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Canada

Canadian Guidelines on Sexually Transmitted Infections
2006 Edition

This chapter from the Canadian Guidelines on Sexually Transmitted Infections 2006 Edition has undergone revisions and has been updated as of October 2007. The chart below summarizes the most significant changes made to the chapter and cross-references the corresponding page numbers in the current hard copy version of the guidelines.

Section	Page	Current Wording/Problem	Update/Clarification
Acknowledgements	**6**	Author name mispelled David Hasse	Changed to David Haase
Acknowledgements	**8**	Omission of an external reviewer	Added after Lorette Madore Cheryl Main , MD, FRCPC, Assistant Professor, Pathology and Molecular Medicine, McMaster University;

Canadian Guidelines on Sexually Transmitted Infections 2006 Edition

Our mission is to promote and protect the health of Canadians through leadership, partnership, innovation and action in public health.

Public Health Agency of Canada

Revised edition of the 1998 *Canadian STD Guidelines.*

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Correspondence:

Sexual Health and Sexually Transmitted Infections Section

Community Acquired Infections Division

Infectious Disease and Emergency Preparedness Branch

Public Health Agency of Canada

Fax: (613) 957-0381

Email: PHAC_Web_Mail@phac-aspc.gc.ca

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Canadian Guidelines on Sexually Transmitted Infections 2006 Edition was coordinated by the **Expert Working Group on Canadian Guidelines for Sexually Transmitted Infections.**

Chair	**Tom Wong**, MD, MPH, FRCPC, Director, Community Acquired Infections Division, Infectious Disease and Emergency Preparedness Branch, Public Health Agency of Canada
Section Chairs	**Primary Care and Sexually Transmitted Infections** **Marc Steben**, MD, FCFP, médecin-conseil, Direction risques biologiques, environnementaux et occupationnels, Institut national de santé publique du Québec et clinique des maladies de la vulve, Hôpital Notre-Dame, Centre hospitalier de l'Université de Montréal **Laboratory Diagnosis of Sexually Transmitted Infections** **Max Chernesky**, PhD, Professor Emeritus, McMaster University **Management and Treatment of Specific Syndromes** **Mark Yudin**, MD, MSc, FRCSC, Assistant Professor, University of Toronto; Deputy Head, Department of Obstetrics and Gynecology, St. Michael's Hospital **Management and Treatment of Specific Infections** **Barbara Romanowski**, MD, FRCPC, Clinical Professor of Medicine, Division of Infectious Diseases, Faculty of Medicine and Dentistry, University of Alberta **Specific Populations** **Rhonda Kropp**, BScN, MPH, Senior Public Health Analyst, Sexual Health and STI Section, Community Acquired Infections Division, Public Health Agency of Canada
Members	**Joanne Embree**, MD, FRCPC, Departments of Medical Microbiology & Pediatrics and Child Health, University of Manitoba **William Fisher**, PhD, Professor, Departments of Psychology and Obstetrics and Gynaecology, University of Western Ontario **Janice Mann**, MD, Head, Knowledge Development and Research, Sexual Health and STI Section, Community Acquired Infections Division, Public Health Agency of Canada **Lai-King Ng**, PhD, Director of Bacteriology and Enteric Diseases Program, National Microbiology Laboratory, Public Health Agency of Canada **David Patrick,** MD, MHSc, FRCPC, Associate Professor, UBC Healthcare & Epidemiology; Director, Epidemiology Services, British Columbia Centre for Disease Control **Michael Rekart**, MD, DTM&H, MHSc, Director, HIV/AIDS Control, British Columbia Centre for Disease Control **Cathy Sevigny**, RN, BScN, Program Consultant, Sexual Health and STI Section, Community Acquired Infections Division, Public Health Agency of Canada **Ameeta Singh**, MD, BMBS, MSc, FRCPC, Infectious Diseases Medical Consultant, Alberta Health and Wellness; Clinical Associate Professor, Department of Medicine, University of Alberta; Medical Director, Capital Health STD Centre
Secretariat	**Allison Ringrose**, BHSc, Program Officer, Sexual Health and STI Section, Community Acquired Infections Division, Public Health Agency of Canada

Guidelines presented in this document reflect the views of the Expert Working Group on Canadian Guidelines for Sexually Transmitted Infections. They should be construed not as rules but rather as recommendations.

