes	Variable	SP/NSP/NB/CMC	Start with recent sexual and needle-sharing partners; outer limit is onset of risk behaviour or to last known negative test Post-exposure prophylaxis may be considered by health care providers for individuals who have been in contact with HIV and appropriately timed initiation of antiretroviral therapy is associated with a better prognosis and is a prerequisite to prevention of further transmission of disease. Please consult with an expert in HIV

CMC=children of maternal case;
HBIG=hepatitis B immunoglobulin;
HC=household contacts;
LGV=lymphogranuloma venereum;

NB=newborns of infected mothers;
NSP=needle-sharing partners;
PEP=post-exposure prophylaxis;
SP=sexual partners

* Trace-back period refers to the time period prior to symptom onset or date of specimen collection (if asymptomatic).

- The length of time for the trace-back period should be extended:
 - 1) to include additional time up to the date of treatment
 - 2) if the index case states that there were no partners during the recommended trace-back period, then the last partner should be notified
 - 3) if all partners traced (according to recommended trace-back period) test negative, then the partner prior to the trace-back period should be notified.

10. Managing Co-morbidity and Associated Risks

Many STIs are transmitted in the context of other medical and social challenges. Recurrent exposure and infection are likely unless underlying issues are dealt with. Specific management for conditions such as drug addiction and mental health conditions should be integrated into the overall multidisciplinary health care plan.

When counselling and testing for STIs, it is important to include HIV pre-test counselling and offer testing. Being infected with an STI (including syphilis, genital herpes, chlamydia, gonorrhea and trichomoniasis) increases the risk of transmission and acquisition of HIV. HIV-infected individuals may be less responsive to STI treatment and require special monitoring post-treatment to ensure treatment effectiveness and to prevent long-term complications arising from inadequately treated STIs.

For individuals diagnosed with chronic viral hepatitis — either HBV or hepatitis C virus (HCV) — co-infection with HIV impacts on the choice of treatment, the response to treatment and natural evolution of the disease. These patients should be referred to a specialist for treatment and management recommendations. Testing for viral hepatitis B and HIV in any patient with chronic hepatitis C is required to ensure proper management of the infection. In addition, for those infected with HCV, ensuring vaccination against HAV and HBV is essential to prevent co-infection, which can further assault the liver, complicate treatment options and compromise response to treatment and patient prognosis.¹⁴

If lymphogranuloma venereum (LGV) is suspected and linked to a current outbreak in Canada, it is also important to test for HCV, because there is a high rate of LGV-HCV co-infection.

11. Following up

Ideally, follow-up should be conducted by the same health care provider to ensure resolution of symptoms, follow-up testing as indicated and follow-through on partner notification to reduce the likelihood of reinfection. Where this is not possible, patients should be directed to the appropriate community resources, counselled on when to get follow-up (especially if tests were done) and advised of indicators of treatment failure. (See infection-specific chapters for follow-up recommendations.)

For individuals identified at ongoing risk for STIs, recommend screening for gonorrhea, chlamydia, syphilis and HIV at 3-month intervals and reinforce safer sexual practices.

Resources

Appendix C contains a list of current sexual health/STI/safer sex resources to assist in counselling and assessing patient risk. *Appendix D* contains a list of provincial and territorial STI prevention and control offices.