An Approach to Increasing Participation in the Community Health Assessment in Northampton County, North Carolina

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Overview

The mission of Northampton County Health Department, located in Jackson, NC, is to promote, provide, and protect the health and safety of the citizens of the County (NCHD, 2018). One of the responsibilities of the health department is to conduct the community health assessment (CHA) every four years to provide a summary of the health conditions in the community and foster increased collaboration among stakeholders. While community engagement in the CHA is crucial to improve the health in the community, inclusivity and participation in the process is not always optimal. The reasons may be lack of community awareness about the importance of the CHA as well as barriers that inhibit engagement.

This paper describes a proposed program plan utilizing the Community Organization and Other Participatory Models theoretical framework to increase inclusivity and participation in the CHA in Northampton County, NC. The health department will lead the campaign over a 4-year period by training health department staff and community coalition volunteers to organize a CHA advocacy team, implement the CHA, and perform a CHA follow up. This CHA advocacy team will implement the proposed program plan through social marketing techniques by using local media, 40 local faith leaders or their assistants, and lay volunteers who will be trained as community champions. They will engage the community by continuing to spread awareness of the CHA, assisting with the distribution of the CHA survey, and leading the CHA small group follow up. Evaluation of the effectiveness of the program plan will occur after the CHA surveys are received and every six months. Limitations such as a lack of sustainability will be addressed

through participatory approaches that fully engage the residents in the entire CHA process. As more residents are engaged, a greater awareness of the importance of the CHA can occur. Also, greater inclusivity may lead to an increased response rate on the CHA survey, and an increase in meaningful strategies to address health priorities can be developed and implemented.

Introduction

Engaging the community compels the community to participate in activities to address their needs (McCloskey et al., 2011). This is important because of the positive outcomes and impacts that can be produced (Cyril et al. 2015). It is also important because the impact on health outcomes is increased as community participation and empowerment increase (Chuah et al., 2018). It is imperative that those who will potentially benefit from the process be engaged, but those who mobilize the community must make the community aware of the importance of its role in the process (NIH, 2011). Ideally, when engaging the community, there must be clear goals for what should be accomplished, as well as knowledge about the culture, norms, health, and economic condition of the community (NIH, 2011).

The community health assessment (CHA) is one way to obtain the information about the community. According to the Centers for Disease Control and Prevention, the CHA is a tool that identifies health needs and issues by collecting and analyzing data from that community (CDC 2015). The overall purpose of the CHA is to describe the health of the community as well as highlight gaps in health care that need to be addressed (Becker, 2015). After discovering the needs, behavioral changes should be initiated by the residents (Becker 2015). Since the CHA is designed to give a voice to the residents, it also promotes discovery and analysis of some of the issues that contribute to their health disparities (Cain et al. 2017). When the issues that confront them are discovered, the community can work together in a cohesive and collaborative effort to

address those needs as well as develop initiatives to improve their status since "community health improvement efforts are most successful when they are grounded in collective impact." (Van Gelderen et al. 2018).

For the use of the CHA to be more effective, there must be optimal resident participation and inclusion in the process, which means that there should be a balanced representation of the residents in the County. Increasing the response rate in completing the CHA can be done through: 1) devising strategies to determine an expanded target population (e.g., based on demographic assessments of populations of greatest health need); 2) implementing strategies to recruit and administer the CHA to an expanded target population; or 3) increasing the response rate for the existing target population. The proposed program plan will focus on increasing representation by enhancing the response rate for the existing target population that the Northampton County Health Department used to implement the prior CHA in 2014. Participation in the CHA is open to all residents of Northampton County, but the target population included residents who worked at the health department, some of the local churches, word of mouth, and those who responded to newspaper and radio advertisements (personal communication, 2018). Approximately 2.5% of Northampton County's population was targeted and sampled (500 residents) with a response rate of 60% (300 surveys returned). By incorporating the proposed program plan, it is projected that the response rate for the CHA from expanding the existing target population will increase by 20%. This is important because more residents responding to the CHA will increase the validity of the data for future initiatives in the community (NC DPH, 2014).

