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Sex Information & Education Council of Canada
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SIECCAN ISSUE BRIEF

THE ECONOMIC BENEFITS OF IMPLEMENTING COMPREHENSIVE SEXUAL HEALTH EDUCATION IN CANADA

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PART 1:
The Economic Costs of Negative Sexual and Reproductive Health Outcomes in Canada

PART 2:
Evidence to Support the Implementation of Comprehensive Sexual Health Education to Reduce Preventable Negative Sexual and Reproductive Health Outcomes

The Sex Information and Education Council of Canada (SIECCAN) is a registered not-for profit charitable organization that works with educators, health professionals, community organizations, governments, and other partners to promote the sexual and reproductive health of Canadians.

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THE ECONOMIC BENEFITS OF IMPLEMENTING COMPREHENSIVE SEXUAL HEALTH EDUCATION IN CANADA

Preventable outcomes that can negatively impact sexual and reproductive health, such as sexually transmitted infections, sexually transmitted infections (STIs), unitended pregnancies, sexual assault, and intimate partner violence, pose a significant threat to the health and well-being of individuals, families, and communities in Canada. Beyond the individual, family, and community impacts, negative but preventable sexual and reproductive health outcomes result in substantial economic costs to Canada.

Economic costs include health care expenditures, lost productivity, costs for support services for the victims/survivors of sexual assault and intimate partner violence, criminal justice costs and other costs across government sectors. Part 1 of this report documents some of the substantial economic costs of negative sexual and reproductive health outcomes in Canada.

Based on the evidence presented in this report, we provide a conservative estimate that the combined costs associated with preventable outcomes such as STIs including HIV, unintended pregnancies, sexual assault/offenses and intimate partner violence in Canada exceeds $13.7 billion dollars annually.

SIECCAN estimates that the combined economic costs of preventable sexual and reproductive health outcomes (STIs, unintended pregnancies, sexual assault/ offenses, intimate partner violence) in Canada exceeds $13.7 billion dollars annually.

Part 2 of this report outlines the findings of research indicating that comprehensive sexual health education can be effective in reducing HIV/STI risk, improving contraceptive use, and lowering rates of sexual and intimate partner violence. The wide-spread implementation of comprehensive sexual health education programs incorporating primary prevention of STIs, unintended pregnancy, and sexual and intimate partner violence is one key pillar of an effective strategy to reduce the economic and social costs to Canadian society.

PART 1:

THE ECONOMIC COSTS OF NEGATIVE SEXUAL AND REPRODUCTIVE HEALTH OUTCOMES IN CANADA

According to the Public Health Agency of Canada (2019), STIs "levy a significant physical, emotional, social, and economic cost to individuals, communities, and society" (p.1).

HIV

HIV/AIDS remains a significant public health concern in Canada. The Public Health Agency of Canada (2024a) reports 2,434 people newly diagnosed with HIV in Canada in 2023, a 35% increase since 2022. In addition to direct medical costs, there are intersectoral costs such as patient and family time (patient time, travel expenses), informal care (non-family and family caregiver support), non-paid lost productivity (domestic tasks, volunteer work), as well as the missing economic value of future consumption unrelated to health due to illness or premature death (Schnitzler et al., 2022). In Canada, "The average lifetime cost of a new HIV infection is

conservatively estimated at $1.44 million, or $2.1 billion for all incidence cases in 2021, representing a modest rise in economic burden compared to a decade ago" (Warkentin et al., 2024, p iii).

Table 1: Average lifetime costs of each new HIV/AIDS infection in Canada in 2021

Direct healthcare costs	$310,000 (22%)
Quality of Life	$309,000 (21%)
Productivity losses	$820,000 (57%)

Source: Warkentin L, Adibnia E, Chojecki D, Ueyama M, & van Katwyk S. (2024). Current and Future Investments for Reaching the UNAIDS 95-95-95 HIV Targets in Canada: Evidence Review & Cost Analysis. Edmonton (AB): Institute of Health Economics. **https://www.ihe.ca/advanced-search/hiv-targets-in-canada**

In total, annual health spending on HIV/AIDS in 2017 in Canada was approximately $687 million (Global Burden of Disease Health Financing Collaborator Network, 2018). Although we incorporate this $687 million annual health spending figure from 2017 in our calculation of the annual cost of HIV (See Table 3), due to the increasing number of people living with HIV in Canada and inflation, it is likely that the overall economic burden of HIV in Canada in 2025 is higher.

