Background Information for the Teacher

Please note: This section, Background Information for the Teacher (pages 241-248), is updated annually both in print and on Saskatchewan Learning's web site at http://www.learning.gov.sk.ca/.

HIV/AIDS education is part of health education. Health education is a shared responsibility among school, neighbourhood, community, school division, regional health authority, and provincial levels.

HIV/AIDS Education Policy

The Ministers of Health and Learning declared the need to strengthen HIV/AIDS instruction in Saskatchewan schools. This policy became effective as of September 1997. For students enrolling in Wellness 10, the HIV/AIDS Education Unit became a compulsory part of the course. Due to the sensitivity of the topic for some families or students, parents have the option to withdraw their son or daughter from HIV/AIDS education. (*Wellness 10: A Curriculum Guide for the Secondary Level*, March 2004, page 241)

HIV/AIDS Education

It is important that teachers and students recognize that health-related information in general, and HIV/AIDS-related information in particular, is dynamic. Accurate information as well as misinformation about HIV/AIDS is available. Often it is provided to the public through the mass media. The intent of this unit is to provide students with the knowledge and skills to access and evaluate information about testing for HIV.

The HIV/AIDS Education Unit incorporates a specific emphasis or perspective at each grade level. At the Middle Level, the following wellness perspectives help students to become increasingly independent with the Decision-making Process and with health promotion:

- grade 6 – Affirming Standards
- grade 7 – Committing Self
- grade 8 – Supporting Peers
- grade 9 – Promoting Health.

In Wellness 10, the emphasis is on making healthy decisions that contribute to the student's overall design for personal wellness.

An overview of HIV/AIDS education throughout grades 6-9 health education and Wellness 10 can be found on page 240 of this unit.

Abstinence is the only sure protection against the sexual transmission of HIV. Students at the Secondary Level need to know that abstinence is the safest and most appropriate choice at this stage in their lives. Making responsible decisions and maintaining an abstinent lifestyle are compatible concepts for high school students.

A number of myths exist about HIV/AIDS. The findings of the Canadian Youth, Sexual Health and HIV/AIDS Survey revealed that 65 percent of grade nine students and 55 percent of grade 11 students believe there is a vaccine available to prevent HIV (Canadian Youth, Sexual Health and HIV/AIDS Survey, 2003). Students need accurate and current information in order to maintain a lifestyle free of HIV infection.

As in all subject areas and grade levels, care is required when arranging for guest speakers and classroom presenters. Clarify, for guest speakers, the learning objectives they are invited to address through their presentations. Outline clear expectations for the time allotment that presenters share with your students. It remains the responsibility of classroom teachers to ensure that unit objectives are achieved.

Sensitive Issues

HIV/AIDS education deals with the personal and sometimes sensitive issues of interpersonal relationships, drugs, and death. Students come to Saskatchewan classrooms from diverse backgrounds and bring with them a range of values and ideas about these topics. Students may live in traditional families or non-traditional families. Some may be hesitant to share ideas and join discussions. It is important to respect the diversity of students' backgrounds, needs, and interests.

The topic of homosexuality may arise during discussions about HIV/AIDS. In accordance with Saskatchewan 's Common Essential Learnings (e.g., Personal and Social Development), Wellness 10 teachers must remind students that all people deserve respect, and that classroom discussions are to be free of stereotyping and prejudice.

Throughout HIV/AIDS instruction, it is best to focus on prevention, transmission, support, testing, and treatment rather than focusing on particular groups of people. Emphasizing behaviours, decisions, and actions will benefit students throughout this unit and the future.

For some adults, classroom discussions about condoms may seem inappropriate. Should discussion arise, students need to know that condoms are not 100 percent reliable. They are not a perfect solution, as there is always a possibility of improper use or breakage. Condoms have, however, been shown to lower the risk of HIV transmission. The consistent and proper use of latex condoms is effective in reducing the risk of contracting HIV through sexual intercourse.

