Tatek

Epidemiology of HIV/AIDS

Stanhope (2020), citing diverse sources that state HIV/AIDS is a worldwide health problem that affected over 36.7 million people, of which Sub-Saharan Africa accounts for more than half of all HIV infections, and women are at the highest risk for infection. Besides, the risk of infection is increased when there is infection with STIs like gonorrhea, syphilis, and chlamydia infection. (Stanhope, & Lancaster, 2020). HIV is mainly transmitted through unprotected sexual contact with an infected person and transmitted through contact with infected blood, transplacental or during breastfeeding from mother to child, exposure to infected body fluid, and sharing or reuse of needle. HIV transmission and progression of the disease ould be prevented. (Stanhope, & Lancaster, 2020).  For example, some of the primary, secondary, and tertiary prevention strategies include abstinence from having sex before marriage for young adults and school children, avoid risky sexual behavior and consistent and appropriate use of a condom, administration of prophylaxis medication after exposure to body fluid for health professionals, abstinence or adherence to HARRT therapy once infected, and screening and treatment to prevent mother to child transmission. (Stanhope, & Lancaster, 2020, P.334)

When we look at the global distribution of HIV-1 subtypes between 1990 and 2015, a systematic review study conducted by Hemelaar (2019) showed that globally, subtype C accounted for 46·6% of all HIV-1 infections, subtype B was responsible for 12·1% of diseases, followed by subtype A 10·3%, subtype D 2·7%, and subtypes F, H, J, and K combined accounted for 0·9%. Hemelaar (2019) argued that the distribution of HIV-1 subtypes and recombinants changed over time in countries, regions, and globally. (Hemelaar et al., 2019).  subtype B increased, subtypes A and D were stable, and subtypes C, G, and CRF02\_AG decreased; the change in the distribution of the disease is challenging; however, surveillance of the global molecular epidemiology of HIV-1 remains crucial for the design, testing, and implementation of HIV vaccines. (Hemelaar, J. et al., 2019).

The observed trained and mortality from hotspot study in the USA has indicated from 2008–2017, the overall rate of newly diagnosed HIV cases declined from 19 to 14 per 100,000 persons, with the Average Annual Percent Change (AAPC) reducing significantly in both the overall U.S. population (-3.1%) and the pooled data from the 57 hotspots (-3.3%).  (Segarra et al., 2021). The ten hotspots with the steepest declines were the District of Columbia, Baltimore City, New York County, San Francisco County, Philadelphia County, San Juan Municipio, Dekalb County, Kings County, King County, and Palm Beach County. (Segarra et al., 2021) The possible explanation for the declined trend could be the study analyses the HIV diagnosis, not HIV  incidence, HIV programs' effect that increases HIV funding levels, HIV testing, antiretroviral treatment, pre-exposure prophylaxis coverage, and other structural or policy interventions. (Segarra et al., 2021)

                                                                                              **Reference**

Hemelaar, J., Elangovan, R., Yun, J., Dickson-Tetteh, L., Fleminger, I., Kirtley, S., . . . Zhang, R. (2019). Global and regional molecular epidemiology of HIV-1, 1990–2015: A systematic review, global survey, and trend analysis. *The Lancet Infectious Diseases*, 19(2), 143-155. [http://dx.doi.org/10.1016/S1473-3099(18)30647-9](http://dx.doi.org/10.1016/S1473-3099%2818%2930647-9)

Segarra, L., Simmens, S. J., Castel, A. D., Kharfen, M., Masur, H., & Greenberg, A. E. (2021). Highly variable trends in rates of newly diagnosed HIV cases in U.S. hotspots, 2008-2017. *PLoS One*, 16(4). <http://dx.doi.org/10.1371/journal.pone.0250179>

Stanhope, M., & Lancaster, J. (2020). Public health nursing: *Population-centered health care in the community* (10th ed.). Elsevier.

Valerie

A current health issue that interests me is HIV/AIDS. This disease has impacted millions of people. There are still many individuals that live with this virus that have yet to be diagnosed. HIV/AIDS impact’s individuals all over the globe. According to Stanhope, there are three stages of HIV, the first stage is known as the primary infection which happens within 1 month of contracting the virus. The second stage is a time when the body shows no symptoms of the virus leaving the third stage to be the final one which is when individuals become symptomatic. When individuals reach the third stage, which is the final stage this is when HIV becomes AIDS. Nurses working in public health should become aware with the trends within the population affected with HIV so that they care provide care to those that may be at higher risks for transmission of this virus. "HIV is transmitted through exposure to blood, semen, transplanted organs, vaginal secretions, and breast milk (Heymann, 2014)." Over the years, the number of people infected with the virus has increases, but with the help of research and medicine, individuals have a longer life expectancy.  According to Stanhope, “The use of highly active antiretroviral therapy (HAART) had greatly increased the survival time of a person with HIV/AIDS.”

Primary prevention focuses on the community that has not yet been diagnosed with the virus and helps provide prevention strategies to help those individuals that may be at higher risk to contract the virus. Some examples for HIV prevention methods begin with access to condoms and health screenings for STDS and treatment. Secondary prevention strategies help those that are living with HIV to prevent further transmission to individuals thar are not infected. For those individuals that live with HIV, the tertiary prevention strategy for them is to help improve the quality of life and delay any further health complications that may arise. I personally do believe that the strategies mentioned in all three methods of prevention are modifiable factors. As nurses in public health all we can do is educate the community and provide the appropriate resources to better help individuals get the help they need. In my opinion it is solely up to each individual to take measures into their own hands as far as getting tested, using condoms when participating in sexual relations, letting their partners aware of their health status, even those individuals that are positive for HIV, they should be responsible in keeping up with their health visits to monitor their condition and also maintain in compliance with their medications.

Centers for Disease Control and Prevention. (n.d.). *The Global HIV/AIDS Pandemic, 2006*. Centers for Disease Control and Prevention. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5531a1.htm>.

Stanhope, M., & Lancaster, J. (2020). Public health nursing: *Population-centered health care in the community* (10th ed.). Elsevier.