Background

Northampton County lies at the North Carolina/Virginia border in the northeastern corner of North Carolina and has a land area of almost 537 square miles (US Census Bureau 2017). It is a rural community with an estimated population of 19,862 people, where over 57% are black and 40.1% white, with 25.2% ages 65 years and older (US Census Bureau, 2017).

Northampton County, like many other rural areas in the United States, lag behind other parts of the country when ameliorating issues concerning income and poverty, employment, and education (Vance et al 2012). According to the US Census Bureau (2017), the median household income in Northampton County in 2016 was $31,543, compared to $48,256 for North Carolina and $55,322 for the entire United States. Moreover, approximately 48% of those age 16 years and older in Northampton County were in the civilian labor force as opposed to 61.5% in North Carolina and 63% for the rest of the United States (US Census Bureau, 2017). Approximately 78% of those ages 25 years and older in Northampton County were high school graduates compared to 86.3% in North Carolina and 87% for the entire United States (US Census Bureau, 2017). Furthermore, the percentage of those in Northampton County in poverty was higher than North Carolina and almost double the rate of the United States (22.4% versus 14.7% and 12.3% respectively, US Census Bureau 2017).

Community Health Assessment in Northampton County: Using the CHA is one method for the Northampton County Health Department to address these and other community needs. Their mission is to "promote, provide, and protect the health and safety of the citizens of Northampton County" and they operate as "a culturally sensitive health organization providing quality services yielding improved health outcomes" (NCHD, 2018). The CHA is important not only because it represents one of the three core functions of public health (Pennel et al, 2017), but it is also the

tool that the Northampton County Health Department can use for stakeholders to learn about their community as well as create plans to address issues that are uncovered by the CHA (Kronstadt et al. 2018).

When performing the CHA, the recommendation by the North Carolina Department of Public Health is to sample at least 500 people to reduce response bias (NC DPH, 2014). However, when obtaining the sample, it is important that the sample be inclusive of as many diverse groups in the population as possible to allow for more reliable results (NC DPH, 2014). If the sample is not a reflection of the various demographics of the population, the CHA survey results will not be as representative or generalizable (NC DPH, 2014).

Northampton County releases the results of the CHA in the State of the County Health (SOTCH) report that details the information from the previous report as well as the initiatives to address the concerns voiced on the CHA. According to the SOTCH (2017), the 2014 CHA was distributed to nearly 500 residents in Northampton County and about 300 of those surveys were returned at a total cost of approximately $10,000 (personal communication, 2018), or an estimated $33 per survey. The strong return rate for the CHA is commendable and may be due to a number of factors in the community such as a desire to be active in community improvement efforts, social obligation, or increased sense of perceived benefits (McCloskey et al., 2011). However, there is still room for improvement in the response rate. A 20% increase in completion of 300 CHA surveys to 400 CHA surveys will also lead to approximately an $8 decrease in the cost per survey. Creating a systematic process for increasing community involvement in Northampton County may also bolster sustainability for recruiting and administering the CHA.

Administering the Community Health Assessment. For each local county health department to gain accreditation with the Public Health Accreditation Board, they must perform the CHA in their county. The accreditation board uses the data collected from the CHA to promote continuous quality improvement in meeting the health needs of the community in the areas of "efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality in services or processes which achieve equity and improve the health of the community" (PHAB, 2013). To ensure continuous quality improvement, the health department must also submit a yearly report to the board on its progress in addressing issues that were discovered in the CHA (PHAB, 2013).

At organizations like the Northampton County Health Department, implementation of the CHA is a 4-year process. In the first year, planning and information gathering are done to construct the CHA survey as well as distribute it; in the second and third year, action plans and implementation planning are conducted based on the information that is received from the CHA; and in the third and fourth years, the program plans are continued and evaluated along with preparation to begin the cycle again (NC DPH, 2014). There are different methods for performing the assessment but the most important elements are community engagement and participation through collaboration (CDC, 2015).

