

Sexually Transmitted Infections in Hillsborough County

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Sexually transmitted infections (STIs) are an important health issue because there are approximately 19 million newly diagnosed STIs each year in the United States and half of these cases occur in the younger population (15 -24 years of age) (HHS, 2014). The state of Florida has 402 newly diagnosed cases a year per 100,000 persons (County Health Rankings and Roadmaps, 2015). Hillsborough County in Florida has a significantly higher rate of STIs when compared to the state as a whole, ranking at 556 newly diagnosed cases a year (County Health Rankings and Roadmaps, 2015). Healthy People 2020 created a goal to reduce the incidence of STIs by promoting healthy sexual behaviors, strengthen community capacity, and increase access to quality services to prevent sexually transmitted infections and their complications (U.S. Department of Health and Human Services [HHS], 2014). The rate of STIs could be reduced by providing better education and more accessible STI screening and treatment programs.

### **Data Summary**

The state of Florida consists of 67 different counties. One of these counties is Hillsborough County which is located on the west coast of central Florida. Hillsborough County is 1,136 square miles and its land use is both urban and rural in different areas. The top 3 land uses of Hillsborough County are urban and built up (46.16%), agriculture (19.31 %), and wetlands (17.38%) (Hillsborough Community Atlas, 2012). As of 2010, Hillsborough is populated with 1,229,226 people with 1,082 persons per square mile (Hillsborough Community Atlas, 2012). The majority of this population consists of young and middle aged persons between the ages 18-64 years which make up 61% of the population (Hillsborough Community Atlas, 2012)., There is a fairly even gender distribution – 49% male and 51% female

(Hillsborough Community Atlas, 2012). The top four employers of Hillsborough County include Hillsborough Co. School Board (25,487 employees), Verizon Communication Corp. (14,000 employees), University of South Florida (11,607 employees), and Hillsborough Co. Government (10,886 employees) (Hillsborough County Government, 2009). The major health care systems in Hillsborough include Baycare Health Systems, Florida Hospital, Tampa General Hospital, Moffitt Cancer Center, and the Veterans Association.

Out of Hillsborough County's population, 15% of persons live below poverty level (Hillsborough Community Atlas, 2012). This percentage is compared to the state of Florida which reports 15% of persons living below poverty level. The percentage of population over the age 25 with a high school diploma in Hillsborough County is 86% which is the same percentage as the state of Florida (United States Census Bureau, 2014). The percentage of population over the age 5 that does not speak English is 9.7% compared to 11.6% in the state of Florida (Hillsborough County Health Department [HCHD], 2011).

### **Strengths and Needs in Hillsborough County**

Overall, every county has areas of health strengths and areas of health weaknesses. By analyzing these strengths and weakness, one is able to determine areas that need to be improved and develop ways to promote health. Some health strengths of Hillsborough County include physical activity, the ratio of population to primary care physicians, and air pollution. According to County Health Rankings, Hillsborough County has a physical inactivity rate of 22% as compared to 23% in the state of Florida (County Health Rankings and Roadmaps, 2015). This means that Hillsborough County has slightly more physically active adults than compared to the state of Florida. This is important because physical activity is a behavior that

promotes good health. Another strong area of Hillsborough County's health ranking is the ratio of population to primary care physicians. When compared to the state of Florida, Hillsborough County has a better ratio of population to primary care physicians (Hillsborough 1,280:1 to Florida 1423:1) – meaning that there is less patients to every doctor which could lead to better care for those patients (County Health Rankings and Roadmaps, 2015). Also, Hillsborough County has a lower rate of air pollution when compared to the state of Florida - 10.9 compared to 11.4 (County Health Rankings and Roadmaps, 2015). This means that the average daily density of fine particulate matter in the air is less per cubic meter than in the state of Florida as a whole.

Some weaknesses of Hillsborough County include high rates of sexually transmitted infections (STIs), high rate of excessive drinking, and a lower rate of mammography screening. Hillsborough County has a high rate of sexually transmitted infections when compared to the state of Florida - 556 compared to 402 (County Health Rankings and Roadmaps, 2015). This means that number of newly diagnosed STI cases per 100,000 persons is greater in Hillsborough County than compared to average in the state of Florida. Another weakness of Hillsborough County is the percentage of excessive drinking rates. Hillsborough County has an excessive drinking rate of 19% compared to 16% in the state of Florida (County Health Rankings and Roadmaps, 2015). Also, Hillsborough County has a lower rate of mammography screening when compared to the state of Florida. Hillsborough County has a mammography screening rate of 63.2% as compared to 67.7% in the state of Florida (County Health Rankings and Roadmaps, 2015). This means that fewer women are being screened in Hillsborough than overall in the state of Florida which can lead to higher cases of cancer.