REPORTABLE BACTERIAL STIs (CHLAMYDIA, GONORRHEA, SYPHILIS)

Reported rates of common bacterial STIs remain a persistent and growing health concern in Canada. While reported rates of chlamydia have stabilized in recent years, it remains the most common bacterial STI in Canada with over 100,000 cases reported annually (Government of Canada, 2025). The number of reported cases of gonorrhea in Canada more than doubled from 2014 to 2023 and the reported rate of Syphilis more than tripled during the same time frame (Government of Canada, 2025).

Table 2: Reported Cases of Bacterial Sexually Transmitted Infections, Canada, 2014-2023

STI	2014	2023	% Change
Chlamydia			
Cases	109,282	129,626	+18.6
Rate per 100,000	308.41	323.39	+4.8
Gonorrhea			
Cases	16,264	42,066	+158.6
Rate per 100,000	45.9	104.95	+128.6
Syphilis			
Cases	3,658	19,064	+421.1
Rate per 100,000	10.32	47.56	+360.8

Source: Government of Canada. (2025). Notifiable Diseases Online. **https://diseases.canada.ca/notifiable/charts?c=cc**

The direct and indirect costs resulting from infection and treatment of bacterial STIs is significant. Up-to-date data on the economic burden of bacterial STIs in Canada is lacking. However, previous research and more recent data from the United States illustrate the magnitude of these costs. Chesson and colleagues (2021) estimated that the direct medical costs of chlamydia and gonorrhea in the United States in 2019 was $ 1 billion. However, if lost productivity (i.e., missing work to seek/receive treatment) is also taken into account, the economic burden of chlamydia and gonorrhea in the United States is considerably higher (Kumar, Chesson & Gift, 2021). For instance, the average medical treatment costs of chlamydia in the United States are $151, but the average cost of lost productivity is $206.

There are no recent published estimates of the economic burden of chlamydia and gonorrhea in Canada. Smylie and colleagues (2011) estimated that the direct and indirect costs associated with chlamydia and gonorrhea were up to $178 million annually and for this report, we incorporate the $178 million cost estimate. However, $178 million is likely a significant underestimate if inflation

and the higher reported rates of chlamydia and gonorrhea in Canada are taken into account. Epidemiological data clearly indicate that the incidence of syphilis has been increasing in recent years. For example, from 2014 to 2023, the number of reported cases of syphilis per year in Canada rose from 3,658 to 19,064, an increase of 461% (Public Health Agency of Canada, 2025). Currently, there are no calculated estimates of the medical or total economic costs of syphilis in Canada. However, research on the cost of syphilis in the United States has indicated that the estimated lifetime cost of syphilis is $1,190 per infection (Chesson & Peterman, 2021).

HUMAN PAPILLOMAVIRUS (HPV)

Human papillomavirus (HPV) is the most common STI in Canada: Seven out of 10 sexually active unvaccinated Canadians contract HPV at some point in their lives (Public Health Agency of Canada, 2019). Sexually transmitted HPV causes an array of cancers (cervical, anal, vulvar, penile, head and neck) and the estimated health systems costs of these cancers in Canada in 2024 was over $300 million (Canadian Partnership Against Cancer, 2025).

In addition to health system costs, in 2024, it cost cervical cancer patients and their families $24.34 million out-of-pocket costs, $17 million in direct time costs and $13.45 million in indirect costs. For anal cancers, these same additional costs amounted to $24.28 million (Canadian Cancer Statistics Dashboard, 2024).

It can be conservatively estimated that the economic burden of HPV related cancers is over $379 million per year in Canada.

GENITAL HERPES (HSV-1, HSV-2)

Genital herpes is a common sexually transmitted infection caused by herpes simplex virus type one or two (HSV-1, HSV-2; Garland & Stephen, 2014). According to the Canadian Health Measures Survey, 13.6% of people in Canada aged 14 to 59 have HSV-2 (Rotermann et al., 2013) and an increasing proportion of genital herpes cases in Canada are attributable to HSV-1 (Government of Canada, 2021).

Currently, there are no calculated estimates of the medical or total economic costs of genital herpes in Canada. However, it is estimated that the direct medical costs of genital herps in the United States are up to $984 million annually (Szucs et al., 2001). A mathematical model projected that the cumulative cost of incident HSV-2 infections would amount to $2.7 billion USD in 2025 (Fisman et al., 2002).

