

## Unit At a Glance

Decision-making Process	Content	Resources
<p><b>Level A - Extend Knowledge Base</b></p> <p>1. Reflect on what you know about the issue.</p> <p>2. Research the issue. Find the facts.</p>	<p>Overview of unit</p> <p>Prior knowledge about HIV/AIDS</p> <p>Sources of HIV/AIDS information</p> <p>Criteria for selecting sources of information</p> <p>HIV transmission and prevention</p> <p>Avoiding or reducing the risk of HIV infection</p> <p>Safety precautions in emergencies</p> <p>How feelings affect behaviour</p> <p>Affirming personal standards</p> <p>Gathering HIV/AIDS information</p> <p>Evaluating sources of information</p>	<p>Sample Checklist for Evaluating Health-related Sources of Information</p> <p>Three or four teacher selected resources</p> <p><i>Double Dutch - Double Jeopardy</i>, video</p> <p><i>Diving for the Moon</i>, novel</p> <p><i>AIDS and Kids: The Whitney Project</i>, video</p> <p>Student gathered HIV/AIDS resources</p>
<p><b>Level B - Make an Informed Decision</b></p> <p>3. State the challenge. Explore alternatives and consequences.</p> <p>4. Make a decision. Set a personal goal.</p>	<p>Exploring challenges related to evaluating HIV/AIDS information</p> <p>Identifying strategies to evaluate information</p> <p>Exploring the consequences of not evaluating information</p> <p>Setting a goal to maintain a current and dynamic HIV/AIDS information base</p>	<p>Sample Checklist for Evaluating Health-related Information</p> <p>Sample Decision Making in the HIV/AIDS Education Unit</p>
<p><b>Level C - Carry Out Action Plan</b></p> <p>5. Design and apply an action plan.</p> <p>6. Evaluate progress. Revise as needed.</p>	<p>Designing and carrying out an action plan</p> <p>Revising action plans based on teacher comments, self-evaluation, and evaluation by designated support person(s)</p>	<p>Sample Action Plan</p> <p>Rating Scale for Assessment and Evaluation of Action Plans</p> <p>Holistic Rating Scale for Assessment and Evaluation of Action Plans</p>

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## Background Information for the Teacher

Please note: This section, Background Information for the Teacher, is updated annually both in print and on Saskatchewan Learning's web site at <http://www.sasklearning.gov.sk.ca/>.

HIV/AIDS education is a required unit of study in 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. A policy to provide instruction to students in grades 1-9 became effective in September, 1997. 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. (*Health Education: A Curriculum Guide for the Middle Level* (1998), page 13)

### HIV/AIDS Education

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

The HIV/AIDS Education Units, like all other units of health education, incorporate a specific emphasis for each grade level.

- In grade six, the emphasis is on making healthy decisions that affirm personal standards.
- In grade seven, students study HIV/AIDS information with a focus on committing themselves to a lifestyle free from HIV infection.
- In grade eight, the emphasis is on encouraging students to support their peers as they demonstrate effective communication skills with parents/caregivers.

- In grade nine, students focus on promoting an understanding of HIV/AIDS as social and medical issues in their communities.

An overview of HIV/AIDS education content and processes can be found on page 119 in *Health Education: A Curriculum Guide for the Middle Level* (1998).

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.

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

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.

As of 1985, improvements in blood screening have substantially reduced the likelihood of infection through blood products or transfusions.

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

A number of myths exist about HIV/AIDS. The findings of the Canadian Youth, Sexual Health, and HIV/AIDS Survey reveal that approximately half of grade nine students believe that a cure exists for HIV/AIDS (Canadian Youth, Sexual Health and HIV/AIDS Survey, 2003). Students

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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 grade specific 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 HIV/AIDS education learning objectives are achieved.

## Sensitive Issues

HIV/AIDS education deals with the personal and sometimes sensitive issues of interpersonal relationships, sex, 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), health educators must remind students that all people deserve respect, and that classroom discussions are to be free of stereotyping and prejudice (see [www.sasklearning.gov.sk.ca/branches/curr/evergreen/s\\_orientation.shtml](http://www.sasklearning.gov.sk.ca/branches/curr/evergreen/s_orientation.shtml) for more information). Within HIV/AIDS education, it is best to focus on prevention, transmission, support, and treatment rather than focusing on particular groups of people. With HIV/AIDS, it does not matter who you are, it matters what you do. Emphasizing behaviours, decisions, and actions will benefit all students throughout this unit of study and in the future.