Some students may have friends or family members who are HIV positive, are dying, or have died of AIDS. For those students, information on supporting friends or family who are living with AIDS, death, and dying may be of real importance. Appropriate resource people and community agencies can support both teachers and students.

HIV/AIDS Information

HIV is a blood-borne virus that is transmitted through blood, semen, and vaginal fluids. It is most often transmitted sexually and through needle sharing. It can also be transmitted from mother to child throughout pregnancy, during childbirth, and through breastfeeding.

HIV is fragile. It does not live long or well outside the human body. It can be washed from hands or skin with regular soap.

HIV (Human Immunodeficiency Virus) is a preventable, chronic, progressive condition of which AIDS is the final stage. Over time, the HI virus breaks down the body's ability to protect itself from infections, leaving individuals vulnerable to a variety of life-threatening diseases. This stage of HIV disease is a syndrome called Acquired Immune Deficiency Syndrome (AIDS).

HIV is a retrovirus, a small class of viruses having ribonucleic acid (RNA) as their genetic material. The RNA serves as a template for the production of deoxyribonucleic acid (DNA), which invades a host cell's chromosomes, reproducing and killing the cell. With HIV infection, the victimized cell is a white blood cell, hence the eventual suppression of the immune system.

HIV attacks the immune system, the body's defense against disease. People who have HIV are said to be HIV positive. Because HIV can live in the body for many years and have no effect, many people who are HIV-positive appear and feel healthy. (Saskatchewan Health, n.d., *HIV & AIDS: What You Need to Know.* Retrieved February 2006 from www.health.gov.sk.ca/rr_hivaids_need_know.htm*)*

AIDS is the advanced stage when the immune system of people with HIV infection is seriously impaired, and cannot fight off illness or infection. Kaposi Sarcoma (a cancer of the blood vessels), PCP (a type of pneumonia), and CMV retinitis (a viral infection that affects the eyes) are common AIDS-related illnesses. (Saskatchewan Health, n.d., *HIV & AIDS: What You Need to Know.* Retrieved February 2006 from www.health.gov.sk.ca/rr_hivaids_need_know.html)

During 2005, an estimated five million adults and children were newly infected with HIV and three million people around the globe died of AIDS. At the end of 2005, it was estimated that thirty-nine million people globally were living with HIV. (*UNAIDS/WHO AIDS Epidemic Update: December 2005*, http://www.unaids.org/epi/2005/doc/EPIupdate2005_pdf_en/Epi05_02_en.pdf*)*

As of June 2005, an estimated 58,929 people have tested positive for HIV in Canada. (Health Canada, November 2005, *HIV and AIDS in Canada: Surveillance Report to June 30, 2005).* An estimated 30% are unaware that they are infected. (Health Canada, May 2005, *HIV/AIDS Epi Update*)

Transmission of HIV

Note: The province of Quebec has not submitted AIDS data to the Centre for Infectious Disease Prevention and Control (Public Health Agency of Canada) since December, 2003 and for this reason annual trends and figures beyond 2003 are limited.

The proportion of transmissions attributed to injection drug use has decreased slightly in recent years, while the proportion of infections attributed to homosexual and heterosexual contact exposure have both increased. In the first six months of 2005, homosexual exposure accounted for 43% of positive HIV test reports and the heterosexual

exposure was 30%. (Health Canada, November 2005, *HIV and AIDS in Canada: Surveillance Report to June 30, 2005*.)

Before 1996, women accounted for just over 10% of positive HIV test reports. By 2004, women accounted for over 25% of positive test results. During the first six months of 2005, the heterosexual and IDU exposure categories accounted for 52% and 38% of positive HIV test reports among women, respectively. (Health Canada, November 2005, *HIV and AIDS in Canada: Surveillance Report to June 30, 2005*.)