PREFACE

In March 2003, the Community Acquired Infections Division, Public Health Agency of Canada (PHAC) (then part of Health Canada), brought together an Expert Working Group (EWG) on sexually transmitted infections (STIs) from across Canada to begin planning the revision of the *1998 Canadian STD Guidelines*. STI experts from the fields of medicine, nursing, laboratory, public health and research voluntarily participated as authors, reviewers and EWG members in an effort to develop updated, evidence-based recommendations for the prevention, diagnosis, treatment and management of STIs in Canada. The content of the *Canadian Guidelines on Sexually Transmitted Infections (STIs) 2006 Edition* reflects emerging issues and highlights changes in the STI literature since the release of the 1998 guidelines.

These guidelines were created as a resource for clinical and public health professionals — especially nurses and physicians — for the prevention and management of STIs across a diverse patient population, including neonates, children, adolescents and adults.

While this document addresses key issues related to the prevention, diagnosis, treatment and management of the most common STIs, it is beyond the scope of these guidelines to provide comprehensive recommendations for the treatment and management of HIV and viral hepatitis C. When confronted with these infections, either as a primary infection or a co-infection, we suggest that you refer to alternate resources (see below for suggestions), including colleagues experienced in the area.

- Strader DB, Wright T, Thomas DL, Seeff LB. AASLD practice guideline: diagnosis, management, and treatment of hepatitis C. *Hepatology* 2004;39:1147–1171.
- U.S. Department of Health and Human Services, Panel on Clinical Practices for Treatment of HIV Infection. *Guidelines for the Use of Antiretoviral Agents in HIV-1–Infected Adults and Adolescents.* Available at: aidsinfo.nih.gov/ContentFiles/AdultandAdolescentGL.pdf. Accessed February 6, 2006

The EWG and PHAC acknowledge that the advice and recommendations set out in this statement are based upon the best current available scientific knowledge and medical practices, and they are disseminating this document to clinical and public health professionals for information purposes. Persons administering or dispensing drugs, vaccines or other products should also be aware of the contents of the individual product monograph(s) for those products, or other similarly approved standards or instructions for use provided by the licensed manufacturer(s). Recommendations for use and other information set out in these guidelines may differ from that set out in product monograph(s) or other similarly approved standards or instructions for use. Manufacturers have sought approval and provided evidence as to the safety and efficacy of their products only when used in accordance with the product monograph(s) or other similarly approved standards or instructions for use.

Practitioners should report adverse drug reactions to the Canadian Adverse Drug Reaction Monitoring Program (CADRMP). For specifications and standards of reporting, consult Health Canada’s CADRMP guidelines.

While these guidelines have been based on current evidence and clinical practice, the prevention, diagnosis, treatment and management of STIs is an evolving field. The EWG and PHAC, in producing these recommendations, will regularly update this information. Readers are encouraged to consult the STIs page of the PHAC website for the latest chapter update(s).

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Editor-in-Chief:	Dr. Tom Wong
Associate Editors:	Rhonda Kropp, Dr. Janice Mann
Production Manager:	Barbara Jones
Production Coordinator:	Robert Lerch
Production Assistant:	Linda Gardiner

Many health professionals from across Canada volunteered their time to author chapters for these guidelines, and their participation is acknowledged by chapter:

