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CULTIVATING AWARENESS OF SUSTAINABLE HEALTH RESOURCES IN THE STATE COLLEGE BOROUGH

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EXECUTIVE SUMMARY

One of the United Nations goals for sustainable development is the "Good Health and Well-Being" objective. This Sustainable Development Goal advocates for maintaining a healthy lifestyle to create sustainable local communities and cultivate a prosperous environment for the entirety of a diverse populace. The state of public awareness regarding the preventative health resources available in a particular area directly impacts the perceptions of community members as well as their well-being as a whole.

Mental health, reproductive health, and substance abuse are prominent areas of health in which diseases are preventable. All three of these topics of interest have an impact on various age groups, as well as social, cultural, and economic implications. The community of State College appears to recognize these impacts, as resources are readily available to help community members in each of these health categories. However, there are disparities between the sustainable health resources available, and the extent to which they are being taken advantage of. A lack of awareness and insufficient health knowledge contribute to this disparity, and can have serious and tangible consequences for individuals and for the community as a whole. However, we have the ability to combat this inconsistency in knowledge about health resources and can take advantage of the opportunity to prevent potentially serious health issues from developing. Decreased access to health resources can be mitigated in the community if individuals are more informed about the existing systems and resources within the borough surrounding these topics of concern.

To address this lack of information regarding available preventative and sustainable health resources, we propose a policy that promotes well-being and preventative health techniques for people of all ages in the State College Borough through accessible resources and

information via technological interfaces. To execute an easily accessible, widespread, and compact guide to local resources, we are specifically creating an informational campaign through a mobile application that will act as a database to contain all avenues of resources for mental health, reproductive health, and substance abuse within the State College Borough. Spreading awareness of preventative health measures and services that individuals can take advantage of will decrease preventable illnesses and increase utilization of preventative health resources. This resource will act as a platform to increase awareness, simplify the process of finding health information for a variety of groups, and eliminate concerns about the social stigma surrounding some of these health topics.

Currently, the State College Borough does not include population health when promoting sustainable systems. Although population health is not currently considered to be an important component of sustainability in the State College Borough, the inclusion of health and well-being in the future can help foster a more forward-looking culture surrounding health in our community. Through developing a policy that increases access to information regarding preventative healthcare measures and existing community health care resources, individuals can take a proactive stance in improving their physical, mental, and emotional well-being.

1. INTRODUCTION

1.1 Sustainability and Health

Earth's climate is intimately intertwined with the health of communities around the world. According to the Intergovernmental Panel on Climate Change, temperatures have warmed $1.33℃$ in the last 100 years averaged over water and land (NASA). This increase in temperature is a threat to good health and well-being, as it increases the propensity for vector and zoonotic-borne diseases to spread, increases the total amount of impoverished areas around the world, and

decreases the protein content of grain crops (McDermott-Levy). These consequences all have direct impacts on an individual's physical and mental health, ranging from respiratory and cardiovascular diseases to stress illnesses.

In acknowledgement of the inseparable nature of sustainability and human health, the United Nations (UN) included good health and well-being in their compilation of sustainable development goals. Comprised of 17 objectives, the sustainable development goals were ultimately formed to protect the planet, end poverty, and ensure prosperity for everyone (United Nations). All of the objectives are interconnected, as each goal depends on the success of the others.

The "good health and well-being" goal is important to building prosperous societies, and was specifically included in the sustainable development goals to promote healthy lifestyles and ensure the well-being of people of all ages. Access to good health and well-being is a human right, and although there have been significant strides towards improving the health of people around the world, inequalities still exist.

While the UN has a number of targets regarding good health and well-being, reproductive health, substance abuse, and mental health are some topics that are highlighted. Good sexual and reproductive health is specifically cited as depending on a state of complete physical, mental, and social well-being. By 2030, the UN plans to ensure universal access to sexual and reproductive health-care services, including, information and education, family planning, and the integration of reproductive health into national strategies and programs. With consideration to substance abuse, the UN also has a goal to strengthen the prevention and treatment for substance abuse, including narcotic drugs, and the harmful use of alcohol (UN). Each of these aspects of good

health and well-being are lifetime concerns for men and women, impacting quality of life from infancy to old age.