TOTAL ECONOMIC BURDEN OF SEXUALLY TRANSMITTED INFECTIONS

Calculating a precise estimate of the economic burden of sexually transmitted infections (STI) in Canada is not currently possible for a number of reasons. For example, for some STIs (e.g., HIV, chlamydia/gonorrhea) the most recent annual cost estimates were conducted more than five years ago and do not account for factors such as inflation or changes in prevalence. In addition, although data from the United States indicates that Syphilis and genital herpes result in significant economics cost, estimates of the economic burden of these STIs in Canada are not available. If the costs of other common STIs were to be included, the final tally of the economic burden of STIs in Canada would be substantially higher.

For Canada, the combined annual economic cost of HIV, HPV related cancers and Chlamydia/gonorrhea is over $1.2 billion annually (Cost of Syphilis, Genital herpes is unknown).

Table 3: Sexually transmitted infections: Minimum cost estimates (millions), Canada

HIV	$687
Chlamydia/gonorrhea	$178
Syphilis	*Estimate not available*
HPV	$379
Genital herpes	*Estimate not available*
TOTAL	**$1,244+**

UNINTENDED PREGNANCY

Some unintended pregnancies are wanted and result in positive experiences for parents and children. However, a significant portion of unintended pregnancies occur to who do not want to be pregnant and result in considerable economic costs.

It is estimated that unintended pregnancies among adolescent girls and women aged 15-19 result in direct associated cost of $60 million annually (Black et al., 2019). For women of all ages, there are an estimated 180,000 unintended pregnancies in Canada with associated annual direct costs of about $320 million (Black et al., 2015).

SEXUAL ASSAULT/OFFENSES AND INTIMATE PARTNER VIOLENCE

One in 4 Canadians aged 25-34 self-report having experienced sexual assault since age 15 (Statistics Canada, 2025). In addition to the extensive negative personal impact on victims/survivors and their families, sexual assault and other sexual offenses result in significant economic costs to Canada. In 2014, the estimated total cost per sexual assault/rape incident, including victim direct and indirect costs and criminal justice system costs was between $136,000-$164,000; this is the most expensive crime after homicide (Gabor, 2016).

A Department of Justice report calculated that the combined criminal justice system, victim, and third-party costs of sexual assault and other sexual offences in Canada amounted to $4.8 billion in 2009 (Hoddenagh et al., 2014).

Forty-four percent of women and 36% of men 15 years of age and older in Canada who have ever been in a relationship report having experienced some form of violence in the context of their intimate relationship (Cotter, 2021).

The authors of a report on spousal violence concluded that intimate partner violence had an annual cost of $7.4 billion in Canada (Department of Justice Canada, 2021).

Combined, sexual assault/offences and intimate partner violence result in an economic cost for Canada of $12.2 billion annually.

ANNUAL COMBINED ECONOMIC COST OF SEXUALLY TRANSMITTED INFECTIONS, UNINTENDED PREGNANCIES, SEXUAL ASSAULT/OFFENSES, AND INTIMATE PARTNER VIOLENCE IN CANADA

Preventable outcomes such as sexually transmitted infections, unintended pregnancy, sexual assault/offenses and intimate partner violence that negatively impact the sexual and reproductive health of people in Canada. Not only do these preventable outcomes pose a significant threat to the health and well-being of individuals, families, and communities in Canada, these outcomes also result in substantial economic costs. Based on the information presented in this report, it can be conservatively estimated that the combined annual economic cost of sexually transmitted infections, unintended pregnancy, sexual assault/offenses, and intimate partner violence in Canada likely exceeds $13.7 billion.

For Canada, the cost of sexually transmitted infections, unintended pregnancy, sexual assault/offenses, and intimate partner violence exceeds $13.7 billion annually.

Table 4: Estimated annual costs of sexually transmitted infections (STI), unplanned pregnancy, sexual assault/offenses, intimate partner violence (billions), Canada

STI	$1.22
Unplanned pregnancy	$.32
Sexual assault/offenses	$4.8
Intimate partner violence	$7.4
TOTAL	**$13.74**

PART 2:

EVIDENCE TO SUPPORT THE IMPLEMENTATION OF COMPREHENSIVE SEXUAL HEALTH EDUCATION TO REDUCE NEGATIVE SEXUAL AND REPRODUCTIVE HEALTH OUTCOMES

There is a consistent body of evidence indicating that wide-spread implementation of comprehensive sexual health education can prevent negative sexual and reproductive health outcomes. Implementation and support for comprehensive sexual health education will, therefore, substantially reduce the significant economic cost to Canada of these preventable problems.

