HIV

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1. **Human Immunodeficiency Virus**

Human Immunodeficiency Virus (HIV) is a blood-borne disease, it basically attacks the immune system. When the immune system gets weak, the person loses the ability to fight illness and recover. This disease takes a long time to show symptoms, it might not make a carrier look or feel sick for years but still can infect others. A lot of people suffering from HIV feel healthy and normal until the very last stage when it turns into Acquired Immune Deficiency Syndrome (AIDS) so the only way to know if someone is affected is to be tested for it. It is a sexually transmitted disease that can be spread in case of contact with the infected blood, to a child from an infected mother during pregnancy or breastfeeding (Mayer & Beyrer, 2007). Unfortunately, medical science has not come up with the cure for this deadly disease but there are medications that help slow down the progression of AIDS in the body.

**Causes**

More than 89% of the HIV carriers acquire it through sexual contact. Mostly, drug addicts share needles and syringes which is a major cause of spreading HIV.
More than half of the people who are carrying this disease get to know about it at the very last stage so it is difficult to keep a distance from them in order to avoid any blood contact. Healthcare workers i.e. doctors and nurses are more likely to infect their patients if they are the carriers. In developing countries, there had been many cases where HIV was transmitted through blood transfusion in a local hospital.

**Symptoms**

Symptoms start to appear at the last stage beginning with flu and laziness. This flu lasts for more than a few weeks which is a major sign to get tested for HIV. Some other possible symptoms also include fever, Rash, Muscle and joint pain, swollen lymph glands, and severe headache. Medical science has been working to come up with the cure of this disease but the closest they have come to this goal is to develop a treatment that can lower its progression rate. With the proper medication, an HIV carrier develops AIDS in about 10 years. At this stage, the immune system is brutally damaged and the person is prone to catch other diseases i.e. cancer or opportunistic infections, etc. Recurring fever, drastic weight loss, soaking night sweats, rashes, and persistent fatigue are some of the signs that signify an unhealthy immune system.

**Complications**

A person with an extremely weak immune system is exposed to many types of deadly diseases and it is hard to treat more than 2 diseases at the same time. If the carrier of HIV travels or get in contact with a person who has flu, there are 100% chances that he’ll catch that flu. Drastic weight loss makes the person so weak that they are no longer capable of leading a normal life. A lung disease called Pneumocystis pneumonia is often common in HIV carriers. It builds up unnecessary fluids in the lungs and makes it hard for the person to breathe properly. At the advanced stage of AIDS, people also suffer from severe depression and different forms of Dementia. A type of cancer called Kaposi's sarcoma is very common in people with HIV.

**Treatment**

HIV treatment is mostly based on some precautions i.e. avoiding blood or sexual contact with anyone, staying at a sterilized room where there is no risk of bacteria or germs. Consuming purified food and drinks etc. At a very early stage, if a person feels that he/she might have caught the disease, there are some medications that can prevent it from spreading. In developed countries, HIV is mostly treated with the medication by the help of which the virus is stopped from replicating in the carrier’s body. As a result, the immune system gets stronger and gains strength to fight the disease for a longer period of time. People who are immediately diagnosed have higher chances of getting cured before HIV turns into AIDS.

**Demographics**

Back in the 1990s, HIV used to be a death sentence but with the latest inventions of medical science, the statistics have been improved. Almost 1 million people in the US, 36.7 million around the world have HIV and 15% of them don’t know that they have it. The states that have the highest HIV rate are New York, Texas, Florida and California. More than half of the people with HIV have low income and are unable to afford the treatment. As per statistics of 2017, 4 out of 5 people who had HIV knew about it and among those, 3 our out of four were getting treatment. Out of 59% HIV carriers, only 10% reached to the last stage and their disease turned into AIDS.

**HIV, A reportable disease**

As per the Public Health Agency, HIV is in the list of reportable diseases but only in those cases where the carrier has donated blood or organs. A person’s medical history is confidential and it cannot be revealed without the consent of the concerned person. But in some countries, it is important for the carrier to mention their health status in order to apply for insurance, prior to any sexual contact and for the visa interview.

**2. Contribution of Social determinants in developing HIV**

Social determinants include people we get in touch with on a daily basis, access to education and job opportunities, social support, culture, health care and exposure to violence and crime. These factors play a major role in determining a person’s lifestyle. People with low income and poor living standards are more likely to be involved in unhealthy sexual activities. Drug addiction and blood contact through needles and syringes is also a major cause of HIV among youth. The people we spend most of our time with i.e. at school, workplace or playgrounds have a major influence on our living habits. All these social determinants contribute to the increasing rate of HIV.

**3. Epidemiology Triangle of HIV**

Epidemiology triangle is the representation of any communicable disease which describes a disease according to host, agent, and environment. It is notable to mention that epidemiology triangle helps in getting a deep insight into the mode of entry of any communicable disease, in this case, HIV. It is important to mention that host can be any human or animal as it has the capability to provide adequate living conditions to HIV to penetrate in and infect the entire defence system. The human body is a potential host for HIV as it has a favourable condition for any infectious agent to exist under natural conditions. Scientists theorize that HIV was carried out by animals such as chimpanzees. It transferred to human beings who hunted them for meat. It is notable to mention that HIV can transfer through a bodily fluid like blood. Whenever blood comes in contact with any damaged human tissue or mucous membrane, it allows the penetration of HIV in that body. The most important part of the epidemiology triangle is the agent that penetrates in a human’s body and infect it. It is notable to mention that causative factor such as a chemical agent or biological agent in the case of this selected disease is HIV virus. HIV virus invades a susceptible host and remains in it due to natural and favourable conditions to grow. Outside factors may have the ability to affect an epidemiologic outbreak which can be catastrophic for any host, such as human beings. Third and the last factor in the epidemiologic triangle is the environment, which plays a vital role in making a human vulnerable to any communicable disease such as HIV.