1.2 Current Health Climate

On October 19, 2009, the State College Borough published their Strategic Plan and defined their goals within the six categories of neighborhoods, service, partnerships, housing, infrastructure, and commercial development. In the creation of this plan, the local government conducted research as well as a Strengths, Weaknesses, Opportunities, and Threats (SWOT) assessment. In July of 2009, the Vision Committee met to amend the mission statement and core values to affirm that "State College Borough's mission is to enhance the quality of life by fostering a safe, vibrant, diverse and sustainable community." While the borough government focuses on creating a more sustainable environment for its citizens, they define this as "environmental, economic, societal and fiscal vitality" (Strategy Solutions). These qualities are vital in sustaining a healthy town, but there is no mention of sustainable health, and the topic of health is infrequently mentioned within the entirety of the State College Borough Strategic Plan. To compare, the Penn State University Strategic Plan lists "Enhancing Health" as their second strategic goal, which connects to the foundation of "Ensuring a Sustainable Future." The University goal includes "comprehensive approaches to enhancing personalized and population health, achieved through a commitment to and investment in relevant research, education, clinical practice, and outreach" (Penn State University). As the State College Borough aims to create more meaningful relationships with Penn State University, it would be constructive for the respective Strategic Plan Committees to meet in order to collaborate on steps to foster a healthy and sustainable environment for the entirety of State College, including both students and borough residents.

The government of the State College Borough claims that one of the community's strengths is a "Well-Educated Community" regarding "current affairs," while one of the weaknesses listed in their Strategic Plan is a "Gap Between Resources and Expectations" (Strategy Solutions). This combination of strengths and weaknesses is connected by the status of health in the State College Borough, as statistics show that while the general population is educated and actively attempts to be informed, citizens lack awareness of information on public health and of the health resources that are available to them when needed.

1.3 Sustainable Health: The Ecological Model

In any strategic initiative to keep a population healthy, it is important to recognize that there are several intertwining factors that determine an individual's' ability to make healthy decisions. There is a concept within the science of public health, called the Ecological Model of Public Health, that breaks the determinants of individuals' ability to be healthy into 5 categories: public policy, community, institutional factors, social systems, and individual factors (Social Ecological Model, 2015). The categories are defined as follows:

- **Public Policy**: These include the laws and regulations at various levels that affect the population.

- **Community Factors:** These include various social norms and support networks that depend on community members and location.

- **Institutional/Organizational Factors:** These are the resources, organizations, and the rules and regulations of the organizations that are available to an individual in their environment.

- **Social Systems:** Social systems are the family, friends, and support groups that an individual is around or a part of.

● **Individual Factors**: Individual factors include an individual's personality, behaviors and genetic predispositions. (Social Ecological Model, 2015)

(Social Ecological Model of Health)

These categories of factors are not rigid and they largely overlap and influence each other. It is important to note that within the ecological model, population health is a complex ecosystem rather than a linear pathway. In light of all of these factors, the goal of this policy is to create an initiative at the policy level of the ecological model that influences individuals in the State College Borough at the community, institutional, interpersonal and individual levels of the model. A policy that emphasizes spreading information and knowledge of resources could be a highly effective mode of increasing the health of a population in this manner because it would increase access to various health promotion programs that fall into categories within the ecological model of public health. Having information increases access to resources available from a community, institutional and social standpoint. An informative model also prevents a

perception of a lack of resources from making an individual effectively have outcomes that are due to a lack of resources. For example, a college could offer free nutritionist services, a beneficial institutional factor according to the ecological model of public health, to a student population. However, a student who does not know about this service may as well go to a school that does not provide it because there is no possibility that it will be taken advantage of. If information about services are given to a student, such as the opportunity to see a nutritionist, his or her access to determinants of health increases, and the effectiveness of other initiatives that attempt to increase population health are boosted.

1.4 Background: Sexual and Reproductive Health

As stated above, UN Sustainable Development Goal 3: Good Health and Well-being highlights access to sexual and reproductive health resources as one of its key components.

According to the UN Population Fund, "good sexual and reproductive health is a state of complete physical, mental and social well-being in all matters relating to the reproductive system." Access to information and resources regarding sexual and reproductive health is essential for the health of any population, but it is especially relevant in State College which has a large population of students, many of whom are engaging in sexual activity without information critical to their reproductive health and well-being.

According to data collected in Spring 2018 from Penn State for the National College Health Assessment, at least 69.8% of students have had sex with one or more partners within the last 12 months. Therefore from a health perspective it is concerning to note that in a survey conducted with a sample size of 100 people aged 16-61 in State College, 8.1% never received any sexual education during their secondary schooling, 33% never received any sexual education from their parents or guardians in the home, and 10% have never done any research of their own

regarding sexual or reproductive health. When asked whether they felt they had an overall good understanding of sexual and reproductive health, 24% of respondents said "No" or "Maybe." When asked whether they knew how to access the resources they needed to gain a good understanding of sexual and reproductive health, 23.2% once again responded "No" or "Maybe." It is clear from these statistics that, although many in the State College population are engaging in sexual activity, many of these individuals do not have the information necessary to make safe and informed choices when it comes to their sexual and reproductive health. For example, less than half of all respondents to the Sexual and Reproductive Health Survey conducted in State College had received any form of education regarding consent during their secondary schooling.