For many adults, classroom discussions about condoms may seem too advanced for students at the Middle Level. 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 proven 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 importance. Appropriate resource people and community agencies can support both teachers and students.

## HIV/AIDS Information

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. You can be HIV-positive and not know it. AIDS is fatal. No cure or vaccine exists. (Saskatchewan Health, n.d., *HIV & AIDS: What You Need to Know*. Retrieved February 2006 from [www.health.gov.sk.ca/rr\\_hivaid\\_s\\_need\\_know.html](http://www.health.gov.sk.ca/rr_hivaid_s_need_know.html))

HIV is a virus that attacks the immune system, resulting in a chronic, progressive illness and leaving infected people vulnerable to opportunistic infections. (Health Canada, February 2004, *Diseases & Conditions – AIDS*, [www.hc-sc.gc.ca/english/diseases/aids.html](http://www.hc-sc.gc.ca/english/diseases/aids.html))

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\\_hivaid\\_s\\_need\\_know.html](http://www.health.gov.sk.ca/rr_hivaid_s_need_know.html))

By the end of 2005, 40.3 million people were living with HIV/AIDS, including 17.5 million women and 2.3 million children under the age of 15. In 2005, 4.9 million people became newly infected with HIV. World-wide, only one in 10 persons infected with HIV has been tested and knows his/her HIV status. (Global Health Council, January 2006, [http://globalhealth.org/view\\_top.php?id=227](http://globalhealth.org/view_top.php?id=227))

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, *Epi Update*)



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## 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 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 can only pass from person to person through these infected body fluids. 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, mosquitos; 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\\_aids\\_hiv\\_anonytest.html](http://www.health.gov.sk.ca/rr_aids_hiv_anonytest.html))

HIV is not spread by insects (e.g., mosquitoes). The virus cannot reproduce inside an insect, so even those insects that draw blood cannot pass on the infection. (Saskatchewan Health, n.d., *HIV & AIDS: What You Need to Know*. Retrieved February 2006 from [www.health.gov.sk.ca/rr\\_hiv\\_aids\\_need\\_know.html](http://www.health.gov.sk.ca/rr_hiv_aids_need_know.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\\_hiv\\_aids\\_need\\_know.html](http://www.health.gov.sk.ca/rr_hiv_aids_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\\_hiv\\_aids\\_need\\_know.html](http://www.health.gov.sk.ca/rr_hiv_aids_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](http://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

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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)

## 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 total 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 individuals 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*)

The proportion of AIDS cases among Canadian women has increased over time from 6.1% before 1994 to 25.4% in 2002. Heterosexual contact with a person at risk and injection drug use account for the increase in incidence. The proportion of women among positive HIV tests 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 Aboriginal communities shows no sign 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
<b>TOTAL*</b>	<b>312,098</b>	<b>518</b>	<b>0.17</b>
*Adjustments have been made to eliminate repeat positive test results.			