HIV is transmitted in blood, semen, vaginal fluids and breast milk of HIV infected persons. HIV is not transmitted in fluids such as sweat, saliva, or tears. It is also not transmitted by everyday contact with people, such as hugging, shaking hands or eating meals with, or prepared by, people infected with HIV. You cannot get the virus from telephones, toilet seats, swimming pools, hot tubs, water fountains, or by sharing glasses or dishes. (Saskatchewan Health, n.d., *AIDS and the HIV Antibody Test.* Retrieved February 2006 from www.health.gov.sk.ca*/rr_ hivaids_hiv_anonytest.html*)

Very small traces of HIV have been found in the saliva of infected people. Even so, of the hundreds of thousands of cases of AIDS reported worldwide, none have been reported as being caused by saliva alone. However, deep kissing where there are open sores or cuts in the mouth increases the risk. It is the blood-to-blood contact, not the saliva, that can transmit the HIV. (Saskatchewan Health, n.d., *HIV & AIDS: What You Need to Know.* Retrieved February 2006 from www.health.gov. sk.ca/rr_hivaids_need_know.html)

Expectant mothers with the HI virus can transmit it to their unborn children during pregnancy, during delivery, or after delivery through breast milk. The number of HIV-exposed infants reported per birth-year has increased steadily from 87 infants in 1993 to 163 in 2004. Although the number of HIV-exposed infants has increased for each birth-year, the proportion of infants confirmed to be HIV infected has decreased from 47% in 1993 to 2% in 2004. Correspondingly, the proportion of HIV-positive mothers receiving antiretroviral therapy has increased steadily reaching a high of 96% in 2004. (Health Canada, April 2005, *HIV and AIDS in Canada: Surveillance Report to December 31, 2004*)

Treatment of HIV/AIDS

There are drugs, therapies, and treatments that slow the progress of HIV and lengthen the lives of people with HIV. There is no known cure for HIV infection. No drug has been found that will destroy HIV or eliminate it from the body. (Saskatchewan Health, n.d., *HIV & AIDS: What You Need to Know.* Retrieved February 2006 from www.health.gov.sk.ca/rr_hivaids_need_know .html*)*

As a result of the improved drug and therapy programs, the number of persons living with HIV in Canada is rising. The virus itself changes quickly, mutating, creating new strains that present challenges in detection and treatment. (Health Canada, February 2005, *Diseases & Conditions – AIDS,* www.hc-sc.gc.ca/english/ diseases/aids.html)

Facts regarding treatment of HIV/AIDS are not clear to Canadian students. Approximately half of grade nine students and 35 percent of grade 11 students believe that a cure exists for AIDS. (Canadian Youth, Sexual Health and HIV/AIDS Survey, 2003) Two-thirds of grade seven students in Canada do not know there is no cure for HIV/AIDS. Close to 20% of adult Canadians believe that HIV/AIDS can be cured if treated early. (Health Canada, *Canada's Report on HIV/AIDS* , 2003).

Testing for HIV

The HIV antibody test looks for antibodies in the person's blood. When the HI virus enters a person's body, a special chemical (antibody) is produced. Antibodies are produced in the body as the body's response to an infection. The only way to know for certain if antibodies are present in the body is to have a special blood test, the HIV antibody test. If a person develops antibodies to HIV in their blood, it means she or he has been infected with HIV and will have a positive test result. It means the infected person can pass the virus to others. HIV antibodies can usually be found in the blood within 12 weeks after you are infected with HIV. In rare cases, it can take up to six months. A positive test does not necessarily mean a person has AIDS nor does it indicate when s/he might develop AIDS. (Saskatchewan Health, n.d., *HIV & AIDS: What You Need to Know.* Retrieved February 2006 from www.health. gov.sk.ca/rr_hivaids_need_know.htm)

The Provincial Laboratory in Regina analyzes all HIV antibody tests in Saskatchewan. Anonymous HIV tests are available at Battlefords and Area Sexual Assault Centre, Prince Albert STD Clinic, Saskatoon Sexual Health Program, and Regina STD and Sexual Health Clinic. The test is free. (Saskatchewan Health, n.d., *AIDS and the HIV Antibody Test – Anonymous Testing.* Retrieved February 2006 from www.health.gov.sk.ca /rr_aids_hiv_anonytest.html)