State College is not alone in this knowledge gap. In the state of Pennsylvania, sex education is not mandated at all in public schools, nor are those schools that teach it required by law to provide medically accurate information (Guttmacher Institute). Across the United States, only 24 states mandate sexual education, and only 18 of these require that information on contraception be provided (Guttmacher Institute). These statistics reveal a clear narrative: individuals are not getting the comprehensive sexual educations that they need to maintain good sexual and reproductive health. Spreading awareness of existing tools and resources regarding sexual and reproductive health is one essential way to help promote healthy sexual behaviors.

1.5 Background: Mental Health and Healthy Lifestyle

The World Health Organization defines mental health as "a state of wellbeing in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community." From this definition, an individual with good mental health is not only empowering him or herself, but the community in which they live. A community comprised of mentally healthy

individuals would be happy, productive, and sustainable. However, in many communities this is not the case and mental disorders hinder many individuals from truly harnessing their potential. According to the National Alliance on Mental Health, 1 in 5 youth and young adults are affected by mental health issues. (NAMI)

Mental health affects anyone - it transcends factors such as socioeconomic status, geographical location, and gender. There is an unjustifiable stigma around mental health, although it is a leading cause of ill-health and disability worldwide (around 450 million people suffer from such conditions). (World Health Organization) Youth and young adults comprise much of the population affected by mental health- a startling, 1 in 5 of them suffer. (NAMI) Here in State College, this is largely the demographic, as the median age of the population is 21.5. Since mental health issues often arise in childhood and young adult life, State College is in a key position to help those most afflicted.

There are a broad variety of mental disorders, with some of the most commonly occurring examples being:

- **Anxiety**: a nervous disorder characterized by a state of excessive uneasiness and apprehension, typically with compulsive behavior and panic attacks.

- **Attention Deficit Hyperactivity Disorder:** a chronic condition that includes a combination of persistent problems, such as difficulty sustaining attention, hyperactivity and impulsive behavior.

- **Bipolar Disorder**: a disorder marked by alternating periods of elation and depression.

- **Obsessive Compulsive Disorder**: an anxiety disorder in which people have unwanted and repeated thoughts, feelings, images, and sensations and engage in behaviors or mental acts in response.

- **Depression**: feelings of severe despondency and dejection.

- **Eating Disorders**: abnormal or disturbed eating habits.

Maintaining a healthy lifestyle is a key component to a sustainable life and a sustainable community. According to the substance abuse mental health & mental health services administration, 26% of sheltered adults who are homeless have a severe mental illness. They stress that prejudice and discrimination associated with mental and substance abuse-related disorders create enormous housing challenges for these individuals. Furthermore, approximately 20% of state prisoners and 21% of local jail prisoners have "a recent history" of a mental health condition. Lastly, mental health accounts for nearly 1 out of 4 community hospital stays. (Screening for Mental Health) While a variety of resources for receiving care are available for individuals suffering from mental disorders in State College, it is evident that the health of the community as a whole depends on the mental health of its entire population.

For many students, college can be a stressful and mentally trying time as they adjust to their newfound independence and an unfamiliar environment. It is not uncommon for these stressors to exact a mental toll on individuals. The Center for Collegiate Mental Health based in State College works towards collecting data on the current mental health status across college campuses. Their most recent report highlights what a serious issue poor mental health on college campuses can be. All of this data is in line with the trends in mental health observed at Penn State. (CCMH)
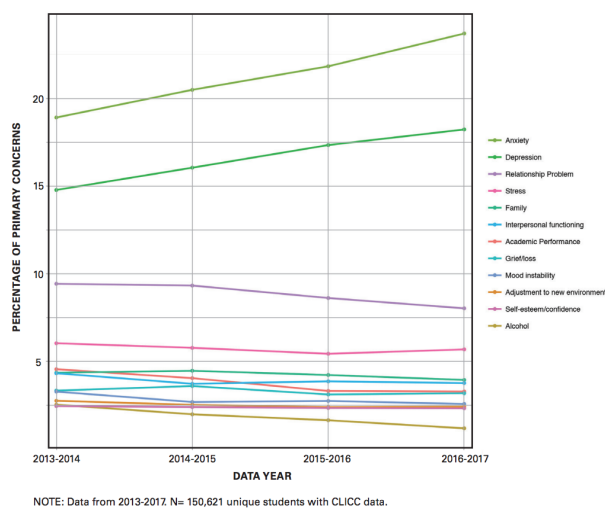
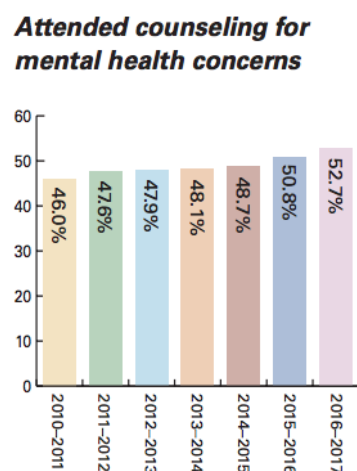*Figure 1.* Top 10 Reasons For Counseling. (2017)   *Figure 2.* Mental health Trends. (2017)

