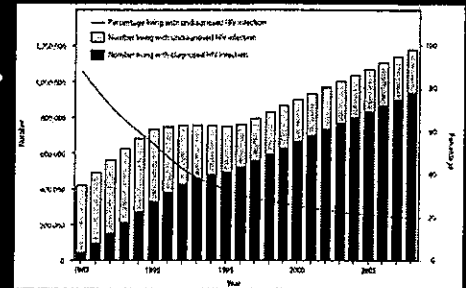


HIV and AIDS

Unit 5.6

5.6 Journal

What health trend does this graph reveal?
What factors might account for this trend?



Objectives

- Explain how HIV infection leads to AIDS.
- Describe how HIV is transmitted from person to person.
- Summarize the state of HIV infection and AIDS throughout the world.

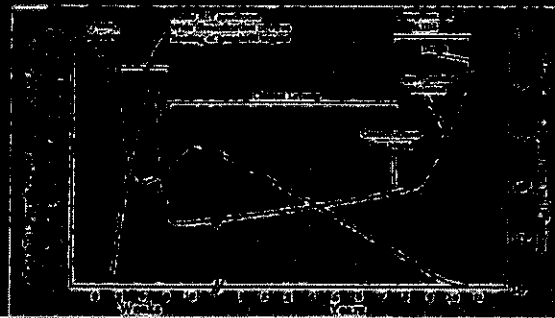
HIV Infection

- The most serious, incurable STI is caused by human immunodeficiency virus (HIV).
- CDC estimates about 1,218,400 people over the age of 13 are living with HIV
 - Including 156,300 (12.8%) unaware of infection
- HIV infection can lead to AIDS - Acquired Immunodeficiency Syndrome.

How HIV Attacks the Immune System

- Inside the body, HIV infects the helper T cells
- Virus reproduces and kills the T cell
- Doctors monitor number of helper T cells to monitor progression of the infection
- Fewer helper T cells and more virus particles means the infection is more advanced

T Cell Count and HIV Infection



Stages of HIV Infection

- **Asymptomatic Stage** - Initial flu like symptoms after infection that go away disappear within a few weeks; then lack of symptoms
- **Symptomatic Stage** - Symptoms begin to occur, may include weight loss, persistent fever, diarrhea, or fungal infections; may not appear until 7-10 years after HIV infection
- **AIDS** - Marked by a very low number of helper T cells in the blood; more severe symptoms; more susceptible to infections

Opportunistic Infection

- Infections that attack a person with a weakened immune system
 - Tuberculosis
 - Fungal infections
 - Pneumocystis Carinii Pneumonia (lung disease)
- Certain types of cancer also more common in people with AIDS
 - Cervical cancer
 - Kaposi's Sarcoma (skin cancer)
- Virus may attack brain and nervous system
 - Causing blindness, depression, mental deterioration
- Death usually caused by an opportunistic infection

Transmission of HIV

- **Sexual Contact** - Can be transmitted through any form of sexual contact; infected fluids can enter a person's bloodstream through tiny cuts in lining of mouth, vagina, rectum or opening of the penis
- **Shared Needles** - Needles for tattoos, piercings, injecting illegal drugs can transmit contaminated blood of an infected person
- **Contact with Blood** - Avoid all contact with others' blood
- **Mother to Baby** - Can pass to baby through pregnancy, birth or breastfeeding; if mother HIV positive - baby delivered by cesarean section and mother should not breastfeed

Safe Behaviors

- Not transmitted through casual contact (i.e. holding hands, hugging)
- Transmission through saliva, tears, perspiration unlikely



Safety of Donated Blood

- Risk of getting HIV from blood transfusions extremely small
- Since 1985, all blood collected in U.S. tested for HIV
- Blood donors screened for risky behaviors

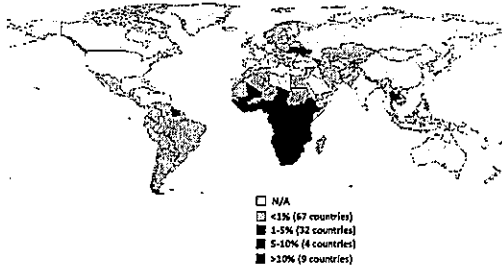
Question	Yes	No	Don't know
1. Have you ever donated blood?	12	83	5
2. Did you ever donate plasma or platelets?	12	83	5
3. Did you ever donate organs?	12	83	5
4. Have you ever had a transfusion on the last 12 months (Did not)?	12	83	5
5. Have you ever had a transfusion in the last 12 months?	12	83	5
6. Have you ever had a transfusion in the last 12 months (Did not)?	12	83	5
7. Have you ever had a transfusion in the last 12 months?	12	83	5
8. Have you ever had a transfusion in the last 12 months (Did not)?	12	83	5
9. Have you ever had a transfusion in the last 12 months?	12	83	5
10. Have you ever had a transfusion in the last 12 months (Did not)?	12	83	5
11. Have you ever had a transfusion in the last 12 months?	12	83	5
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28. Have you ever had a transfusion in the last 12 months (Did not)?	12	83	5
29. Have you ever had a transfusion in the last 12 months?	12	83	5
30. Have you ever had a transfusion in the last 12 months (Did not)?	12	83	5

A Global Problem

- Approx. 36.9 million people living with HIV/AIDS worldwide
 - 2.6 million under age of 15 years old
- Most affected region - Sub-Saharan Africa
 - 25.8 million living with HIV as of 2014
 - Accounts for almost 70% of the global total of new infections

Adult HIV Prevalence Rate, 2014

Global HIV/AIDS Prevalence Rate = 0.8%



NOTES: Data are estimates. Prevalence rates include adults ages 15-49.
SOURCE: Kaiser Family Foundation, based on UNAIDS, How AIDS Changed Everything, 2015.

High-Risk Groups

- People who engage in high-risk behaviors
- In many countries, young women represent the majority of new HIV infections
 - Due to lack of information on how to protect themselves and lack of power to protect themselves

Education and Prevention

- World Health Organization (WHO) and Joint United Nations Programme on HIV/AIDS monitor situation on HIV/AIDS
 - Main goal - HIV Education to prevent infection
 - Also coordinate treatment efforts for people already living with HIV/AIDS