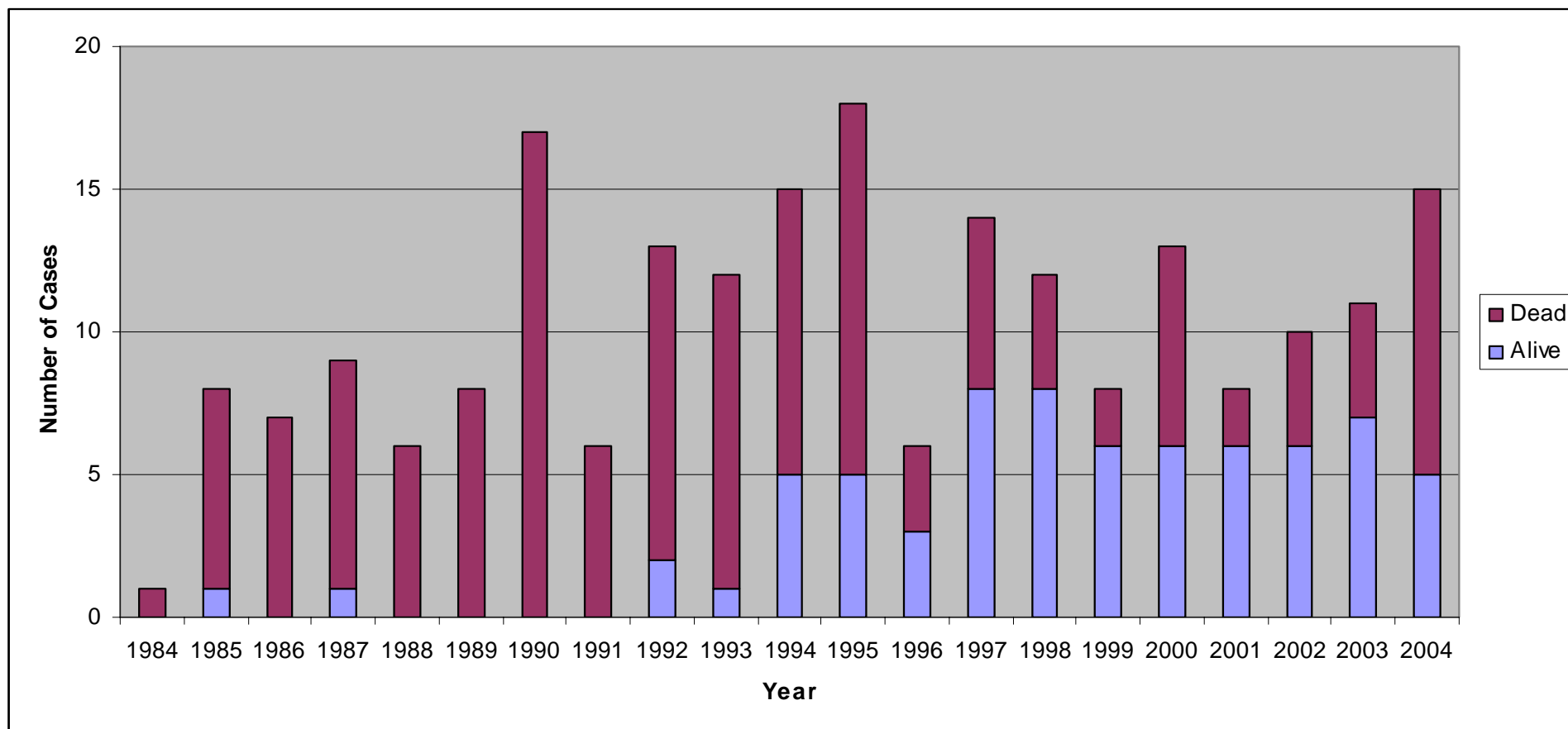
Please note: This graph shows the number of tests administered in the province (not individuals tested) and the number of positive test results from those tests. The graph does not show the number of people who relocate to Saskatchewan after having tested positive elsewhere.

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
<b>Alive</b>	0	1	0	1	0	0	0	0	2	1	5	5	3	8	8	6	6	6	6	7	5
<b>Dead</b>	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 Sex  
(to June 30, 2005)**

Age Group	Males		Females		Total	
	Cases Reported	Percent	Cases Reported	Percent	Cases Reported	Percent
<b>Pediatric</b>						
<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
<b>Subtotal</b>	<b>118</b>	<b>0.7</b>	<b>109</b>	<b>5.9</b>	<b>227</b>	<b>1.1</b>
<b>Adults</b>						
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
<b>Age Group not reported</b>	2	0.01	0	0	2	0.01
<b>Subtotal</b>	<b>18 171</b>	<b>99.3</b>	<b>1 743</b>	<b>94.1</b>	<b>19 914</b>	<b>98.9</b>
<b>Total</b>	<b>18 289</b>	<b>100.0</b>	<b>1 852</b>	<b>100.0</b>	<b>20 141</b>	<b>100.0</b>