To become a sustainably healthy community, State College must destigmatize these issues and prompt action for preventative mental health measures to be taken. This policy has the ability to inform the public of preventative measures that will help individuals take control of their mental health and well-being.

1.6 Background: Substance Abuse

A "drug addiction is a chronic disease characterized by drug seeking and use that is compulsive, or difficult to control, despite harmful consequences. The initial decision to take drugs is voluntary for most people, but repeated drug use can lead to brain changes that challenge an addicted person's self-control and interfere with their ability to resist intense urges to take drugs" (NIH).

Substance abuse is when the addiction to the consumption of drugs becomes a continuous, repetitive and uncontrollable action. Drugs can range from over-the-counter medications such as Oxycodone, Hydrocodone, Morphine, and Codeine to illegal drugs such as Heroin, Opium, or Marijuana in most states. Regardless of the type of drug a person is using, the

process of abusing drugs leads to similar negative physical, emotional, and behavioral effects. The behavior and development of the brain changes because the physical makeup of the chemicals alter after an encounter with the drug(s). The drug has an effect on the brain's "reward circuit" which is responsible for the pleasurable "high". When dopamine is sent to the brain, the person feels this "high", and if the signals are not continuously re-sent to the brain, it causes a deficit. Eventually, the brain becomes tolerant to the amount dopamine when the individual initially started taking the drug, so there is a need to relapse to reach a greater "high" feeling.

Due to this relapse, the brain loses its nutrients, composure, and primary functions. Essentially, the brain starts to deteriorate. Other long term effects include changes to other systems of the brain, impairment of functions including judgement, decision-making, stress, memory and behavioral patterns. The use of substances can slow the development of the brain and stunt physical growth. "Substance use during adolescence has been associated with alterations in brain structure, function, and neuro-cognition" including occupational and academic performance in adulthood. Longitudinal studies have shown that substance abuse leads to cognitive impairment. Gray matter tissue volume increases, which contains cell bodies and neurons imperative for progressive and proficient mental cognition and white matter microstructural integrity, which is responsible for connecting the gray tissue together decreases. Gray matter is the part of the brain responsible for the thinking. White matter carries out and connects the thinking in an organized and coordinated fashion (NCBI). The image below displays the differences of gray and white matter during various levels of substance use. As shown, the amount of white matter significantly increases from "mild" substance abuse to "severe".
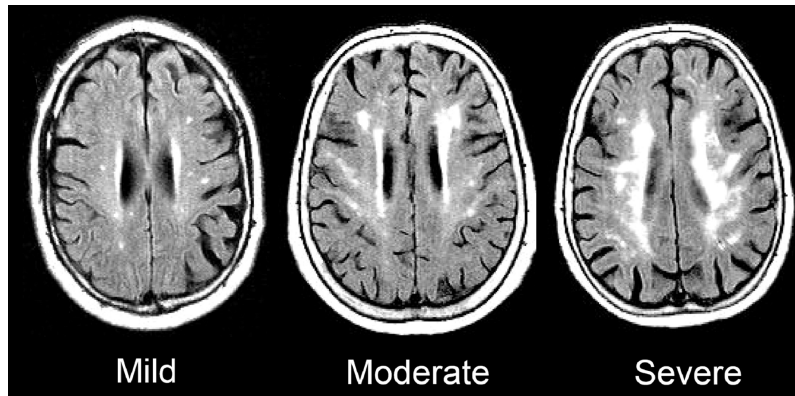
Levels of Substance Abuse in the Brain. BMJ. (2009, July 06)

The initial risk factors that lead to substance abuse include environmental and social criteria. This criterion includes those who are likely to experience prenatal exposure to drugs and alcohol, grew up in an insecure or low-income household, had lack of attachment to the primary caregiver, and little access to a nutritionally healthy lifestyle.

