

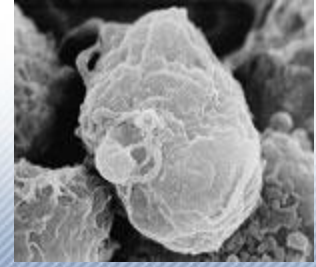


# Health and Disease Management Presentation HIV/AIDS



# Introduction

Electron microscope image of HIV, seen as small spheres on the surface of white blood cells ■



- **Introduction to the HIV Epidemic-**

**HIV** stands for human immunodeficiency virus. This is the virus that causes AIDS

- HIV finds and destroys a type of white blood cell (T cells or CD4 cells) that the immune system must have to fight disease.

**AIDS** stands for acquired immunodeficiency syndrome.

- AIDS is the final stage of HIV infection. It can take years (sometimes up to 10 years or more) for a person infected with HIV, even without treatment, to reach this stage.
- The **AIDS epidemic**, HIV continues to exact a tremendous toll in the United States. To date, more than 500,000 people have died of AIDS in the U.S.
- The epidemic continues to have a great impact on men who have sex with men (MSM). By risk group, MSM represent the largest population living with HIV (45%), followed by those infected through heterosexual contact (27%), individuals infected through injection drug use (IDU) (22%), and finally those who are both MSM and injection drug users (5%).



# Incidence and economic impact



## HIV/AIDS Surveillance and Cases of HIV Infections and AIDS in the U.S. and Dependent Areas-

- First case of AIDS in the US was reported in **1981**
- Last **25 years** epidemic has expanded to become one of the greatest public health challenges, both nationally and globally
- *HIV/AIDS Surveillance Report* marks the reporting of more than **1 million** AIDS cases since the beginning of the epidemic in the United States

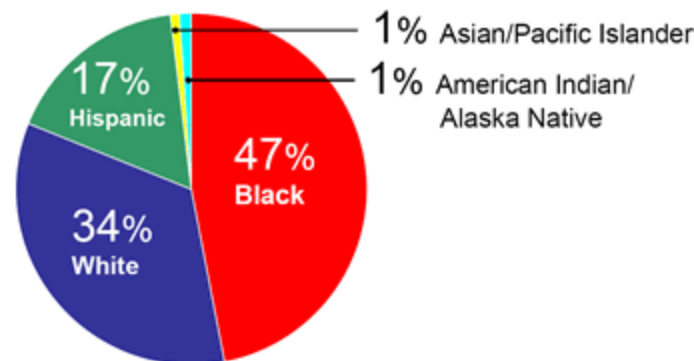


# Incidence and economic impact continued...

## Epidemic toll in the U.S.-

- The AIDS epidemic, HIV continues to exact a tremendous toll in the United States. To date, more than 500,000 people have died of AIDS in the U.S. and the latest estimates indicate that, as of the end of 2003, there are approximately 1,039,000 to 1,185,000 people living with HIV infection
- Approximately 40,000 new infections per year. Of particular concern is that approximately 25 percent of those infected with HIV are unaware of their infection
- Today the majority of those affected are people of color
- Out of the approximate 1 million people currently living with HIV infection:
  - 47 percent are Black
  - 34 percent are White
  - 17 percent are Hispanic
  - 1 percent are Asian/Pacific Islanders
  - 1 percent are American Indians/Alaska Natives

People Living with HIV in the U.S. — Race/Ethnicity



# Incidence and economic impact continued...



## Epidemic toll in the U.S.

- Great Epidemic impact on men who have sex with men (MSM) 45%
- Heterosexual contact 27%
- Individuals infected through injection drug use (IDU) 22%
- MSM and injection drug users 5%
- August 2008, CDC published (issue in JAMA) the first national HIV incidence (new infections) estimates using new technology and methodology that more directly measure the number of new HIV infections in the United States. Showed an estimated 56,300 new HIV infections occurred - a number that is substantially higher than the previous estimate of 40,000 annual new infections
- 25 years into the AIDS epidemic, HIV infection continues to exact a tremendous toll in the United States
- Recent data indicate that African Americans and gay and bisexual men of all races continue to be most severely affected (CDC, 2009)