The incidence of sexually transmitted infections is alarmingly high in Hillsborough County. When compared to the state of Florida, Hillsborough County has 145 more newly

diagnosed cases per 100,000 persons – this comparison is significantly higher (Hillsborough 556 to Florida 402) (County Health Rankings and Roadmaps, 2015). In addition to these reports the trend in Hillsborough county of STIs has been increasing over the years, which makes this a major health issue (County Health Rankings and Roadmaps, 2015). Healthy People 2020 created a goal to reduce the incidence of STIs by promoting healthy sexual behaviors, strengthen community capacity, and increase access to quality services to prevent sexually transmitted infections and their complications (U.S. Department of Health and Human Services [HHS], 2014). STIs are an important health issue because there are approximately 19 million newly diagnosed STIs each year in the United States and half of these cases occur in the younger population (15 -24 years of age) (HHS, 2014). This is concerning because STIs can be asymptomatic and go undetected which can lead to serious long-term health complications, especially in younger women – untreated STIs cause infertility in an estimated 24,000 women a year in the U.S (HHS, 2014). Not only are high rates of STIs causing health issues but it is costing the U.S. healthcare system approximately \$15.9 billion annually (HHS, 2014).

### **Discussion of Community Health Models**

The Determinants-of-Health model allows community health nurses to assess different factors that affect the health of individuals and communities. According to the World Health Organization, “whether people are healthy or not, is determined by their circumstances and environment” (World Health Organization, 2014). The Determinants-of-Health model can assist a nurse to develop interventions aimed at a population based health issue by first assessing what factors are contributing to the problem and then focus on addressing those factors. Different factors contribute to the development and spread of STIs. STIs are acquired during unprotected sex with an infected partner. Biological factors that affect the spread of STIs include

asymptomatic nature of STIs, gender disparities, age disparities, and lag time between infection and complications (HHS, 2014). STIs are often asymptomatic at first so individuals do not even know they have an infection and continue to have sex. Sometimes individuals do not find out they have an infection until after they have developed complications, which can be weeks to years after contracting the infection. Women tend to develop STIs more often than because of their anatomy. Also, women tend to develop more serious complications than men. STIs more often occur in adolescents and young adults which puts them at an increased risk. One's environment and lifestyle can affect the development and spread of STIs. Poverty and marginalization contributes to STIs because people in those groups are generally a part of social networks where high-risk sexual behavior is common and live in areas where either access to care or health-seeking behavior is compromised. Some lifestyle factors include substance abuse, sexual behaviors, and cultural norms concerning willingness to seek care. Some health system factors that contribute to high STI rate in Hillsborough County include difficulty accessing and affording care. The population of Hillsborough County has an increased risk of sexually transmitted infection complications due to the high rates of sexually transmitted infections in the area as evidenced by the Florida charts statistics comparing Hillsborough to the state of Florida.

### **Community Based Interventions**

Population-based interventions can occur at different levels to prevent the development, spread, and complications of sexually transmitted infections. The Prevention Model divides interventions into three different levels with specific focuses for each level. Primary prevention focuses on preventing and maintaining health of a person or population. Secondary prevention focuses on screening those at risk or those who may have the infection. Tertiary prevention occurs when diagnosis has already been made. The interventions that should take place would

be aimed at the individual/family and community level because it involves individuals changing their life-style and behaviors, as well as, high risk groups within the population.

The primary level of prevention to reduce the incidence of STIs would be community-wide education. This intervention would be considered health teaching under the Intervention Wheel. The education would consist of risk factors/behaviors, signs and symptoms, and ways to prevent STIs including abstinence and use of condoms. In the education of risk factors/behaviors it would be important to include oral sex as a behavior that can lead to STIs because many people believe that it is not considered “sex”. Also it is important to provide education about sexual networks – the “links” between sexual partners (HHS, 2014). This means that even if a person may only have one sex partner, they have to consider who their partner has been with and if they are a member of a risky sexual network. The education should be sure to include human papilloma virus (HPV) because of its high prevalence and the fact that it does not have a cure. It is important to provide education about signs and symptoms during this level of prevention so that individuals can seek medical screening or treatment if they begin to experience symptoms. As far as education on preventing STIs, it is important to explain healthy sexual behavior, stressing abstinence as the best way but including the impact of condom use. It would be beneficial to provide free condoms with the community teaching. Since the high risk population is adolescents and young adults this education should be shared beginning in school-aged children. According to Fohran et al. (2009), STIs “begin to be acquired soon after initiation and with few partners”. Fohran et. al. suggests STI education and screening early on in life, well before the start of sexual activity (Fohran et al., 2009). The information should be continued to be reminded throughout life. The stakeholder in whom the intervention is geared is community

members. The role of the community health nurse would be to plan the presentation and educate community members at schools and other areas in the community.