Those who suffer from substance abuse are often aware they do, but do not have the right resources to address the problems.

Relative to other parts of Pennsylvania, substance abuse in State College is comparably low. That said, substance abuse is still a rising concern in the State College Borough. State College is currently ranked the 59th county in Pennsylvania for substance abuse. From 2015 to 2016 there was a 33% change in drug-related overdose deaths. As of December 2015, 73% of deaths were related to drug overdoses, compared to 32% in 2016 (Pitt Pharmacy). Of those individuals, 30% were between 25-34 years of age, more prevalent in males than females, and predominantly white. Of those deaths, the primary drug used is Fentanyl, an opioid used to treat severe pain. The potency of Fentanyl can result in much higher rates of overdose deaths than that of heroin. Due to this, there were drastic increases in the percentage of deaths.

The State College Borough strategic plan responded to the problems caused by drug and alcohol abuse, and the consequences it has on the populations as a whole. As stated, "local law enforcement has documented that drug sales and abuse exist in State College and pose in increase threat to health and safety of our community" (State College Strategic Plan). The issue of substance abuse clearly needs to be addressed within the borough and its severity can not go unnoticed. Without increased awareness around resources available regarding substance abuse, rates in State College will continue to increase and individuals will lack proper care to improve their health and well-being. This should not be a barrier to preventing substance abuse illnesses. People should feel they have the resources and support in their efforts to get "clean".

2 - POLICY: INFORMATIONAL CAMPAIGN

2.1 Informational Campaign Implementation

Throughout the country, college campuses and communities are becoming more and more active in spreading awareness of social issues that affect their students. It is not uncommon to see entire weeks dedicated to sexual assault prevention, drinking culture, or mental health. In most cases, outlets are used to spread awareness of the problem and alter misconceptions associated with an issue, and ultimately more resources are advocated for and current resources are distributed. This informational campaign model can be applied to just about every social issue affecting a population. According to a publication from the Boston School of Public Health, issues pertaining to drinking are often addressed in these campaigns through "informational", "social norms" reshaping, and "advocacy" phases (DeJong, 2002). The ideology behind these informational campaigns to increase access to resources and prevent problems through the spreading of information. This parallels the objectives of our policy as well as can find basis embedded within the ecological model of public health (See section 1.3). Not only do informational campaigns represent a community resource, they alter the culture of individuals

within the community which directly correlates to the individual factors that will determine how they behave (CDC Community Guide) . For example, according to a publicly funded review, sexual assault campaigns did so through "providing information on the prevalence of sexual assault, challenging rape myths and sex-role stereotypes, identifying risk-related behaviors, increasing empathy for rape survivors, providing information on the effects of rape on victims, and providing lists of victim resources" (Morrison et al. 2004). Ultimately, implementation at this grassroots level can be highly effective to creating a far healthier community due to an expansion of health factors presented in the ecological model.

2.2 The Policy

The consequences of climate change and poverty have direct impacts on the physical and mental health of individuals and communities at large. Compounding this concern, highly vulnerable individuals are unaware of sustainable health resources readily available to them. To address these problems, we propose a policy that promotes well-being and preventative health techniques for people of all ages in the State College Borough through accessible resources and information via technological interfaces. We are specifically creating an informational campaign through a mobile application that will act as a database containing all avenues of help for mental health, substance abuse, and sexual and reproductive health in the State College Borough.

To maintain good health and well-being, people need access to accurate information and safe, effective, affordable, and acceptable health options (UN). To promote and protect the health of oneself and the individuals in proximity, the UN suggests raising awareness in the community about the importance of good health, healthy lifestyles, and people's right to quality health care service.

Many Penn State students and residents of the State College Borough are unaware of the resources available to them. Although the university and borough offer many resources and opportunities for mental health, substance abuse, and sexual health, it can be challenging to quickly locate appropriate resources when in need of help or in a crisis. Individuals are often overwhelmed with options, especially as these resources are disconnected with information located on numerous websites and hard-to-compare descriptions.

Alternatively, our web-based tool, which could also be accessed via a phone app, will be an easily accessible, widespread, and compact guide to local resources (Appendix 1). As a consolidation of all available resources, individuals will more easily be able to determine where to go to seek assistance for themselves and others, while also being aware of resources that might be needed in the future. The tool will also be well publicized and, because of its nature, will be able to assist a considerable amount of residents at a low cost.