# Incidence and economic impact continued -Summary of Persons living with AIDS)



The number of persons living with AIDS (AIDS prevalence) increased steadily from 2003 through 2007. At the end of 2007, an estimated **455,636** persons in the 50 states and the District of Columbia were living with AIDS:

- By race/ethnicity, African Americans continue to be most severely affected by AIDS
- 15.6 for Hispanics, 6.2 for American Indians/Alaska Natives, 5.4 for whites, and 3.7 for Asians/Pacific Islanders



# Incidence and economic impact continued

**Economic Impact-** Costs for research, treatment, and prevention are escalating out of control. The best weapon available against AIDS is:

- **Education**
  - **Preventive education**
  - **Action**
- Prevention is the best strategy for reducing the human and **economic** toll from HIV/AIDS
  - HIV/AIDS prevention efforts have been effective in helping to slow the rate of the epidemic. i.e. **HIV prevention pays programs**

**Common question regarding the economic impact of HIV/AIDS-**

- *What does medical care cost for a person who has AIDS?*
- *How do most people with AIDS pay for their medical care?*
- *Can people with AIDS get new health insurance?*
- *Can people who have HIV or AIDS get help paying their bills?*

- The federal government divides money for different AID/HIV activities as follows: (Example federal budget by percentage for year 2000)
- Research (19%)
- Prevention (8%)
- Treatment and Services (71%)
- International Efforts (2%)
- **Prevention Pays Resource-**
- **Comprehensive HIV Prevention**
- Essential Components of a Comprehensive Strategy to Prevent Domestic HIV
- [http://www.cdc.gov/hiv/resources/reports/comp\\_hiv\\_prev/pdf/comp\\_hiv\\_prev.pdf](http://www.cdc.gov/hiv/resources/reports/comp_hiv_prev/pdf/comp_hiv_prev.pdf)





# Typical Presentation of Disease

## Stage 1:

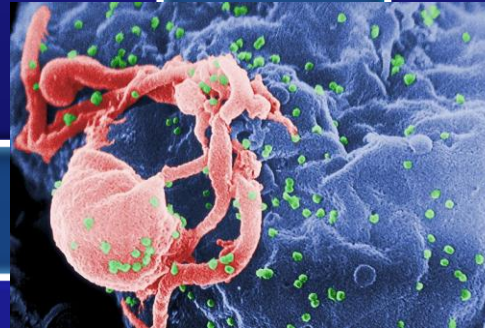
Acute Infection

Fever, fatigue, muscle pain,  
Decreased appetite

## Stage 2:

Asymptomatic HIV

Lymphadenopathy, Intermittent headaches  
T-lymphocyte may drop  
Cough



## Stage 3:

Symptomatic HIV

Early: Fever, Candida, herpes, night sweats

Late: Chronic diarrhea, cachexia, opportunistic  
diseases: pneumocystis-carinii and Kaposi's  
sarcoma

T count drops

## Stage 4:

Advanced HIV-AIDS

T count < 50, more persistent viral infections, seizures,  
confusion, blindness





# Specific Socio-cultural Needs



The nursing assessment / diagnoses *related to* the HIV disease process / epidemic in regards to the **socio-cultural needs** is vast, and needs professional consideration.

The socio-cultural **needs** encompass three areas:

- General Education
- Prevention Education & Action
- Governmental / General Funding



**AIDS is currently a worldwide epidemic or pandemic:**

- **Costs** for research, treatment, and prevention are escalating out of control

**HIV/AIDS and African Americans *Disproportionate Impact* is a major socio-cultural need:**

- African Americans are disproportionately affected by the epidemic; and account for about **13%** of U.S.A.'s population
- But accounted for nearly half of all new HIV diagnoses (49%) in 2006 (data from **33** states)
- Black gay and bisexual men and black women bear the greatest burden





## Specific Socio-cultural Needs continued...



The reasons are not directly related to race or ethnicity, but rather to some of the **barriers** faced by many African Americans. These **barriers** can include:

- poverty (being poor),
- sexually transmitted diseases, and
- stigma (negative attitudes, beliefs, and actions directed at people living with HIV/AIDS or directed at people who do things that might put them at risk for HIV).