The secondary level of prevention to reduce the incidence of STIs would be STI testing. This intervention would be considered screening under the Intervention Wheel. This intervention would include testing services and examinations, diagnosis and reporting, and treatment. Free testing services and examinations would be beneficial in reducing the occurrence of STIs. Free testing services at school would be a good idea for adolescents who are concerned what their parents would think and for better accessibility. Individuals would be able to be diagnosed and treated to prevent long-term complications. During this intervention, individuals can be prescribed antibiotics if necessary and possibly receive information about free or discount medications available. Additional education should be given at this screening level to reinforce information regarding STIs and healthy sexual behavior. The stakeholders toward whom this intervention is geared is the community members, health care providers, and funding sources. The community health nurse would be responsible for obtaining patient medical and sexual histories, prepping the client for the testing and examinations, testing the client, explaining treatments and medications, and providing resources for the client.

The tertiary level of prevention to reduce the incidence of STIs would be follow-up care with individuals diagnosed and/or being treated for STIs. This intervention would be considered referrals/follow-up care under the Intervention Wheel. The interventions during this level of prevention would include monitoring individual's compliance with education and treatment – asking about any changes in behavior. It would also include monitoring the treatments effects – if antibiotics resolved the issue, any complications, follow-up pap smears (if HPV positive) or testing. Individuals may have to deal with STI consequences including reproductive health



problems, cancer, fetal and perinatal health problems. Education should be provided on preventing further negative impacts on health and preventing the spread of STIs. Stakeholders toward whom the intervention is geared include community members, health care providers and funding sources. The community health nurse's role during this level of prevention would be obtaining follow-up information, additional testing, and providing additional education.

### **Proposed Health Policy**

Health policies are an important tool consisting of plans and actions used to achieve a specific healthcare goal in a community. The suggested health policy would be mandatory sexual health education, as well as, free and accessible testing and condoms in Hillsborough County. Since the incidence of sexually transmitted infections are the highest in adolescents and young adult population, sexual education should be mandatory part of the school curriculum and preferably begin in middle school. There should also be more accessible testing and condoms for this population. It would be beneficial if schools had STI programs (including screenings, treatments and condoms available). According to Cohen et. al., the inclusion of STI testing and treatment programs into the school setting will have a major impact on reducing the nation's bacterial STI rates (Cohen et al., 1999). Also, health provider offices should include a questionnaire screening and offer STI testing on every visit for patients. The goal of this health policy is reduce the rates of STIs in Hillsborough County by providing education and more accessible STI screening and treatment programs. Stakeholders affected by the proposed health policy include community members, public officials (such as school board members), healthcare providers, and funding sources. Community members and healthcare providers should be supportive of the health policy and its hope to reduce the rate of STIs and promote healthy sexual behavior. However, some community members may be in opposition to mandatory sexual

education in public schools. Public officials must approve the sexual education and STI programs for it to be included in the school setting. Funding sources may be opposed to providing free STI testing and treatment programs.

The first steps toward presenting the health policy proposal is presenting the issue of STI rates in Hillsborough to the community members and gaining their support. The next step would be picking a healthcare representative to explain the prevalence of STIs in this county and the need for more education to county officials, especially the public school board. If the school board agrees to allow sexual education to be part of the curriculum then that initiates the integration of STI reduction and prevention programs in school settings. There would also need to be changes recommended to healthcare provider offices that could be implemented by conferences and seminars encouraging the promotion of offering STI screening and treatment on every visit. The funding sources would need to be on board with this policy as well. The healthcare representative could present information on the need and potential impact that free STI testing could have on managing and reducing STI rates in the county to the funding sources to gain their approval and participation.

The proposed health policy could have a major impact on reduction of STI rates in Hillsborough County. The most vulnerable population of STIs is the adolescent and young adult population. The proposed health policy is geared to the Hillsborough County community as a whole, but focuses mainly on the school-aged children to hopefully reduce the rates of STIs in this high risk age group. In general, the policy enhances population health by providing better education and more accessible STI screening and treatment programs. The hope of this policy is that if the community is receiving more education at a younger age these members have the potential to grow and become a population with healthy sexual behaviors due to education.

**Conclusion**

Every county has its own health strengths and weaknesses. As a health care provider it is important to know the surrounding area's health issues that need to be addressed in order to promote a healthier community. Hillsborough County has an alarmingly high rate of STIs which is a health concern not only to this community but to the nation as seen by Healthy People 2020 goal directed at reducing STI rates. The goal of these proposed interventions and health policy is to benefit the community by providing better education and care at little to no cost which has the potential to ultimately reduce the rate of STIs in Hillsborough County.

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