Although the CHA is distributed by the health department for its accreditation, the process is still one that involves the collaboration between community residents, community coalitions and other organizations in the community. The CHA should uncover the factors that contribute to the health of the community, find areas for improvement, and identify resources that can improve conditions in the community (PHAB, 2013). This information is used to make decisions and create initiatives for the community. By mobilizing the community in the process

of assessment and subsequent improvement initiatives, the efforts have an increased chance of being productive, effective and sustainable (Pennel et al., 2017). Community involvement can also foster novel approaches to creating solutions to health problems as well as increasing future collaboration (Pennel et al. 2017).

Current Strategy for Administering the CHA in Northampton County. When administering the CHA, Northampton County Health Department advertises the CHA in the local newspaper, by word of mouth, and through social media (personal communication 2018). It is also given to several of the local churches and interested residents, and it can be accessed on the health department's website (personal communication 2018).

The need to improve community awareness is apparent. An informal poll of some Northampton County residents from different areas of the county and in different age groups revealed that some residents are not aware of the CHA. None of those polled recalled ever hearing of the CHA even though they had lived in the county for the past five years. Some even stated that they did not listen to local radio, had not seen CHA advertisements in the newspaper, nor had they heard about it during any community activities. For the CHA to be effective in Northampton County and positive changes to occur in the community, the residents must be involved at the onset of the process and be an integral part of the process (NIH, 2011).

Barriers to Awareness and Participation

Even though there are benefits to community participation in the CHA, there are still barriers that impede community involvement. Rural communities such as Northampton County are particularly vulnerable since these areas have more residents that are older, poorer, have more dangerous health behaviors, and have decreased access to health care which leads to worse

health outcomes (Harris et al., 2016). Also, *older age and poor health* are associated with poor response rates to the CHA (Edelman et al. 2013). Elderly residents in the community, in particular, may have unique barriers such as *vision or comprehension impairments* and they may have *concerns about the confidentiality* of any of the information that they provide (Edelman et al. 2013). Rural areas like Northampton County *cover a broad geographic area*, which makes improving awareness about the CHA and its distribution difficult. Furthermore, poorer areas tend to have *decreased access to technology* such as the Internet. According to the Broadband Infrastructure Office (2016), in 2013, approximately 47% of North Carolina households with annual incomes of less than $15,000 had broadband access. Rural areas may also have a *lower educational level*, which can create a barrier to awareness since the awareness method for the CHA is written advertisements in the newspaper and the CHA survey is a written document that requires literacy in English to complete it properly. In 2003, approximately 24% of the residents in Northampton County lacked "basic prose literacy", which means that they could not read basic English (National Center for Educational Statistics, n.d.). Moreover, Becker (2015) noted that random sampling to generate resident contact information to conduct phone or mail surveys had poor response rates in rural areas due to a lack of buy in, and that people were more likely to respond if they received the survey from someone they knew.

Even though the CHA is conducted by the local health department, there may be *mistrust of a governmental or health system***,** which can prevent optimal participation in the CHA. Kennedy et al. (2007) stated that mistrust of the system cannot be contributed to one factor, but prejudice and stereotyping along with an inadequate quality of care can foster feelings of mistrust in the healthcare system. For example, minorities may retain animosity towards the system for its historical mistreatment of them. According to Gamble (1997), the Tuskegee

Syphilis experiment is often recited as the rationale to African American mistrust of medicine and public health, but this event is not enough to explain the mistrust since a multitude of other factors can influence African American attitudes towards medical and public health research (Gamble 1997). The Tuskegee Syphilis Study was conducted by the government from 1932 to 1972 on 399 black men from Alabama who were deliberately denied syphilis treatment so that the natural history of the disease could be documented (Gamble, 1997). Also, in North Carolina, experimental sterilizations condoned by the state were conducted until the 1970s on 7,528 children and adults (Brightman et al. 2014). Other reasons for mistrust of the system may include beliefs that individuals are being used as experimental subjects ("guinea pigs"), low perceived benefit, inconveniences when participating, and dishonesty by system administrators (Corbie-Smith et al. 1999).