**Psychosocial profile research of adolescents infected with HIV via high risk behaviors gave common *psychosocial stressors* reasons for *initial* HIV testing. Their study concluded that:**

- Infections with HIV via high-risk behaviors during adolescence occur in youth with multiple psychosocial stressors
- Targeted prevention efforts to reduce these underlying stressors may decrease new adolescent infection
- HIV-infected youth are best served a comprehensive care environment with immediate access to medical care, social work, and psychology/psychiatry services



# Current Therapies

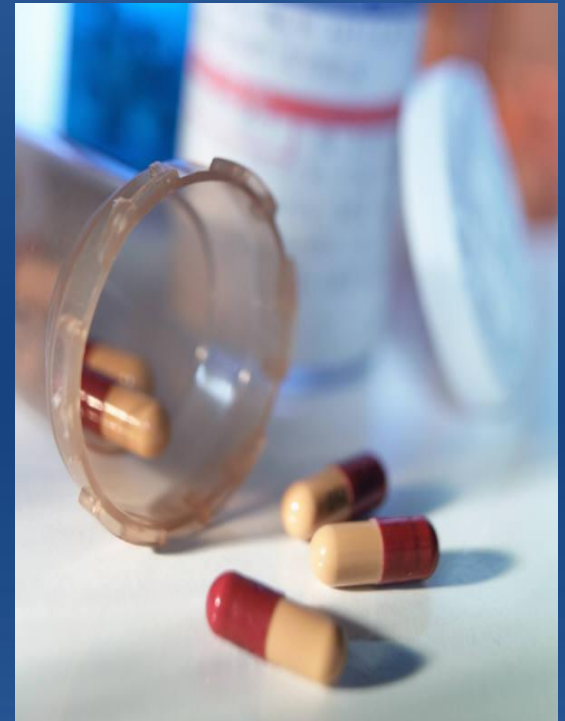
## Conventional Therapy

There are 3 classifications of HIV medications.

- NRTI's Nucleoside and Nucleotide Reverse
- Transcriptase Inhibitors
- Protease Inhibitors
- NNRTI's Non-Nucleoside Reverse Transcriptase Inhibitors

## Complementary and Alternative Therapies

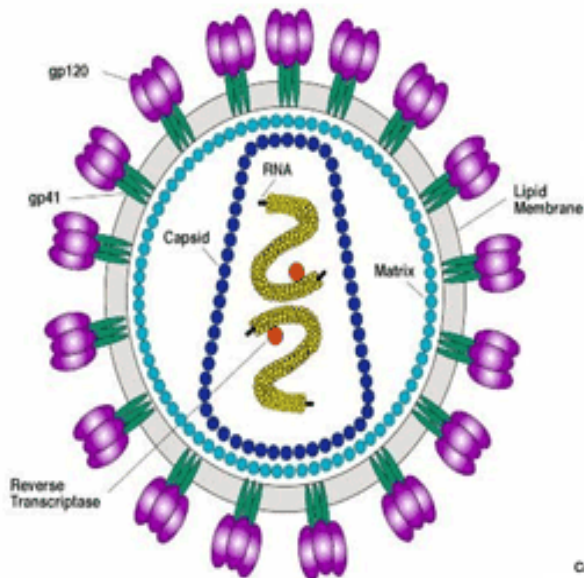
- Nutritional Supplements
- Homeopathy
- Chinese Herbal Medicine
- Acupuncture
- Mind-Body Therapies
- Meditation
- Hypnotherapy
- Massage Therapy
- Reiki Treatment





# Potential Learning Needs

## Organization of the HIV-1 Virion



## Be as healthy as possible

- Eat Healthy
- Exercise
- Avoid smoking and alcohol
- Avoid other STD's
- Regular medical & dental check-ups

## Work closely with your physician

- Drug Therapy
- Lab Tests
  - Viral load
  - CD4 count



# Resources Available



## HIV Education and Support

### **CDC**

(800)227-8922

[www.cdc.com](http://www.cdc.com)