Fred Y. Aoki, MD, Professor of Medicine, Medical Microbiology and Pharmacology & Therapeutics Member, Section of Adult Infectious Diseases, Faculty of Medicine, University of Manitoba, Author: Genital Herpes simplex virus (HSV) Infections; **Dr. Max Chernesky**, PhD, Professor Emeritus, McMaster University, Author: Laboratory Diagnosis of Sexually Transmitted Infections; **Francois Coultée**, Clincial Researcher, Laboratoire de Virologie Moléculaire, Centre de Recherche Centre Hospitalier de l'université de Montréal Hôpital Notre-Dame, Co-Author : Genital Human Papillomavirus (HPV) Infections; **Laurent Delorme,** MD CSPQ FRCP(C), médecin microbiologiste infectiologue, Hôpital Charles-LeMoyne, Co-Author : Genital Ulcer Disease (GUD); **Francisco Diaz-Mitoma**, M.D., Ph.D., FRCPC, Professor and Chief, Division of Virology, Children's Hospital of Eastern Ontario, University of Ottawa, Co-Author : Genital Ulcer Disease (GUD); **Alex Ferenczy**, MD, Professor of Pathology and Obstetrics & Gynecology, McGill University and the Sir Mortimer B. Davis-Jewish General Hospital Montreal, Co-Author : Genital Human Papillomavirus (HPV) Infections; **William A. Fisher**, PhD, Professor, Departments of Psychology and Obstetrics and Gynaecology, University of Western Ontario, Author: Primary Care and Sexually Transmitted Infections; **Sarah Forgie**, MD FRCPC, Assistant Professor, Pediatrics, Division of Infectious Diseases, University of Alberta, Associate Director, Infection Control, Stollery Children's Hospital and University of Alberta Hospital, Co-Author: Sexual Abuse in Peri-Pubertal and Prepubertal Children, Sexual Assault in Post Pubertal Adolescents and Adults; **Eduardo L. Franco**, MPH, DrPH, James McGill Professor of Epidemiology and Oncology Director, Division of Cancer Epidemiology, McGill University, Co-Author : Genital Human Papillomavirus (HPV) Infections; **Deana Funaro,** MD, FRCPC dermatology, Clinical professor at Notre-Dame Hospital and Ste-Justine Hospital, University of Montreal, Co-Author : Genital Ulcer Disease (GUD); **David Haase**, MD, Professor, Department of Medicine, Division of Infectious Diseases, Dalhousie University, Author: Human Immunodeficiency Virus (HIV) Infections; **Rhonda Kropp**, BScN, MPH, Senior Public Health Analyst, Sexual Health and STI Section, Community Acquired Infections Division, Public Health Agency of Canada, Author: Men Who Have Sex With Men (MSM)/Women Who Have Sex With Women (WSW), Substance Use, Co-Author: Lymphogranuloma Venereum (LGV); **Annie-Claude Labbé**, MD, FRCPC, Department of microbiology, Hopital Maisonneuve-Rosemont Montreal, Co-Author : Genital Ulcer Disease (GUD); **Janice Mann,** MD, Head, Knowledge Development and Research, Sexual Health and STI Section, Community Acquired Infections Division, Public Health Agency of Canada, Author: Inmates and Offenders, Lymphogranuloma Venereum (LGV); **Lynette J Margesson,** MD, FRCPC, Assistant Professor of Obstetrics and Gynecology and of Medicine(Dermatology)Dartmouth Medical School, Co-Author : Genital Ulcer Disease (GUD); **Deborah M. Money**, MD, FRCSC, Associate Professor, University of British Columbia, B.C. Women's Hospital, Co-Author: Pregnancy; **Gina Olgilvie**, MD, MSc, University of British Columbia, Vancouver, Author: Urethritis; **Ron Read**, MD, Head, Infectious Diseases, Department of Medicine, Microbiology and Infectious Diseases, University of Calgary/Calgary Health Region, Author: Hepatitis B Virus Infections; **Michael L. Rekart**, MD, DTM&H, MHSc, Director, HIV/AIDS Control, British Columbia Centre for Disease Control, Author: Sex Workers; **Barbara Romanowski,** MD, FRCPC, Clinical Professor of Medicine, Division of Infectious Diseases, Faculty of Medicine and Dentistry, University of Alberta, Author: Ectoparasitic Infestations, Gonococcal Infections; **Allan Ronald**, MD, Distinguished Professor Emeritus, University of