A *lack of funding* at the local health department may serve as a barrier to awareness of the CHA. Although the Public Health Accreditation Board requires that health departments submit the CHA for accreditation along with an annual report of their progress, they do not provide any funding for these activities. Unfortunately, rural health departments have *fewer resources and provide fewer services* compared with larger health departments because they have less funding (Harris et al 2016) and they usually have greater needs to address (Beatty et al. 2010). This can lead to decreased awareness campaigns about the CHA in the community since it takes funds to initiate and execute.

Program Plan Theory and Rationale for Increasing Awareness of the CHA

The challenge is to overcome barriers and increase awareness about the CHA to boost participation through expansion of the target population to increase the response rate. The framework that will be used for the proposed program plan to increase awareness of the CHA in

Northampton County, NC, and also be the basis of the program's goal, objectives and logic model is the Community Organization and Other Participatory Models (COOPM). The COOPM emphasizes community empowerment to assess its own health and social problems and provide solutions to those problems without the influence of outside sources (NCI, 2005). It encourages the community to act instead of merely participate which also leads those in the community to reform their thinking about their abilities (Rifkin 2009). This framework will be appropriate for the program plan in Northampton County because it mobilizes the residents to identify the problems in the community and gather the appropriate resources to work on the problems while creating solutions to the problems (NCI, 2005). The CHA will be the tool for identifying community problems and priorities, and the data collected will be used to improve the condition of the community. According to the CDC (2015), the information from the CHA can be used to develop an improvement plan to increase awareness about public health, discover areas to address with initiatives in the community, and increase communication among community collaborators.

The three models for creating awareness and invoking change with the COOPM are *community development*, which is based in the process of creating capacity; *social planning*, which focuses more on problem solving and expert opinion; and *social action* which is oriented towards mobilizing the community to solve its problems and initiate changes (NCI, 2005). All of the models can be used, but social action through the COOPM framework is the most pertinent for Northampton County. By using the CHA and operating through social action, the residents will discover the issues that are pertinent to the community and mobilize to ameliorate the impact of those issues. The CHA gives the community a means to act and a voice to express their concerns about the social determinants of health, uncover some of the factors that lead to

health inequalities (Cain et al. 2017), and alleviate these inequalities, particularly for those with a greater burden of disease from structural, social, and cultural barriers (Cyril et al. 2015). As Northampton County residents are moved to social action through collaborative efforts including empowerment, community capacity, participation, relevance, issue selection, and critical consciousness, health disparities can be lessened (NCI, 2005). Empowerment for Northampton County residents means that they will have control over initiating awareness about the CHA as well as creating changes based on the data and community capacity will involve them actively engaging in leadership of the CHA (NCI, 2005). Participation entails working with each other to enhance awareness about the CHA and relevance will lead to them choosing initiatives based on the resources they have available (NCI, 2005). Residents choose what they want to address in issue selection and using critical consciousness, they find the origins of the issues as well as make plans to address them (NCI, 2005). The National Cancer Institute (2005) has remarked that actions at the community level which tackle conditions in the neighborhoods, employment, educational opportunities, as well as promote health and disease prevention are important in alleviating health disparities.

A program plan to bring greater awareness of and subsequent participation in completing the CHA will contain a multi-faceted approach for collaboration with different stakeholders in the community. It is imperative that the program plan be inclusive and culturally relevant to Northampton County to capture a more holistic view of the community (Axner 2018). According to Axner (2018), a program that is culturally relevant is important because different cultures not only have unique strengths, but also support from the different groups must be present for any initiative to be successful in their community. It is also important for the plan to be inclusive and culturally relevant to attract different members of the community to have

enough members to create action and change (Axner 2018). Including the community in the process provides different perspectives and helps improve cultural sensitivity, reliability, and validity (Pennel et al. 2017).

Social marketing strategies – product, price, place, and promotion (Lee & Kotler, 2016) – may help increase awareness of the CHA. In using these techniques, the residents will become aware of the CHA and what it is (product); that the tool used, namely the CHA survey, is a way to voice their opinions on the state of the community for free (price); the survey is available online or in print form from the health department as well as from several of the community collaborators (place); and the survey is important because it leads to improvements in the community from which all residents can partake and benefit (promotion).

