

The Social Determinants of Health in Relation to Sexually Transmitted Infections in Maricopa County Arizona

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Abstract

Based on the information that was collected on the County Health Rankings website [1], one of the top health concerns for Maricopa County was sexually transmitted infections or STIs. A big concern with STIs is this is not a common subject explored in educational settings or addressed socially. There are many organizations, including the CDC, that have access to materials, there is limited distribution of the educational content. Therefore, the public is not well informed and lacks the information to make educated decisions. The areas with insufficiencies are knowledge of the disease processes, prevention, and treatment.

Keywords

STI, Infectious Disease, Maricopa, Arizona, Sexually Transmitted Infections, Public Health, Disease Prevention, Sexual Health, Sexual Health Education

1. Summary of How the Proposed Policy Will Address the SDOH in My Community

The proposed policy is to increase the accessibility to educational material on STIs among young adults and teens in the colleges and schools within Maricopa County. This policy involves the curriculum addition of STI education to include signs & symptoms, treatment, prevention, and long-term effects from these diseases. This intervention will include a survey given to the students before and after education has been provided. This will give an understanding of the information attained through the curriculum presented. The primary goal in implement-

ing STI education is to provide students with the knowledge and understanding of preventing STIs and the necessary steps in seeking treatment.

2. Proposal of Persuasive Course of Action for Policy Makers

The reason for this proposed policy implementation is that STIs can have life-long detrimental impact on a patient's health. An untreated STI can cause infertility, cancer, blindness, and death. Healthy People 2020 stated the cost each year to handle STIs is about \$16 billion strain on the healthcare system in the United States [2]. STI transmission is preventable and we can decrease the financial component by implementing education. This policy change is crucial in promoting health and wellness among the general public. This policy change will decrease healthcare spending. Education is the best option for preventing and decreasing the transmission rate of STIs.

3. Context and Scope

3.1. Social Determinant of Health (SDOH) in My Community

The SDOH in Maricopa County is the insufficient access to educational information on STI prevention, treatment, and long-term effects. While there is a lack of educational material to the general public, there is a gap in the educational curriculum beginning in high school and into college level. This is evident because they are the vulnerable population. This is seen by analyzing the rate of STIs in Maricopa county and noting that there is an increasing number of cases in the county. This data has shown that there is a lack of education provided and curriculum implemented in the high school and college settings [3]. Research has also shown that evidence based STI education decreases the number of infections and it also increases the patient's overall well-being and health (Szydowski, 2015).

3.2. Data to Support the SDOH

The sexually transmitted infection rate in Maricopa County is 525.3 cases per 100,000 people in the county. However, the rate of STIs in the United States on average is 155.8 [1]. This indicates that Maricopa County has about three times the infection rate as the average infection rate in the United States. While analyzing and trending the data from prior years, the rate of infection was steadily trending upward. Chlamydia numbers have been trending upward in the county since 2016. The number of cases per 100,000 population are 426.4 (2016), 444.6 (2017), 467.1 (2018), and 489.2 (2019) [4]. This information leads us to believe that the current STI education is not easily accessible or effective.

3.3. Three Characteristics of Target Population Affected by SDOH

The main audience for this policy is 1) male and female, 2) 13 to 24 years old, and 3) those attending high school or a college in Maricopa County. These characteristics of the target audience were selected based on the data trends for Ma-

Maricopa County. The data shows that both males and females were affected at a similar rate and the 13 - 24 age range was the biggest impacted group. Males and females were equally impacted by STIs [4]. For the third characteristic, this information was gathered based on locations of infections occurring around campus housing and apartment complexes [5]. Diversity also needs to be addressed in this policy. The policy must include LGBTQ community that helps them understand gender identity and how their sexual orientation impacts STIs.

3.4. Identification of Appropriate Policy Maker(s) or Legislator(s)

The policy makers are Marcy Flanagan who is the public health director of Maricopa County, Dr. Harry McDermott who is the director of health and wellness at the University of Arizona, and Karen Moses who is the director of health and wellness at Arizona State University. Another policy maker that is important to include is Alicia Williams, the director of the Arizona State Board of Education.

3.5. Why the SDOH Requires the Policy Maker's Attention

Sexually transmitted infections are completely preventable occurrence. There are policies and available resources in the county to aid in prevention, however with the increase rate of infection the resources are not effective in preventing the spread of STIs. STIs are heavily impacting the young adults in Maricopa County causing them to lose their fertility, while putting this population at risk for cancer, pelvic inflammatory disease, and even death [2]. In order to decrease the rate of transmission, an effective educational curriculum needs to be introduced in the school system and at the college level.

The policy needs the expertise of these policy makers in order to include the proper presentation, content, and support for implementation to the community. Ms. Flanagan support is crucial in providing help to the public and using the Maricopa County website to distribute the STI education to the public. Dr. McDermott and Ms. Moses assistance is important in order to set up the STI education during college orientation. These policy makers are able to provide support of the educational material and are to provide the parents with the education. It is important to have the support of these policy makers, they are able to approve what is appropriate to include. Finally, Ms. Williams needs to oversee the public school curriculum spectrum. By having her assistance, she is able to communicate with all the school districts. She can present the information to each school district and can approve what is appropriate to teach minors.