3 - IMPLEMENTATION

3.1 Preventative Health Interface

The existence of a user-friendly and comprehensive interface that includes details about the aforementioned health topics of concern as well as specific resources that the Borough provides can help bridge the gaps that exist in awareness of sustainable preventative health in the State College community. The website will be welcoming and easy to use for various age groups and educational levels. Ultimately, this tool acts as a one-stop destination for the health questions that the citizens of the borough might have. Users would not be inputting their private health information in any way; this would simply act as a beneficial point of reference which would include steps of action and local solutions based on the needs of the individual. Therefore, there would be no need for the users to be concerned regarding confidentiality, especially considering

that certain topics included on the website- including but not limited sexual and mental health- can have social stigma attached. The graphics below illustrate the streamlined menus that will guide the user to the information that they are seeking.

3.2 Business Plan and Timeline to Launch

In order to build this sustainable health interface, entitled "Healthy State," a team of founders would essentially need to found a tech startup with a nonprofit business model. There is plenty of room for variability when considering the path of a tech startup. *Healthy State*'s path to launch, however, would be one executed in a bootstrapped fashion. In entrepreneurship, the term "bootstrapping" refers to the practice of utilizing whatever resources one has at their disposal whenever possible, and otherwise obtaining necessary resources at as low a cost as possible. By bootstrapping through the path to launch, *Healthy State* may become available to its target market with no cost to the consumer more quickly than if the startup went the more typical route and attempted to raise large sums with the help of Venture Capitalists.

Therefore, *Healthy State*'s first priority following its establishment would be to recruit an experienced IT Specialist willing to volunteer their time for little to no compensation in order to build the website and application, which would eventually become available on iOS- and Android-supported devices. With access to an abundance of skilled IT students from Penn State's network and a strong mission, *Healthy State*'s founders are confident that they could bring an interface designer onboard with relative ease.

Once the platform was built, the next consideration would be marketing the interface to its target audience. *Healthy State*'s target audience is quite broad in reach, as it includes all residents of the State College Borough and Penn State students. Therefore *Healthy State* would need to adopt a wide variety of marketing techniques to reach its intended market. Potential marketing techniques include:

- Social media paid advertisements
- Maintaining an active presence on Twitter, Instagram and Facebook

- Captive advertisements prior to online video content

- Print advertisements in local magazines and newspapers

- Announcements in campus publications such as Stall Stories and the PSU email newsletter

- Flyers to be hung up and distributed in high traffic areas around State College

- Free swag such as stickers, t-shirts, keychains, etc. bearing the brand

- Advertisements on local television and radio networks

- Presence via tables and booths at important local events

- CATA bus advertisements

- Obtaining partnerships with celebrities connected to the local community and Penn State to champion the mission of *Healthy State*

- Partnered events with local organizations, businesses and nonprofits that share similar missions

- In person advocacy/informational events

This list of marketing methods is by no means complete, but it is a starting point on which *Healthy State* may eventually build a full scale marketing and informational campaign. Because *Healthy State* hopes to build their interface at little to no cost, their goal is to focus as much capital into marketing the interface as possible. In order to raise capital to invest into a marketing campaign, *Healthy State* intends to launch an initial round of fundraising with the goal of raising $10,000 in the first year. One method of fundraising *Healthy State* intends to pursue is to seek out wealthy donors with connections to Penn State and State College who have a personal stake in the health of the community, and begin to build relationships with said individuals in order to ultimately secure donations. Another viable fundraising option is to

pursue Angel Investors already seeking new ventures to sink funds into. *Healthy State* may also pursue crowdfunding routes via platforms such as *Kickstarter* or *Indiegogo*.

Following this process of obtaining a low cost IT Specialist, completing its first round of fundraising, and designing a full scale marketing campaign for its informational interface, *Healthy State* should viably be ready to launch in the Summer of 2019.

3.3 Interface Content: Sexual and Reproductive Health

Healthy State should include resources and information to provide a Comprehensive Sexual Education to users, as well as to point them in the direction of local resources to promote reproductive health and well-being.