Manitoba, Author: Chancroid; **Shelly Sarwal**, MD, MSc, FRCP(C), Medical Officer of Health, Nova Scotia Department of Health, Author: Vaginal Discharge; **Cathy Sevigny**, RN, BScN, Program Consultant, Sexual Health and STI Section, Community Acquired Infections Division, Public Health Agency of Canada, Author: Primary Care and Sexually Transmitted Infections; **Rita Shahin**, MD, Toronto Public Health, Author: Travellers; **Ameeta Singh**, BMBS, MSc, FRCPC, Infectious Diseases Medical Consultant, Alberta Health and Wellness Clinical Associate Professor, Department of Medicine, University of Alberta, Medical Director, Capital Health STD Centre, Author: Sexual Abuse in Peri-Pubertal and Prepubertal Children, Sexual Assault in Post Pubertal Adolescents and Adults, Syphilis; **Marc Steben**, MD, médecin-conseil, Direction risques biologiques, environnementaux et occupationnels, Institut national de santé publique du Québec et clinique des maladies de la vulve hôpital Notre-Dame Centre hospitalier de l'Université de Montréal, Author: Genital Human Papillomavirus (HPV) Infections, Genital Ulcer Disease (GUD), Primary Care and Sexually Transmitted Infections; : **Bruno Turmel**, MD, médecin-conseil, Direction générale de la santé publique, Ministère de la Santé et des Services sociaux du Québec, Author: Epididymitis, Prostatitis, Sexually Transmitted Intestinal and Enteric Infections; **Julie van Schalkwyk**, MD, MSc, FRCSC, Assistant Clinical Professor, Department of Obstetrics and Gynecology, University of British Columbia, Author: Pregnancy; **Tom Wong**, MD, MPH, FRCPC, Director Community Acquired Infections Division Infectious Disease and Emergency Preparedness Branch, Author: Chlamydial Infections, Immigrants and Refugees; **Mark H. Yudin**, MD, MSc, FRCSC, Assistant Professor, University of Toronto, Deputy Head, Department of Obstetrics and Gynecology St. Michael's Hospital, Author: Pelvic Inflammatory Disease (PID), Co-Author: Urethritis.

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Robert Brunham, MD, Director of Medical and Academic Affairs, BC Centre for Disease Control, Director, UBC Centre for Disease Control, Professor of Medicine, Division of Infectious Diseases, University of British Columbia; **Susan Comay**, MD, Medical Director, Sexual Assault Service, BC Women's Hospital; **Curtis Cooper**, MD, FRCPC, University of Ottawa; **Francisco Diaz-Mitoma**, MD, PhD, FRCPC, Professor and Chief, Division of Virology, Children's Hospital of Eastern Ontario, University of Ottawa; **Harold Dion**, MD, CCFP, FCFP, Clinique médicale l'Actuel, Chair of the Board, Quebec College of Family Physicians; **Shelia Dunn**, MD, CCFP(EM), University of Toronto, Sunnybrook and Women's College Health Sciences Centre; **Alex Ferenczy**, MD, Professor of Pathology and Obstetrics & Gynecology, McGill University, Sir Mortimer B. Davis-Jewish General Hospital; **David Fisman**, MD, MPH, Visiting Scholar Center for Health and Wellbeing, Woodrow Wilson School, Princeton University; **Jennifer Geduld**, Manager, HIV/AIDS Surveillance Section, CIDPC, Surveillance and Risk Assessment Division, HIV/AIDS Epidemiology and Surveillance, Public Health Agency of Canada; **Mary Gordon**, MD, City of Ottawa, Public Health, Sexual Health Centre; **Kevin Gough**, MD, FRCPC, MEd, St. Michael's Hospital, University of Toronto; **Andree Gruslin**, MD, FRCS, Post Graduation Program Director, Assistant Professor, MFM Department of Obstetrics and Gynecology, University of Ottawa; **Hunter Handsfield**, MD, Professor of Medicine, University of Washington, Center for AIDS and Sexually Transmitted Diseases; **Sandra Hooper**, RN(EC), MScN, Nurse Practitioner Sexual Health Centre, Ottawa Public Health; **Robbi Howlett**, MASc, PhD (candidate), Manager, Ontario Cervical Screening Program, Division of Preventive Oncology, Cancer Care Ontario; **Gaya Jayaraman**, PhD, MPH, Manager, HIV Drug Resistance and Field Surveillance Section, Surveillance and Risk Assessment Division, Public Health Agency of Canada; Hugh D Jones, MD, Dip Ven, STD/AIDS Control, Clinic Physician; Fadel Kane, MD, MSc, HIV/AIDS Programs and Policy Division, Public Health Agency of Canada; **Sari Kives**, MD, University of Toronto, St. Michael's Hospital; **Claude Laberge**, MD, Service de lutte contre les ITSS, Direction générale de la santé publique, Ministère de la santé et des services sociaux du Québec; **Gilles Lambert**, MD, Institut national de santé publique du Québec; **Debbie Lindsay**, MD, University of Manitoba, Child Protection Centre, Health Sciences Centre; **Noni MacDonald**, MD, MSc, FRCP, Dalhousie University, IWK Health Centre; **Louisa MacKenzie**, MD, FRCPC, DTMH, Calgary Refugee Health Program, Margaret Chisholm Resettlement Centre; **Lorette Madore**, RN, DPHN, BN, Supervisor, Clinical Services, Healthy Sexuality and Risk Reduction Program, Ottawa Public Health/Santé publique d'Ottawa; **Cheryl Main** , MD, FRCPC, Assistant Professor Pathology and Molecular Medicine, McMaster University; **Nathalie Mondain**, PhD, Groupe de Recherche Interdisciplinaire en Santé (GRIS), University of Montreal; **Deborah Money**, MD, FRCSC, Associate Professor, University of British Columbia, BC Women's Hospital; Carolyn A Montgomery, MB, STD/AIDS Control, Clinic Physician;**Curtis Nickel**, MD, Professor of Urology, Queen's