4. Current Policy or the Effect of Not Having a Current Policy

In Maricopa County, there is very little information available on the county website. The main links I found were related to STI testing and a simple fact sheet on prevention. The county did provide information on how to obtain free condoms, but you need call hotline and provide your personal information [5]. Many individuals might be embarrassed and want to remain anonymous about sexual prac-

tices. The county does not provide an ongoing method to provide STI education on prevention, treatment, and long-term effects. This is demonstrated through the rising rate of STIs throughout the county over the last several years.

5. Ethical Implications of Current Policy or Absence of Existing Policy

The current policy in Maricopa County provides information to the public that complies with the public health code of ethics. There is a moral obligation to the information. On the other hand, there is no data that shows if the public is able to access the information and using the information. The increasing rate of infection suggests the current policy is not effective (Table 1). The public health code of ethics supports policies that make the public accountable, that are engaging, and include the entire population [4].

6. Policy Proposal and Implementation Plan

6.1. Two Policy Alternatives to Address the SDOH

The first policy alternative that would be beneficial is to increase the availability to educational resources that are evidence based for STIs. There are educational tools and resources on the Maricopa County Health Department website. The

Table 1. Lack of access to education relative to STI occurrence.

<i>Lack of access to education</i>	Statistics/facts	Summary of statistics/facts	Source for statistics/facts
Demographic Information <i>(Provide 2 or more statistics/facts associated with demographics for SDOH in column to the right)</i>	STI cases per 100,000 people. US-155.8 AZ-585.5 Maricopa County-525.3	Higher number of STI cases in Maricopa County vs. Top US performers.	[1]
	Provide map of areas showing cases, which include Tempe and Phoenix college campuses which indicated they had greater than 60 cases in the years 2016-2019	When the STI map is side by side a geographical map, this indicates the areas that are same in each map to show the areas around the colleges are a higher rate.	[5]
Risk Factors <i>(Provide 2 or more statistics/facts regarding risk factors associated with SDOH in column to the right)</i>	Young Adults, (13 - 24 years old)	There is higher rate of infections in the age group of 13 - 24.	[4]
	Unprotected sex	Improper use of condom or the absence of condoms increases the risk for any STI.	[2]
Trends in SDOH Over Recent Year(s) <i>(Provide 2 or more statistics/facts associated with trends in SDOH over recent year(s) in column to the right)</i>	Chlamydia rate in Maricopa County 2019-489.2 per 100,000 people	Steady climb in cases indicates the lack of educational access.	[4]
	Gonorrhea cases 2016-9622 2017-11,711 2018-12,903 2019-15,639	Steady climb in cases indicates the lack of educational access.	[4]

barrier is the inability to teach the public how to use and access these tools. There is a large portion of young adults that are attending college within Maricopa County. The proposed policy would be to initiate STI educational curriculum during college orientation and to high school students through a mandatory health class. This is a method that has a high success rate because research has shown that evidence based STI education decreases infection occurrences. This approach requires participation from the students and the education can be evaluated [6].

The second alternative that would have an impact is providing printed educational material on STIs and include free condoms. This information would be handed out during the educational session in school. The information and condoms would be available at the school nurse or health services offices. There would be a continuing condom availability program that has proven to decrease rates of chlamydia and gonorrhea [7].

6.2. Preferred Policy

The preferred policy is the first proposed alternative policy. This policy was selected because it brings the information to the students and requires them to listen presenting them with the facts. Research has also shown that evidence based STI education has decreased the risky sexual behaviors, such as early engagement in sexual activities, increased contraceptives use, and decreasing the number of sexual partners [8].

7. How the Desired Results of the New Policy Will Optimize Health in Community

The policy that has been introduced will increase the health of Maricopa County by providing young adults with the proper educational information to prevent STIs. The policy does not discourage sexual activity. However, the policy strives to teach about infection prevention, treatment, and the proper use of condoms. By having this decrease of STIs, the county will have a decrease in adverse health effects such as infertility, cancer, and pelvic inflammatory disease.

7.1. Financial Costs and Benefits of Proposed Policy Alternative

There are direct and indirect economic costs associated with STIs. Research has shown that preventable diseases have cost the United States about \$10 billion yearly [9]. The financial portion of the policy would be the creation of the curriculum and survey implementation. The cost can be divided among the school systems and colleges. This would be a huge benefit for each campus, just by increasing the students' health. Maricopa County Health Department already has prevention education and treatment information that is free, therefore the students could access this information without adding extra financial burden to the policy.

7.2. Two Ethical Implications of Proposed Policy Alternative

The first ethical implication for this policy is the fact that nurses need to advo-

cate for the health and well-being of their patients. The policy proposed helps to promote health and safety. This is done through the accessibility of the evidence based STI education. It is crucial to share evidence and research-based knowledge, it is a public duty and ethical priority to share this information. The foundation of public health stems from powerful knowledge that improves the public's health and well-being. The code of ethics for public health not only promotes accountability of the public but also incorporates each citizen's participation to be a productive and an active citizen [6].