It is noteworthy to mention that any factor that can speed up the growth of infection or disease in the human body is considered in the environment. However, one must understand the fact that these factors are not directly a part of the host or the agent. Certain external conditions such as the accessibility of necessary medical facilities, temperature or quality of drinking water can affect the ability of an agent to thrive. Individual vulnerability to HIV/AIDS can be shaped through the health of the local environment in at least two ways. Desperate economic circumstances are somehow responsible to increase the risk of HIV infection as it engages humans in ‘transactional sex’ for material goods. Natural resource scarcity is also a potential environmental factor that may lead to inadequate diet and food insecurity. HIV is more susceptible for people whose immune system is usually undermined through inadequate diet. Communities with lower incidences of reporting and higher concentrations of the sexually transmitted disease usually allow HIV to flourish. It is noteworthy to mention that HIV epidemiology is monitored through different systems such as biological surveys, clinical data collection, and case reporting. In the case of Australia, HIV usually has been characterized by sexual transmission among men (Prestage et al., 2008). HIV is growing in Australia through sexual transmission among men as per Gay Community Period Surveys (Murray et al., 2011). However, in the last few years, there is a dramatic reduction in HIV in Australia from 31 per cent in 1995 to 16 per cent in 2014. Induction of HIV infectious virus in a human body is also due to the injection of the drug by using used injections. People who inject drugs are more susceptible to HIV infectious virus due to the receptive syringe sharing (Mayer & Beyrer, 2007). The receptive syringe contains the blood of the first person, and if that person is suffering from any infection then the second person is more likely to get an infection as it is direct transmission through the skin.

**4. Role of Community Health Nurse**

The role of community healthcare nurses can never ignore when it comes to improving HIV treatment outcomes. Health promotion and proper education about the disease of HIV is only possible by assuring the proper intervention of the nurses working at community healthcare level. The major objective of the community health nurse is to critically focus on short and long-run care and treatment considering the approach of disease prevention. The work of the community healthcare nurse includes to avert or control the massive spread of communicable disease such as the growing concern of HIV in different regions of the world. Community health nurse needs to directly work with the patients and support them during the entire process of disease treatment. The major task appeared in case of HIV for community health nurse is to enhance awareness at the community level about all the hazards associated with the issue of HIV. A critical exploration of the former case findings and analysis of different healthcare reports can be helpful to figure out the actual responsibilities of the community health nurse to attain the actual objectives of healthcare services. At the global level, there are many community healthcare nurses who work in different settings with people to better deal with the issue of the human immunodeficiency virus (HIV).

The active and crucial role of community health nurse can better understand through the specific case study of homeless people living in the country with the disease of HIV. The case study relevant to the main idea of people living with HIV (PLHIV) conducted by Elizabeth Crock in the context of homelessness individuals who suffered from the issue of HIV (Crock, 2016). The focus of this practical research approach to determine specific strategies that can be helpful for the community health nurse to provide better healthcare aid to the individuals in the community who are recognized as the homeless population. It is essential for the community healthcare nurse to attain detailed statistics about the disease to offer better healthcare intervention programs for the patients (Crock, 2016). Collection of the demographic data of the community is immensely crucial to recognize the actual circumstances and the magnitude of the issue of HIV that prevails in society.

**5. National Organisation**

Founded as a non-profit organization in 1988, the International AIDS Society (IAS) is one of the largest associations in the world that deal with HIV professionals. It was founded in Stockholm, Sweden and has members from more than 180 countries working together to mitigate the risks associated with the spread of HIV and AIDS. It uses it membership base, coupled with scientific authority as well as their convening power to work towards a global HIV response that not only educates individuals on precautionary measures, but it also works towards finding a cure to the disease. This can ultimately reduce the global impact of HIV and enable individuals to put their best foot forward in terms of reducing the global impact of HIV. The IAS members include researchers from all disciplines, public health Practitioners, clinicians, policymakers, and even programme implementers. It is also responsible for organizing two of the world’s most notable conferences, i.e. the IAS Conference on HIV Science and the biennial International AIDS Conference.

The IAS operates from its headquarters in Geneva and is considered a part of the Global Health Workforce Alliance by WHO. The IAS works with a number of regional societies that work towards providing relief and mitigating the risks associated with HIV and AIDS. It. also runs the Industry Liaison Forum, with the primary objective of removing any and all barriers from research by investing in the pharmaceutical industry. Additionally, it also works towards the professional development of HIV professionals in both regional and international efforts being made.

**6. Global Implications of HIV**

HIV has always been and still continues to be a major public health concern that has claimed more than 35 million lives to date. In 2017 alone, more than 940,000 deaths have occurred as a direct result of HIV-related illness. According to another estimation, 36.9 million people are living with the illness, with 1.8 million estimated to be directly affected by the disease. Additionally, 59% of adults and more than 52% of the children affected with HIV have received and will continue to receive lifelong ART i.e. Antiretroviral Therapy in 2017. Even to date, there is no cure to the illness and the drugs being administered to control it aren’t nearly sufficient to mitigate the risk associated with the disease.

Add in the prevalence of cultural stigma associated with the disease, the people that suffer from the disease are often isolated by their peers and left to their own devices. They are marginalized and treated as less than human. It keeps them for seeking medical assistance and even hinders access to medication that can help them in the long run. It is notable to mention that people are diagnosed late which contributes towards an unwillingness to take an HIV test. (Mayer & Beyrer, 2007).

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