According to the UN Population Fund, Comprehensive Sexual Education is defined as the following: "a curriculum-based process of teaching and learning about the cognitive, emotional, physical and social aspects of sexuality. It aims to equip [people] with knowledge, skills, attitudes and values that will empower them to: realize their health, well-being and dignity; develop respectful social and sexual relationships; consider how their choices affect their own well-being and that of others; and, understand and ensure the protection of their rights throughout their lives." It is essential for a population to receive a comprehensive sexual education in order to achieve good sexual and reproductive health. Other characteristics of a Comprehensive Sexual Education include ensuring scientifically accurate information, information that is age- and developmentally-appropriate, curriculum-based learning, information grounded in gender equality, culturally relevant and context appropriate guidance, and the ability to promote the development of life skills needed to support healthy sexual behaviors (UN Population Fund).

When populations fail to provide individuals with a Comprehensive Sexual Education, this may lead to stigma surrounding sexual topics, shame and ignorance, and may even increase risk-taking or unhealthy sexual behaviors. Therefore, *Healthy State* would provide resources and information to the State College population surrounding the following key topics as stipulated by the UN Populations Fund:

1. Relationships

2. Values, Rights, Culture and Sexuality

3. Understanding Gender

4. Violence and Staying Safe

5. Skills for Health and Well-being

6. The Human Body and Development

7. Sexuality and Sexual Behavior

8. Sexual and Reproductive Health

On *Healthy State,* information surrounding Sexual and Reproductive health will be divided into age groups for easy consumption of pertinent information. The age groups will be as follows: 5-8 years, 9-12 years, 13-15 years, 15-18+ years. *Healthy State* may be utilized as a tool for parents to educate their children with, or as a tool for an individual's self-directed learning.

Healthy State should also be utilized as a resource to find local tools regarding sexual and reproductive health. The interface would help direct users to the following resources when needed:

- Pregnancy Resource Clinic: http://www.scprc.com/

- University Health Services: https://studentaffairs.psu.edu/health

- Health Promotion and Wellness at Penn State: https://studentaffairs.psu.edu/health-promotion

- Counseling and Psychological Services at Penn State: https://studentaffairs.psu.edu/counseling

- Centre County Women's Resource Center: http://ccwrc.org/

- Penn State LGBTQA Student Resource Center: https://studentaffairs.psu.edu/lgbtqa

- Penn State Gender Equity Center: https://studentaffairs.psu.edu/genderequity

- Mt. Nittany Medical Center: https://www.mountnittany.org/

- Community Help Centre: https://www.centrehelps.org/

- National Sexual Assault Hotline: https://www.rainn.org/about-national-sexual-assault-telephone-hotline

- Penn State University Police: https://police.psu.edu/

- State College Police: https://www.statecollegepa.us/27/Police

While *Healthy State* would take a neutral tone and refrain from promoting one community resource above another, the interface would provide the user with information regarding the values and mission of the organizations/institutions it links to in order to fully inform users of the context of the resources available to them.

3.4 Interface Content: Mental Health and Healthy Lifestyle

Here in the State College community there are plenty of resources available for individuals to take control of their mental health. Dr. Staley, the director of community outreach at CAPS (Counseling & Psychological Services), prioritizes having appealing and tangible resources available. However, she recognizes that there is an issue getting student participation. This lack of awareness may be attributed to a variety of issues. Two main ones are lack of

awareness that they even exist and the stigma around mental health that makes it hard for the individual to acknowledge them.

Healthy State, being an online platform, has the ability to help alleviate these two issues. It can provide anyone with information regarding all of the resources they need when they need them. Furthermore, it will acknowledge that mental health is an issue that many, many people deal with. It can start a conversation, increase awareness, and help destigmatize this issue. People should feel proud of handling their mental health, not ashamed.

Therefore, the interface content will feature resources at the University and in the community that provide mental health services. In addition, it will promote opportunities for leading a healthy lifestyle and taking action against mental disorders. The current resources available include:

- CAPS: https://studentaffairs.psu.edu/counseling

- Centre County Mental Health: http://centrecountypa.gov/index.aspx?NID=341

- Taking Flight Development Center: http://www.takingflightcenter.com/

- SunPointe Health: http://www.sunpointehealth.com/

- Onward Behavioral Health: http://www.obhcares.com/

- Oasis Lifecare: http://www.oasislifecarellc.com/

- MidStep: http://www.midstep.com/

- Individual & family choices: http://www.individualandfamilychoices.com/

- The Healing Room: http://www.statecollegehealingroom.com/

- Guiding Light: http://guidinglighthealth.com/

- Life Hacks workshops

- WellTrack

- Online Screenings

Healthy State's goal is for individuals within the community to feel supported and ready to seek help. As mentioned previously, there is a stigma surrounding mental health, and *Healthy State* will utilize an online platform and the power of social media to destigmatize this issue. By providing data on who is dealing with mental health issues, student testimonials, and promoting community events, *Healthy State* will decrease stigma and make community members suffering from mental disorders feel unashamed for seeking help. *Healthy State* may serve as a necessary spark for beginning an open conversation about mental health in the community. People suffering from mental health issues can come to *Healthy State* and find the support that they need - whoever they may be.

