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Epidemiology Paper

HIV Prevention

There are many concerns regarding the health of the public. As nurses, particularly community health, it is our duty to serve our clients rightfully and be as efficient as we possibly can. As nurses providing for the community, it is our contractual obligation to collaborate, advocate, manage and research. (Allender, 2010) Evidence based practice is crucial in improving healthcare delivery. Research and epidemiology are factors that contribute to this common goal and it is the role of the community health nurse to furnish the most recent information to their clients.

There are many objectives for the Healthy People 2020. The one in which we have chose interest in is the HIV epidemic in America. The Goal for 2020 is: Prevent human immunodeficiency virus (HIV) infection and its related illness and death. According to Healthy People 2020, the HIV epidemic in the United States continues to be a major public health crisis. An estimated 1.1 million Americans are living with HIV, and 1 out of 5 people with HIV do not know they have it. HIV continues to spread, leading to about 56,000 new HIV infections each year. In 2010, the White House revealed a National HIV/AIDS Strategy which included 3 prime goals.

These goals include:

1. Reducing the number of people who become infected with HIV.
2. Increasing access to care and improving health outcomes for people living with HIV.
3. Reducing HIV-related health disparities.

(<http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicId=22>)

Although HIV is a deadly disease, it is preventable. Prevention interventions have been shown to be effective in decreasing the transmission of HIV. Those who get tested positive can make important behavior changes to improve their health and reduce the risk

of transmitting HIV to their drug using and sex partners. More than 50% of new HIV infections arise as a consequence from the 21% of those who do not know that have it.

People with HIV are living longer and healthier due to the progressively more useful treatments available today. Since the 1990's, deaths from HIV have very much declined in the United States. It will be more significant than ever to maximize national prevention and health care programs for HIV as the rates of HIV increase. It has been noted that there are indeed disparities in new HIV infections. These disparities include gender, race and ethnicity. Almost 75 percent of new HIV infections occur in men. More than half occur in gay and bisexual men, despite of race or ethnicity. Forty-five percent of new HIV infections occur in African Americans, 35 percent in whites, and 17 percent in Hispanics.

(<http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicId=22>)

In the Healthy people 2020 report, there are a number of objectives to look at. Some of the main objectives are:

- 1.
 2. Reduce new (incident) HIV infections among adolescents and adults
 - 3.
 4. Reduce the number of new AIDS cases among adolescents and adults
 5. Reduce the number of new AIDS cases among adolescent and adult heterosexual
 6. Reduce the number of new AIDS cases among adolescent and adult men who have sexual relations with mens
 7. Reduce the number of new AIDS cases among adolescents and adults who inject drugs
 8. Reduce the number of perinatally acquired HIV and AIDS cases
- (<http://www.plannedparenthood.org/health-topics/stds-hiv-safer-sex/hiv-aids-4264.htm>)

With this current issue, New York State has taken several steps to try and bring about solutions to this epidemic. In late 1990, the Ryan White Human Immunodeficiency Virus Program, a federal program, was developed to serve uninsured or underinsured HIV+ individuals, or those that cannot afford services needed. It came about in honor of Ryan White, a hemophiliac whom became infected with HIV after receiving blood. After his diagnosis, he dedicated his time to teaching the public about HIV and AIDS. After his death in April 1990, the program was established. The program acts as a last resort to pay for services. For example, when other programs, such as Medicaid, Medicare, Center for Disease Control and Prevention, Veterans Affairs Administration, NYS Dept of Health cannot fund the services, the Ryan White Program takes effect to help pay for services needed. The program implemented a priority setting tool to help determine the core and non-core needs of the HIV population. With a decrease in available resources and an increase in the number of HIV cases, resource allocation has become a pivotal factor in controlling the HIV epidemic.

In a study posted in the Morbidity and Mortality Weekly Report, statistics showed that out of 77% of HIV-infected adults that were receiving medical care, only 51% actually continued to receive medical care. Only 28% of the HIV population had a suppressed viral load; this is because testing, ongoing medical care and adherence to the medication regimen need to be improved. The research also showed that many newly diagnosed HIV patients were not offered HIV prevention services the preceding year by their healthcare providers. Healthcare providers need to deliver HIV prevention services more frequently.

There are various ways nurses can help reduce the rate of HIV transmission. These include avoiding needle sharing, practicing safe sex, HIV testing on pregnant women to prevent perinatal transmission and interventions to help the HIV population adhere to their treatment regimen.

Drug use is a major problem that results in contracting HIV. Sharing needles has been shown to be the source of transmission in drug abusers. In order to decrease the incidence of needle sharing, Needle exchange programs have been established to prevent transmission of blood borne diseases. “There is clear evidence that needle exchange programs have reduced HIV transmission rates among injecting drug users in areas where they have been established. One of the most definitive studies of needle exchange programs was carried out in 1997, focusing on 81 cities worldwide. It found that HIV infection rates increased by 5.9 percent per year in the 52 cities without needle exchange programs, and decreased by 5.8 percent per year in the 29 cities that did provide them. A study of HIV among I.D.U.’s in New York between 1990 and 2001, found that HIV prevalence fell from 54 percent to 13 percent following the introduction of needle exchange programs.” In 2004 the World Health Organization (WHO) released a report that reviewed the efficiency of needle exchange programs in many countries, and investigated whether they encouraged or expanded illicit drug use. The results produced compelling confirmation that needle exchange programs considerably reduce HIV infection, and no evidence that they support drug use. (<http://www.avert.org/needle-exchange.htm#contentTable1>)

As the community health nurse one of the roles are advocacy. Referring clients to appropriate agencies is extremely significant in order to maintain optimal health.