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INTRODUCTION

The Process Underlying the Creation of the *Canadian Guidelines on Sexually Transmitted Infections 2006 Edition*

The process used to create the *Canadian Guidelines on Sexually Transmitted Infections 2006 Edition* was developed by the 14-member expert working group (EWG) (chaired by Dr. Tom Wong from the Public Health Agency of Canada [PHAC]) and by the Sexual Health and Sexually Transmitted Infections Section, PHAC. Chapters were written by STI experts from across Canada on a voluntary basis. To facilitate the evidence-based revision, PHAC conducted literature reviews on all chapters and provided additional literature assistance as requested by the authors during chapter writing. Each of the 29 chapters underwent a minimum of four rounds of blinded expert review, three within the EWG and one with at least two external reviewers. Final approval of each chapter by the EWG was required before the chapter was considered complete. In order to ensure the integrity and impartiality of the process and the recommendations in the final document, all EWG members and chapter authors have signed a conflict of interest and disclosure form.

This edition has been enhanced to include references throughout each chapter, as well as level of recommendation and quality of evidence indicators for the treatment recommendations. The indicators used reflect a combination of the methodologies from the U.S. Preventive Services Task Force and the Canadian Task Force on Preventive Health Care and have been modified and simplified for use in these guidelines as outlined in Tables 1 and 2.

Table 1. Levels of recommendation
(Modified from Harris RP, et al.[1])

Recommendation: **A**	Strongly recommends that clinicians routinely provide the treatment to eligible patients. **Good evidence** that the treatment improves important health outcomes and concludes that benefits substantially outweigh harms
Recommendation: **B**	Recommends that clinicians routinely provide the treatment to eligible patients. At least **fair evidence** that the treatment improves important health outcomes and concludes that benefits outweigh harms
Recommendation: **C**	No recommendation for or against routine provision of the treatment. At least **fair evidence** that the treatment can improve health outcomes but concludes that the balance of the benefits and harms is **too close to justify a general recommendation**
Recommendation: **D**	Recommends against routinely providing the treatment to asymptomatic patients. At least **fair evidence** that the treatment is **ineffective** or that harms outweigh benefits
Recommendation: **I**	**Evidence is insufficient** to recommend for or against routinely providing the treatment. Evidence that the treatment is effective is **lacking, of poor quality or conflicting,** and the balance of benefits and harms cannot be determined

Table 2. Quality of evidence
(Modified from Harris RP, et al[1] and Gross PA, et al.[2])

I	Evidence from at least one properly randomized, controlled trial
II	Evidence from at least one well-designed clinical trial without randomization, from cohort or case-control analytic studies (preferably from more than one centre), from multiple time-series studies or from dramatic results in uncontrolled experiments
III	Evidence from opinions of respected authorities based on clinical experience, descriptive studies or reports of expert committees

New Terminology and Chapters
The *Canadian Guidelines on Sexually Transmitted Infections 2006 Edition* reflects the change in terminology from sexually transmitted disease (STD) to STI, which has been adopted to encompass both symptomatic and asymptomatic patient presentation. This shift helps legitimize the need for thorough patient assessment and screening of those with identified risk, regardless of symptomatology.

Each chapter belongs to one of five sections: Primary Care and Sexually Transmitted Infections, Laboratory Diagnosis of Sexually Transmitted Infections, Management and Treatment of Specific Syndromes, Management and Treatment of Specific Infections and Specific Populations.

The *Primary Prevention of STD* and *Clinical Approach to the Diagnosis and Management of STD* chapters from the 1998 guidelines have been combined into one chapter for the current revision, titled *Primary Care and Sexually Transmitted Infections*.

Chapters from the 1998 guidelines that have been incorporated into other sections of the current revision include *Cervicitis, Persons with Repeated STD* and *Youth and Street Youth*.