3.5 Interface Content: Substance Abuse

The State College Borough population faces a lack of awareness for existing convenient resources for substance abuse. Although there are a plethora of services that can help with substance abuse, this new policy in place will leverage awareness and accessibility of the services for substance abuse for individuals and the community at large. The implementation of the interface, *Healthy State,* will include resources that cover substance abuse to bridge the gap between the available services and the utilization of those resources. This will raise awareness of severity of substance abuse within the borough to help mitigate the problem and leverage awareness for the services in the borough. The interface will include general information about substance abuse, reduce stigma around the issue, relay basic information to the public so others can easily understand the topic, and include community resources. The current resources available include:

- Pyramid Healthcare State College Outpatient: https://www.pyramidhealthcarepa.com/

- Centre Counseling Associates: https://centrecounseling.godaddysites.com/

- St. Joseph Institute for Addiction: http://www.stjosephinstitute.com/

- PA Treatment and Healing Center: http://pathtochange.org/

- Crossroads Counseling: http://www.crossroadscounselinginc.com/

- Counseling and Psychological Services (CAPS):

  https://studentaffairs.psu.edu/counseling

- A Journey to You: http://ajourneytoyou.com/

As of now, the easiest way for an individual struggling with substance abuse to get help in the State College Borough is to conduct an online search for various locations to seek help. However, not all of this information is available in one place and it is often difficult for an individual to judge which option is best for them. *Healthy State* will reduce the steps one needs to take in order to find the care they need. When all the healthcare resources and services are in one location, individuals can evaluate which services are more tailored to their healthcare needs and choose what method to pursue more confidently. This interface is a resource people can use to comfortably reach out when they are in need of help, and will be accessible to individuals of various age groups and people of all cultural backgrounds. The implementation of *Healthy State* will provide the borough with a platform that compiles available resources into a more efficient database, with more consideration for the various needs of those who struggle with substance abuse. This will also be a safe stepping stone for finding resources for those who feel embarrassed about initially reaching out to find help, but still want to feel supported in their efforts to get "clean".

4 - CONCLUSION

4.1 Risks and Downsides

One risk associated with *Healthy State* and the informational campaign is that the campaign may not make a difference in people's actual health behaviors. The Ecological Model asserts that healthy behaviors are influenced by a variety of factors including people's social groups, families, governmental structures, upbringing, etc. It is therefore a concern that regardless of whether or not people are better informed of preventative health measures that may prevent sickness, they may not practice them in their daily lives.

Another concern has to do with fundraising. In order to successfully execute our informational campaign we need a sizeable sum of money for our extensive marketing plan. While the intent is to raise this money with the help of donors, angel investors, crowdfunding and other methods, there is always the risk that the target fundraising goal of $10,000 in the first year of operations will not be reached.

One final concern is that residents of the borough won't feel incentivised to utilize the app in the first place. Not everyone is concerned with living a healthy lifestyle, especially since most people's habit is to ignore their state of health until they experience illness, at which point the tendency is to seek cures and then return to ignoring their state of health.

4.2 Impact

While the creation and implementation of this interface would be a small part of a larger effort to pursue sustainable health in the State College Borough, it has the potential for short and long-term benefits that could greatly help individual citizens and the state of well-being of the borough as a whole.

Beyond generic informational resources that can be found through popular search engines, this tool would be directly applicable to those living in and around the State College Borough. The interface will reflect the acceptance and the diversity within the community, both

within its design and its contents. For example, our interface menu features nature imagery rather than pictures of people, as this is a tool for all community members; a resource should not contain bias or exclude any groups, explicitly or implicitly. As this interface is personalized and specialized for State College Borough residents, people will be more likely to seek help with their health concerns and pursue local services.

In reviewing the impact of the policy and the effectiveness of the interface in the aftermath of the initial implementation, the individuals managing the interface will seek to receive feedback from the members of the community in terms of what parts of the tool and what information they found most helpful, as well as information and resources that they would like to be included in a future version of the resource.

Overall, this policy will help to create a more healthy and sustainable State College Borough, where individuals will have increased access to preventative health information and greater knowledge of the resources available to them in the community. Through this, the culture of how health is viewed can shift to one where individuals are more informed, and have more control over their own well-being.

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