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

**Pediatric AIDS Cases (< 15 Years Old) In Canada  
(2005)**

<b>Risk Factors</b>	<b>Male/Female Total</b>		<b>% of Total</b>	
Perinatal Transmission	175		77.1	
Recipient of Blood	20		8.8	
Recipient of Clotting Factor	12		5.3	
No Identified Risk Factor	14		6.2	
Other	6		2.6	
<b>Total</b>	<b>227</b>		<b>100.0</b>	
Percentages based on total number minus those reports for which exposure category was unknown (NIR).				
<b>Age Group (Yrs.)</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>% of Total</b>
Less than 1	45	51	96	42.3
1 to 4	31	39	70	30.8
5 to 9	19	13	32	14.1
10 to 14	23	6	29	12.8
<b>Total</b>	<b>118</b>	<b>109</b>	<b>227</b>	<b>100.0</b>

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

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## HIV/AIDS Education Resources

**AIDS** (Print-Non-Fiction). Bardhan-Quallen, Sudipta. (Diseases and Disorders Series). Thomson Gale (SBC), 2005. 112 p. ISBN 1-59018-404-1 (\$32.95 hdc.).

This comprehensive resource describes HIV/AIDS from its origins to the latest research in the field. It provides insight into the lives of people who are HIV positive and identifies the signs and symptoms of AIDS. Information is also included on risky behaviours and on ways the virus may be transmitted.

**Suggested Use:** Grade 7; Grade 8; Grade 9; HIV/AIDS Education

**AIDS** (Print-Non-Fiction). Whelan, Jo. (Health Issues Series). Raintree Steck-Vaughn Company (SBC), 2002. 64 p. ISBN 0-7398-4771-6 (\$34.45 hdc.).

This book provides a very thorough presentation of facts and information related to HIV/AIDS that is written at a level suitable for Middle Level students. Topics include the immune system, signs and symptoms of the disease, ways in which it is transmitted, testing procedures, and the challenge of living with HIV/AIDS. A chapter on avoiding infection presents important information for youth to consider when making decisions related to healthy behaviours including safe sex practices.

**Suggested Use:** Grade 7; Grade 8; Grade 9; HIV/AIDS Education

**Other Use:** Wellness 10

**HIV/AIDS** (Print-Non-Fiction). Merki, Mary Bronson. Glencoe/McGraw-Hill (MHR), 2003. 44 p. ISBN 0-07-826213-5 (\$19.46 pbk.). Teacher's Annotated Edition - ISBN 0-07-826214-3 (\$22.99 pbk.).

In an appealing and concise format, this useful resource presents a variety of information related to HIV/AIDS. It begins by addressing the question, "What is HIV/AIDS?" Other topics covered include the effects of HIV on the immune system, the ways in which HIV is spread, tests available for HIV, the progressive stages of the disease, the challenges of living with HIV/AIDS, research and treatment, and the importance of making responsible choices including safe sex practices. Although American in focus, this resource contains current information relevant to Saskatchewan's health education curriculum. A teacher's annotated edition is available that suggests possible activities and responses to discussion questions.

**Suggested Use:** Grade 7; Grade 8; Grade 9; HIV/AIDS Education

**Home Truths: Living With AIDS** (Video). (The National Series). Canadian Broadcasting Corporation (CBC), 2002. 22 min. Order no. Y8Q-01-08 (\$125.00).

(CAN) In this CBC national broadcast, a reporter interviews HIV positive individuals who are living in a small Newfoundland community. The discussion addresses the stigma and isolation felt by people living with HIV/AIDS. It also explains that the community response is changing to that of acceptance. Emphasis is placed on the informal community supports that exist and the importance of these to the well-being of infected individuals. Segments of the video would be useful in meeting related learning objectives.

**Suggested Use:** Grade 9; HIV/AIDS Education

**The Immune System** (Print-Non-Fiction). Boudreau, Gloria. (The KidHaven Science Library Series). Thomson Gale (SBC), 2004. 48 p. ISBN 0-7377-2077-8 (\$28.45 hdc.).

This resource explains how the immune system fights disease. It describes problems affecting the immune system including allergies, anaphylaxis, autoimmune diseases, and immunodeficiency diseases.

**Suggested Use:** Grade 7; HIV/AIDS Education