In the Canadian Youth, Sexual Health and HIV/AIDS Survey, only 59 percent of grade seven participants were able to answer the following true question correctly, "There are blood tests that show if a person has been infected by HIV/AIDS." (Canadian Youth, Sexual Health and HIV/AIDS Survey, 2003)

In the same Canadian study, two percent of grade nine females and three percent of grade 11 girls reported that they had visited a doctor for an HIV test within the previous twelve month period. By comparison, one percent of grade nine boys and zero percent of grade 11 males indicated that they had visited a doctor's clinic for the same reason. (Canadian Youth, Sexual Health and HIV/AIDS Survey, 2003)

HIV testing during pregnancy is an option available to women across Canada. (Health Canada, May 2004, *HIV/AIDS Epi Update)*

HIV/AIDS and Youth

Risk behaviour data among Canadian youth still show the potential for increased HIV transmission and half of all new infections worldwide are occurring among young people. Youth, in general, are vulnerable to HIV infection as a result of many factors, including risky sexual behaviour, substance abuse, and perceptions that HIV is not a threat to them. (Health Canada, May 2004, *HIV/AIDS Epi Update)*

Decisions about sexual activity are often first made during adolescence and these decisions are likely to influence one's sexual health into adulthood. (Canadian Youth, Sexual Health and HIV/AIDS Study, 2003)

Youth continue to be at the center of the HIV epidemic – they are the most affected and infected population. During 2005, 700,000 children and youth were infected with HIV. UNAIDS estimates that 14,000 people are infected every day. About 50% are 15-24 year olds. (UNAIDS, *AIDS Epidemic Update 2005)*

An estimated 11.8 million people aged 15-24 years are living with HIV/AIDS and half of all new infections worldwide are occurring among young people. As of June 30, 2003, 3.4% of the AIDS cases reported to the Center for Infectious Disease Prevention and Control were diagnosed among youth ages 10-24 years. Given the median length of time between HIV infection and the onset of AIDS (10 years or more), many people in older age groups would have been infected with HIV during their youth. The mode of infection varied by age. Exposure to infected blood or blood products accounted for almost two-thirds of the reported AIDS cases among the 10-19 age group while sexual transmission was the main route of exposure among the 20-24 year olds. (Health Canada, May 2004, *HIV/AIDS Epi Update)*

HIV/AIDS and Canadian Trends

Cases of AIDS have been reported from all geographic regions, in both sexes, in all age groups and among different racial and ethno-cultural groups. (Health Canada, November 2005, *HIV and AIDS in Canada: Surveillance Report to June 30, 2005)*

Women represent an increasing proportion of all positive HIV test reports in Canada from 6.1% before 1994 to 25.4% in 2002. Heterosexual contact and injecting drug use are the two major risk factors for HIV infection in women. The proportion of women among positive HIV test reports is highest among adolescents and young adults. (Health Canada, May 2004, *HIV/AIDS Epi Update)*

A higher proportion of Aboriginal persons test positive for HIV infection at a younger age than non-aboriginals. Injecting drug use is the most prevalent mode of transmission, and the HIV epidemic among the Aboriginal communities show no signs of abating. Aboriginal women make up a large part of the HIV epidemic in their communities. (Health Canada, May 2004, *HIV/AIDS Epi Update)*

The graphics on the following pages show Saskatchewan and Canadian statistics.