Introducing the client to various programs where they can obtain sterile needles prevents them from exchanging needles, thus getting infected by other HIV carriers. Counseling is also another option where the nurse may refer the client to help them gain information and obtain resources to these services. Another role the nurse acts as is educator. Holding educational meetings in a community center to inform residents of the services available is also essential. These meetings can take place in a church or religious center, a citizen center, or any day center where people attend services.

Prevention of sexual transmission of HIV is another solution that is effective in impeding the occurrence of HIV in the public with the use of contraception and sex education. According to UNAID's 2004 Global Report on the AIDS Epidemic, 'ABC' stands for:

- Abstinence (not engaging in sex, or delaying first sex)
- Being safer, by being faithful to one's partner or reducing the number of sexual partners
- Correct and consistent use of condoms

(<http://www.avert.org/abc-hiv.htm>)

As the years change, so does society. Although it is unrealistic to prevent people from having sex, prevention in transmitting HIV sexually is possible. “Condoms, when used consistently and correctly, are the only form of protection that can help stop the transmission of sexually transmitted diseases (STDs) such as HIV, and prevent pregnancy.” There are condoms available to both men and women, as well as different sizes and shapes. Condoms are also given out free of charge at designated areas to everyone, regardless of income, gender or age. Sex education is also important in

prevention by providing the community with the knowledge they need regarding the risks and consequences of unsafe sex practices. Sex education is especially critical for adolescents in which it builds a foundation to prevent unhealthy sexually activity.

(<http://www.avert.org/abc-hiv.htm>)

The nurse's role in this solution is an educator. The nurse could educate the community and teach them about unsafe sexual practices and the risks involved. The community health nurse could also hand out condoms in centers where residents attend.

The nurse could answer specific questions regarding condom utilization such as:

- What about the condom size?
- Where can I get condoms?
- Where can I get condoms?
- How can I check a condom is safe to use?
- When and how do you use a condom?

Discussing the client's concerns in detail guarantees the best comprehension for the matter. After explaining how to put on a condom the nurse should then have the client do a return demonstration to ensure the client obtained the most advantageous knowledge on the subject. (<http://www.avert.org/abc-hiv.htm>)

Another solution is to prevent mothers from infecting their unborn children with HIV. Pre-screening mothers and infants for HIV should become routine for early diagnosis and intervention when needed. In a research study conducted to find out how much women really knew about protecting their children from HIV, they found that 40% of African American women and 50% of Hispanic women were unaware of medication to prevent perinatal transmission of HIV. The study also concluded that 86% perinatal HIV

transmission cases were from African American and Hispanic women; this is due, in large part, to the lack of timely HIV testing. A survey was given to explore the barriers to HIV education and the best way to address the issue. Research found that women who are educated about preventive perinatal HIV transmission are more likely to get tested. Most African American and Hispanic cited that the media was their leading source information. This encouraged the CDC to launch a 5-year national media campaign promoting HIV testing. The researchers believe that educating the public about HIV testing is the most crucial intervention for preventing perinatal HIV transmission, as well HIV testing on 100% of pregnant women. As a public health, it is important to encourage HIV testing on all pregnant mothers, with a major focus on the African American and Hispanic populations. Extensive teaching of all prevention strategies should be addressed.

HIV transmission could also be prevented when the HIV population adheres to their treatment plan. When this is done, their viral load is low and reduces chances for transmission to others. A phenomenological research study was done to HIV+ individuals to explore possible reasons as to why some don't adhere to the regimen. There were four main areas of focus. The first focus was noting the patient's acceptance of the fact that they were HIV+. Many struggled to accept it the first place, which caused them to avoid seeking treatment options. They felt that adjusting their lifestyle completely and taking daily medications reminded them of the fact that they had to live with a condition that carried a stigma. However, becoming aware of deaths and complications associated with avoiding treatment allowed them to choose to learn how to live with the condition.

The second focus was giving the patients strategies to adhere to the treatment plan and managing side effects. Teaching about the proper medication administration and incorporating it into their current lifestyle can make the coping process easier. For example, teaching to take medications with breakfast every morning or using vitamin boxes to help remember to take them.

Another focus was the patient's relationship with the healthcare provider. Some of the participants verbalized adherence to the treatment plan after their healthcare provider explained the mechanism and benefits of the medications. It is important that this population feel a great deal of support and attention to help them cope and manage their diagnosis appropriately.

And lastly, the results of their CD4 counts and viral load helped patients adhere medication therapy. It acted as a motivator for them to continue their regimen. Some reported deterioration of physical status after stopping their medication and a better physical health after once again adhering to the regimen. The research study concluded that the decision to start and continue adhering to HAART is a process that requires support and attention. The public health nurse must keep this in mind. He/she must be sensitive to the patient's diagnosis, support the patient, as well as the family and be available to answer any questions or concerns they may have. This will help the patient continue their treatment plan and decrease risk of the HIV transmission.

Advocating, teaching and establishing relationships with our communities are crucial interventions to help reduce the HIV transmission. Public health nurses play a major role in this current epidemic. With existing and future research and evidence-based

practice, healthcare providers can become more aware of ways to help society prevent acquiring and transmitting HIV.

References

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