A second ethical implication from this policy initiative is supported through autonomy and preservation of integrity [5]. Even though this policy provides educational and informational content about STIs, the accountability lies with the student. The students need to take this information and put it into effect as part of their daily life. This information is not meant to discourage sexual activity but for the individual to make smart, safe choices. These decisions are left up to the students and how they choose to implement the information.

7.3. Barriers to Implementation of Proposed Policy Alternative

One possible barrier that might be encountered is parental influence against the STI education. Some parents might view this education as an influence to increase sexual activity. This could potentially have a big impact since we are focusing on high school students and new college students. The age group we are educating includes some minors and new young adults.

A second barrier to providing STI education is learning style and reading level of each student. Each student has a different learning style and method he/she learns best. If the student is at a lower reading level, he/she might not understand vocabulary, content, or anatomy. The content could be overwhelming, if the student is not understanding. Since the STI curriculum being introduced is evidence based, the content needs to be at a higher level of thinking in order to understand the long-term effects and benefits of prevention.

8. Communication Methods Used to Introduce the Proposed Policy

This policy would be introduced to the policy makers for their review during the policy meetings. The main ideas to be discussed include the data to support STI rates, the physical and financial strain, the curriculum to be introduced to the students, and financial breakdown to implement the policy change. The meeting agenda will provide a clear layout of what is to be addressed when this policy is brought to the attention of the policymakers. This meeting would be an in person meeting to display body language and each member is able to get to know each other. The in-person meeting would aid in building relationships. Being able to agree on the policy terms would be easier when meeting face-to-face. I would explain my position in the healthcare field and as part of the community that I serve. By showing that I care for the community I live and work in, it will

help demonstrate to the policymakers that we have a common ground for the county. This will begin by sharing our common goal of increasing access to evidence based education in Maricopa County and taking steps forward in creating a successful policy.

Another communication method option is holding a virtual meeting using a platform such as Zoom. I would conduct the meeting as the host, while providing the basics of policy to the officials. The agenda would be sent prior to meeting for review and so that all members can prepare material and questions for the meeting. This will help guide the direction of the meeting and set the expectations. I will provide the policymakers with education and the foundation of the policy throughout the meeting and encourage collaboration to support the increase the effectiveness of the policy in action.

In addition, I will work with the policymakers to ensure they are kept informed regarding the policy progress and steps being taken. I will thank the policymakers for their support with this policy change. This can be done through written letters or media representation when possible. By acknowledging their aid, this will help build a relationship with the policymakers and promote the policy change in a positive light. This allows them to know that they placed a crucial role in creating this policy change.

9. Potential Results of Inaction

If there is no action taken on the new policy, there will be increased occurrence of STIs in Maricopa County. The rates will continue to trend up. This will then negatively impact the health of adolescents and young adults. It will continue to pose a financial strain on the community and healthcare systems treating the STIs. By not taking action, more young adults could have potential of lasting effects such as cancer and infertility. The infections can cause physical and emotional pain and strain for the patient. Another impact of inaction is the financial burden put back on the healthcare systems. This is a \$16 billion annual problem that could be easily decreased and prevented [10].

10. Reflection

10.1. Change Agent Description

As a change agent, this issue is presented to the community policymakers and a proposed plan of action was introduced. During research, a social deterrent of health was identified. County STI rates and resources were identified. Even though the county has some valuable resources available, they are not be access or used effectively within Maricopa County. I needed to present knowledge to the policymakers on the content and keep them engaged showing how the STIs negatively impact our community members and puts a financial burden on the county. I demonstrated that the priority action is to increase access to evidence-based education regarding STIs with the central focus on decreasing the rate of STI transmission. I showed responsibility for the policy be leading the meeting and mak-

ing a difficult decision that had the potential of causing parental conflict with the policy action. I demonstrated to the policymakers that this common goal would increase access to evidence-based information and increase the health of the county residents.

10.2. Knowledge and Skills to Develop

The knowledge and skills that need to be developed are monitoring the results and outcome through a specific evaluation. Since this policy hasn't been implemented, we cannot currently evaluate the effectiveness of evidence based STI educational instruction. I would need to be consistently monitoring and evaluating the students' receptiveness toward the material being taught. The specific evaluation is crucial in order to provide results, showing the content is useful and therefore continue the funding for implementing the policy. The policy is run by proven results that show its effectiveness. These results help us to change the educational content to meet the needs of the students and make modifications to content where necessary. We are looking for a decrease in STI transmission rates. This would prove to the policymakers that the curriculum is effective.

Author Contributions

All listed authors had equal contributions in the core areas; conceived and designed analysis, data collection, analysis tools, analysis performance, writing.

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Conflicts of Interest

There were no known areas that could be considered conflict of interests by any authors of this paper.

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