Positive HIV Antibody Tests in Saskatchewan (1984-2004)

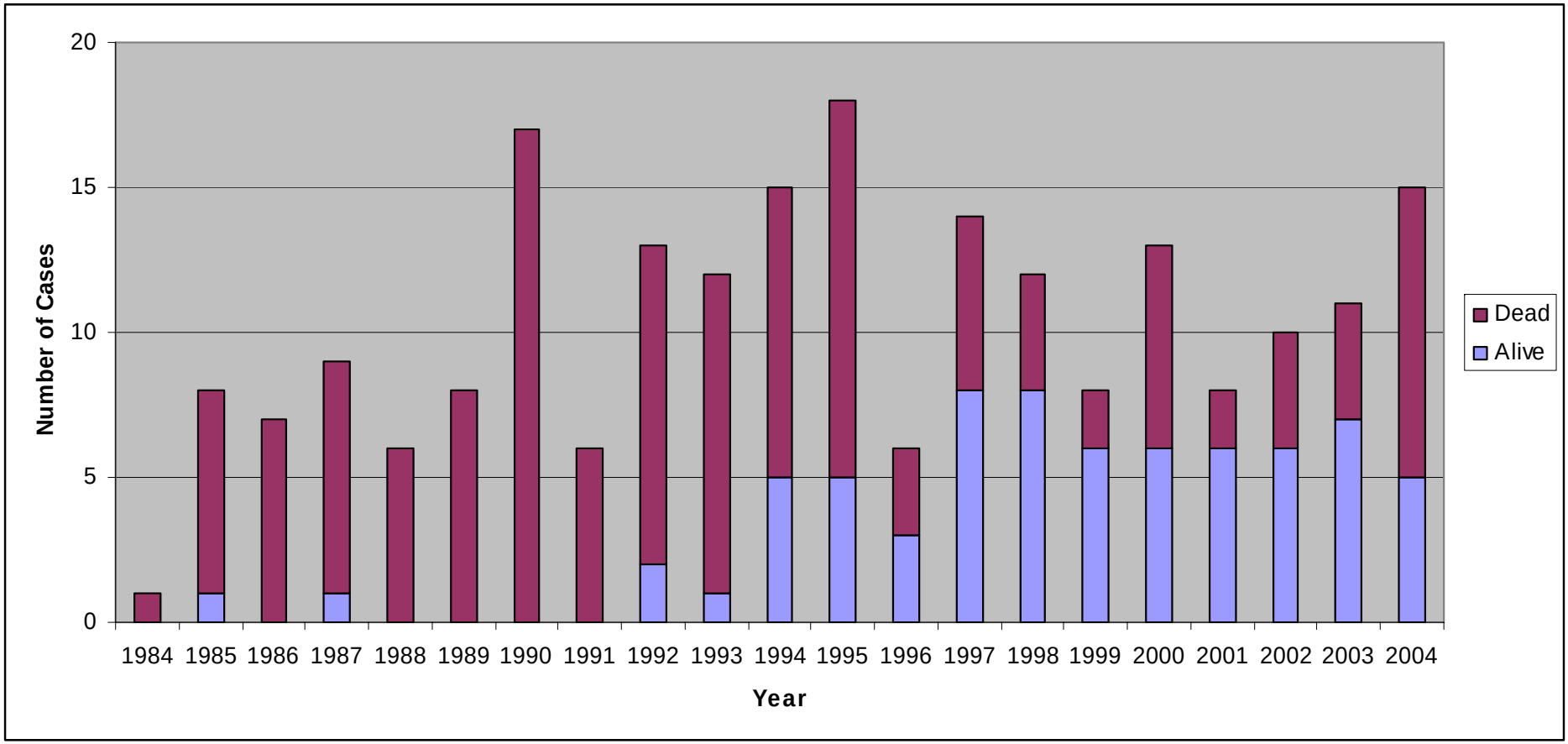
Year	# Individuals Tested	# Positive Individuals	% Positive Specimens
1984-88	7,602	37	0.49
1989	3,319	14	0.42
1990	4,615	26	0.56
1991	6,440	17	0.26
1992	12,152	35	0.29
1993	13,390	17	0.13
1994	17,814	26	0.15
1995	16,100	28	0.17
1996	17,883	24	0.13
1997	29,664	43	0.14
1998	22,015	26	0.12
1999	20,827	31	0.15
2000	21,954	34	0.15
2001	25,067	40	0.16
2002	26,341	26	0.10
2003	30,137	40	0.13
2004	36,778	54	0.15
TOTAL*	312,098	518	0.17

*Adjustments have been made to eliminate repeat positive test results.