### **National AIDS Information Clearinghouse**

(800)458-5231

### **National AIDS Hotline**

(800) 342-AIDS

### **National STD Hotline**

(800)227-8922

### **CDC Business & Labor Resource Service**

(877)242-9760

[info@hivatwork.org](mailto:info@hivatwork.org)

### **National HIV/AIDS Telephone Consultation**

(800) 933-3413

### **AIDS.gov**

### **Michigan Aids Hotline**

(800)872-2437

### **Muskegon Co. Health Dept. (Counseling)**

(231)724-1274



# References



- Brown, L.K., & Lourie, K.J. (2000) Children and Adolescents Living with HIV and AIDS: A Review. *Journal of Child Psychology and Psychiatry*, 41, 81-96.
- Cadman, J. (June 2004). Women and viral load. Retrieved June 16, 2009, from [http://www.thewellproject.org/en\\_US/Treatment\\_and\\_Trials/First\\_Things\\_First/viral\\_Load.htm](http://www.thewellproject.org/en_US/Treatment_and_Trials/First_Things_First/viral_Load.htm)
- Center for Disease Control and Prevention (CDC) & American Red Cross (ARC) Web site. Retrieved June 17, 2009.
- Community Research Initiative on AIDS. Retrieved on June 10,2009, from <http://www.criany.org>.
- Creagh, T. (March 2009). Women and HIV. Retrieved June 16, 2009, from [http://www.thewellproject.org/en\\_US/HIV\\_The\\_Basics/Women\\_and\\_HIV.htm](http://www.thewellproject.org/en_US/HIV_The_Basics/Women_and_HIV.htm)
- Department of Health and Human Services Centers for Disease Control and Prevention, April 2008. HIV/AIDS key resources. Retrieved June 17, 2009, from <http://www.cdc.gov/hiv/links.htm>
- Handbook of medical-surgical nursing (3<sup>rd</sup> ed.). (2002). Springhouse, PA: Springhouse Corporation.
- Highleyman, L. (July 2003). Tuberculosis; the well project. Retrieved June 16, 2009, from [http://thewellproject.org/en\\_US/Diseases\\_and\\_Conditions/Oppportunistic\\_Infections/Tuberculosis.htm](http://thewellproject.org/en_US/Diseases_and_Conditions/Oppportunistic_Infections/Tuberculosis.htm)
- Kadivar, H., Garvie, P. A., Sinnock, C., Heston, J. D., & Flynn, P. M. (2006, August). Psychosocial profile of HIV-infected adolescents in a Southern US urban cohort. *AIDS Care*, 18(6), 544.
- Krohn, J. & Taylor, F.A. (1999). Finding the right treatment modern and alternative medicine. Point Roberts, WA: Hartley & Marks Publishers, Inc.



# References (Continued)



- Margolese, S. (July 2003). Women and depression. Retrieved June 16, 2009, from [http://www.thewellproject.org/en\\_US/Diseases\\_and\\_Conditions/Other\\_Diseases\\_and\\_Conditions.htm](http://www.thewellproject.org/en_US/Diseases_and_Conditions/Other_Diseases_and_Conditions.htm)
- Neighbors, M. & Tannelhill-Jones, R. (2006) *Human Diseases* (2<sup>nd</sup> ed.). pg. 77-81 Clifton, PA: Thomson Delmar Learning.
- Office of National Aids Policy, The White House (2000). *Youth and HIV/AIDS 2000: A New American Agenda*.
- Peters, D., & Pelletier, K.R. (2007). *New medicine* (1<sup>st</sup> ed.). New York, NY: D.K. Publishing.
- Shernoff, M. (November 2006). Physicians Living with HIV/AIDS. *The body* 2(11). Retrieved June 16, 2009, from <http://www.thebody.com/content/are2467.html?ts=pf>
- Sparks-Ralph, Sheila & Taylor, Cynthia M. (2005). *Nursing Diagnosis Reference Manual* (6<sup>th</sup> ed.). pg. 672-673. Ambler, PA: Lippincott Williams & Wilkins Company.
- The American National Red Cross. (2003) *HIV/AIDS FACTS BOOK*. U.S. Centers for Disease Control and Prevention (CDC). Washington, DC: American Red Cross National Headquarters.