SEXUAL HEALTH EDUCATION: EVIDENCE OF EFFECTIVENESS

Extensive reviews of the peer-reviewed intervention evaluation literature have consistently indicated that sexual health education for youth can improve sexual and reproductive health outcomes (e.g., Barriuso-Ortega et al., 2024; Denford et al., 2017; Goldfarb & Lieberman, 2021; Niland et al., 2024).

RESEARCH SUPPORTS COMPREHENSIVE SEXUAL HEALTH EDUCATION

"Review of the literature of the past three decades provides strong support for comprehensive sex education across a range of topics and grade levels. Results provide evidence for the effectiveness of approaches that address a broad definition of sexual health and take positive, affirming, inclusive approaches to human sexuality." (p. 13)

Goldfarb & Lieberman. (2021). Three decades of research: The case for comprehensive sex education. Journal of Adolescent Health, 68, p. 13. https://doi.org/10.1016/j.jadohealth.2020.07.036

BENEFITS OF DELIVERING SEXUAL HEALTH EDUCATION TO YOUTH

"Promoting and implementing well-designed sexual health education positively effects student health in a variety of ways. Students who participate in these programs are more likely to:

- ***Delay initiation of sexual intercourse.***
- ***Have fewer sex partners.***
- ***Have fewer experiences of unprotected sex.***
- ***Increase their use of protection, specifically condoms.***
- ***Improve their academic performance."***

US Centers for Disease Control and Prevention. (2024). Sexual Health Education | Adolescent and School Health | CDC

With respect to the prevention of sexually transmitted infections (STI), there is clear evidence that well designed educational programs reduce STI risk among youth (Denford et al., 2017; Morales et al., 2018; Petrova & Garcia-Retamero, 2015).

INTIMATE PARTNER VIOLENCE (IPV) AND SEXUAL VIOLENCE (SV) PREVENTION AMONG YOUTH

"This review found sufficient evidence that primary prevention interventions are effective in reducing the perpetration of IPV and SV among youth. Specifically, those interventions that used the following strategies were consistent and favorable across studies: (1) teaching healthy relationship skills, (2) promoting social norms that protect against violence, and (3) creating protective environments."

Finnie et al. (2022). Intimate Partner and Sexual Violence Prevention Among Youth: A Community Guide Systematic Review. American Journal of Preventive Medicine, 62(1), e45–e55. https://doi.org/10.1016/j.amepre.2021.06.021

Increasing youth and young adult rates of HPV vaccination is critical to reduce the human and economic burden of HPV-related cancers in Canada and there is credible evidence that the integration of information about HPV and the HPV vaccine within comprehensive sexual health education will be an effective strategy to increase HPV vaccination rates (Ou & Youngstedt, 2022; Piedimonte et al., 2018; Thanasas et al., 2020). Education programs specifically targeting contraception have been shown to increase contraceptive use (Lopez et al., 2016).

There is an established body of research evidence that comprehensive sexual health education can play a pivotal role in reducing sexual and intimate partner violence among youth (Finnie et al., 2022; Makleff et al., 2020; Piolanti & Foran, 2022; Russell et al., 2021).

Guidance for policy makers (SIECCAN, 2019) and specific benchmarks for educators (SIECCAN, 2024) to implement comprehensive sexual health education in Canada are available.

These, and other policy documents from the Sex Information and Education Council of Canada (See below) provide the basis for operationalizing the development of effective sexual health education programs in a variety of settings.

Available evidence strongly indicates that policies and resources to support the implementation of comprehensive sexual health education programs/interventions across Canada will result in a substantial economic return on investment. Comprehensive sexual health education programing can meaningfully improve the health and well-being of individuals, families, and communities across Canada. In addition, as this report demonstrates, comprehensive sexual health education can result in cost savings for government.

Comprehensive sexual health education is a key component of the prevention pillar identified in the Government of Canada's Sexually Transmitted and Blood Borne Infections (STBBI) Action Plan 2024-2030. (Public Health Agency of Canada, 2024b)

Sustained and increased government funding for sexual health promotion, sexually transmitted infection prevention, and gender-based violence prevention programs that incorporate comprehensive sexual health education are required investments to enhance the well-being of Canadians and to reduce the costs to government of negative sexual and reproductive health outcomes.

RESOURCES TO SUPPORT THE DEVELOPMENT AND IMPLEMENTATION OF COMPREHENSIVE SEXUAL HEALTH EDUCATION IN CANADA

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