Please note: This graph shows the number of tests administered in the province (not individuals tested) and the number of positive test results from those tests. The graph does not show the number of people who relocate to Saskatchewan after having tested positive elsewhere.

Prepared by: CDC Unit, Population Health Branch
Date Prepared: 2004
Source: Saskatchewan HIV and AIDS Case Reporting Surveillance System

AIDS Cases in Saskatchewan
Life Status by Year of Diagnosis, 1984-2004



	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Alive	0	1	0	1	0	0	0	0	2	1	5	5	3	8	8	6	6	6	6	7	5
Dead	1	7	7	8	6	8	17	6	11	11	10	13	3	6	4	2	7	2	4	4	10

Prepared by: CDC Unit, Population Health Branch
Date Prepared: 2004
Source: Saskatchewan HIV and AIDS Case Reporting Surveillance System

Age Distribution of Cumulative Reported AIDS Cases in Canada, by Gender and Age (to June 30, 2005)

Age Group	Males		Females		Total	
	Cases Reported	Percent	Cases Reported	Percent	Cases Reported	Percent
Pediatric						
<1	45	0.3	51	2.8	96	0.5
1-4	31	0.2	39	2.1	70	0.3
5-9	19	0.1	13	0.7	32	0.2
10-14	23	0.1	6	0.3	29	0.1
Subtotal	**118**	**0.7**	**109**	**5.9**	**227**	**1.1**
Adults						
15-19	53	0.3	14	0.8	67	0.3
20-24	489	2.7	119	6.4	608	3.0
25-29	2 214	12.1	317	17.1	2 531	12.6
30-34	3 976	21.7	407	22.0	4 383	21.8
35-39	4 047	22.1	289	15.6	4 336	21.5
40-44	3 162	17.3	239	12.9	3 401	16.9
45-49	2 033	11.1	131	7.1	2 164	10.7
50-54	1 059	5.8	62	3.3	1 121	5.6
55-59	590	3.2	65	3.5	655	3.3
60+	546	3.0	100	5.4	646	3.2
Age Group not reported	**2**	**0.01**	**0**	**0**	**2**	**0.01**
Subtotal	**18 171**	**99.3**	**1 743**	**94.1**	**19 914**	**98.9**
Total	**18 289**	**100.0**	**1 852**	**100.0**	**20 141**	**100.0**

Source: Bureau of HIV/AIDS & STD, Laboratory Centre for Disease Control, Health Canada
Date Prepared: November 2005

Number of Positive HIV Test Reports in Canada, by Gender and Age (to June 30, 2005)

Age Group	Males		Females		Total	
	Tests Reported	Percent	Tests Reported	Percent	Tests Reported	Percent
Pediatric <15 years	403	0.9	288	3.42	711 Includes 20 Gender not reported / Transgender	1.34
Adults						
15 to 19 years	414	0.9	320	3.8	734	1.4
20 to 29 years	10,275	23	2,857	34	13,132	24.6
30 to 39 years	17,814	39.8	3,159	37.5	20,973	39.4
40 to 49 years	9,648	21.6	1,308	15.5	10,956	20.6
>50 years	3,897	8.7	595	7.1	4492	8.5
Subtotal	42,048	94	8,239	97.9	50,287	94.5
Age group not reported	2,723	6.0	180	2.1	2903	5.5
Total	**44,771**	**100.0**	**8419**	**100.0**	**53,190**	**100.0**

Prepared by: Health Canada
Prepared: November 2005
Source: HIV and AIDS in Canada, Surveillance Report to June 30, 2005