New chapters have been added to the Management and Treatment of Specific Infections section *(Chancroid, Lymphogranuloma Venereum)* and to the Specific Populations section *(Immigrants and Refugees, Inmates and Offenders, Sex Workers, Men Who Have Sex with Men/Women Who Have Sex with Women* and *Substance Use)* of this edition.

Need to Strengthen Prevention
In Canada, there are three nationally reportable STIs: chlamydia, gonorrhea and infectious syphilis. Since 1997, there has been a steady increase in the rates of all three infections. This phenomenon is not unique to Canada; other countries, including the U.S. and the U.K., have reported similar trends.[3,4] Targeted enhanced surveillance and research are required to determine the factors that may be playing a role in these trends. Some of the possible factors may include the following:

- Nucleic acid amplification tests (NAATs) have been introduced.
- Some people may have developed safer-sex burnout.
- There have been innovations in HIV therapy (e.g., highly active antiretroviral therapy), leading to related treatment optimism.

- Youth awareness of risks and knowledge of risk-reduction behaviours remain less than optimal.[5]
- Sex is occurring at an early age, with a high rate of serially monogamous relationships.
- Sex is continuing later in life.
- The transmission risks of STIs associated with sexual activity (vaginal, anal and oral) are not well understood by the public.
- "Party drugs," such as ecstasy and crystal meth, are being increasingly linked to unsafe sexual behaviours.[6]
- Anonymous partnering venues, such as the Internet, are expanding.

By being aware of trends in STIs, risk factors and affected populations, primary care providers and public health practitioners can be strategically placed to apply relevant and complementary individual and community-based education and patient services.

The prevention and control of STIs cannot be approached with a narrow focus. The appropriate medical management of identified cases of STIs is but one piece of the puzzle. Both primary and secondary prevention activities are paramount to reducing the incidence (newly acquired infections) and prevalence (number of cases) of STIs. Primary prevention aims to prevent exposure by identifying at-risk individuals and performing thorough assessments, patient-centred counselling and education.[7] Secondary prevention involves reducing the prevalence of STIs through the detection of infections in at-risk populations, counselling, conducting partner notification and treating infected individuals and contacts in a timely manner, thus preventing and/or limiting further spread.[7]

Both the burden of disease and potential complications associated with STIs are relevant and significant considerations for health professionals and decision makers. The presence of an acute infection can increase the risk of co-infection: for example, an ulcer from an infection such as syphilis can significantly increase the risk of acquiring and transmitting an HIV infection. The sequelae for women from untreated infections such as chlamydia and gonorrhea can include pelvic inflammatory disease, chronic pelvic pain, ectopic pregnancy and infertility. In recent years, there has also been increasing evidence to support the role of persistent human papillomavirus (HPV) infections in cervical dysplasia and carcinoma.

As we strive to attend to the physiological needs of patients, we must also be prepared to attend to their psychological needs as well. Chronic viral STI can have long-standing negative impacts on a patient's psychosocial well-being. The many potential impacts and sequelae of STIs highlight the need for strengthened prevention efforts.

Future Developments

As within many areas in the health sector, innovation and development are part of the growing body of knowledge and tools used in the prevention, treatment and management of disease and infection. We recommend consulting a variety of mechanisms/sources to maintain and enhance your clinical practice.

Two future developments with significant potential for impact on the field of STIs are the upcoming HPV and herpes simplex virus (HSV) vaccines. The latest data on these two

developments are outlined below. As these are evolving areas of inquiry, please consult the STI section of the PHAC website for the latest available information.

HPV vaccine
Preliminary data on virus-like particle vaccines for HPV prevention demonstrate positive results in terms of both safety and short-term efficacy. As of 2005, two candidate vaccines are well into phase 3 trials. Both candidate vaccines include protection against HPV-16 and HPV-18, which cause 70% of cervical cancers.[8] One of the candidate products also includes protection against HPV-6 and HPV-11 antigens, which cause 90% of external genital warts.[9] Therapeutic vaccines have also been studied, but the initial results have not been favourable.

HSV vaccine
Preliminary data about a viral glycoprotein-based vaccine against HSV type 2 has shown good results in terms of safety. It provides short-term protection for HSV type 1–negative women, but no protection has been found in men.[10] Therapeutic vaccines have also been studied, but results to date have demonstrated a lack of effect compared to placebo.

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