Lee and Kotler (2016, pgs. 43-44) also describe steps for a marketing campaign that would be pertinent to the proposed program plan for Northampton County to expand to the existing target population. The most salient step is to create the *purpose statement of the benefits of the campaign* (Lee & Kotler, pg. 53). In this case, a successful awareness campaign will increase the knowledge of the CHA and its importance in Northampton County; enhance participation by the sample target audience through expanding inclusion and increasing the response rate for the CHA by 20%; and be sustainable through collaboration with stakeholders and community coalitions. Creating a purpose statement will help focus the efforts of the campaign and ensure that all related activities are relevant to the common mission and vision of the campaign. Also, it would be beneficial to *perform a SWOT analysis* (strengths, weaknesses, opportunities, threats) of the campaign in the county (Lee & Kotler, pg. 53) (Appendix 1). This will assist in dealing with possible issues that might arise to help or hinder the awareness campaign. Kronstadt et al. (2018) commented that partnerships play an important role in helping

small health departments offset capacity limitations. Thus, for the proposed program plan, the awareness campaign can be conducted using the coalitions to provide resources that the health department might not have.

Once a social marketing plan has been established, the proposed program plan will be implemented in Northampton County. Utilizing cross-sector collaboration is a beneficial way to distribute the campaign. Word of mouth is very effective in rural communities since it is used in many interactions and community leaders are crucial to this process because of their networks throughout the community (Becker, 2015). However, to utilize the widespread variety of networks, various community leaders and other stakeholders must be "invited to the table" to enhance their awareness of the CHA as well as increase their buy in. Becker (2015) noted that using locals to advertise the CHA leads to the community investing more effort in implementing the plans and improving the community.

Kenny et al. (2013) commented that partnership collaboration is crucial to ensure acceptable, appropriate, and effective responses to tackle inequities in rural communities. However, there may still be those in the community that are overlooked as partners in the process. Kronstadt et al. (2018) showed in their analysis of partnerships between the health department and community coalitions, *some of the least tapped resources included faith-based organizations and the media*. In Northampton County, there are approximately 40 churches (personal communication 2018). In the past, obstacles to reaching faith-based groups, particularly African Americans, included mistrust; methods and messages that were not culturally sensitive; and efforts that appeared to benefit the system but not provide any real benefits to the church and community (Goldmon & Robertson 2004). However, working with the church through the proposed program plan to create awareness may be beneficial since

collaborations involving different groups such as faith leaders, health educators, community leaders and other stakeholders will involve different people in communicating ideas that could provide answers to issues in the community (Goldmon & Robertson 2004). Collaborating with the faith-based community on this initiative will be more efficient since churches are better equipped to gain participation from people who are in difficult to reach populations (Goldmon & Robertson 2004). The key to reaching this untapped resource is to utilize the faith leaders of each church since they are trusted leaders in the church as well as in the community. Goldmon and Robertson (2004) noted that church and community involvement is validated by the pastors' participation and can lead to acceptance by and recruitment of participants. By using faith leaders as available resources, the proposed program plan has the potential to be more quickly initiated and carried out as well as reach more people.

However, faith-based organizations are not the only resources that are underutilized. As previously mentioned, another resource to use in the campaign to increase awareness of the CHA is the *media*. Although Northampton County does not have its own newspaper or radio station, there are two newspapers that serve the area and several radio stations located in neighboring counties. Asking the newspapers for space to publish an article on the CHA and its importance instead of merely running an advertisement will increase the likelihood that the purpose of the CHA and its importance will be understood. Also, reaching out to the radio stations to conduct radio interviews with trusted community champions will reach and reinforce the message to the target population. It would also be a good way to start word-of-mouth conversations in the community to increase awareness about the CHA. Moreover, the Internet will be used to increase awareness about the CHA and its importance through the use of Facebook and the health department website.

Importance of Participation in the CHA. Including more Northampton County residents from the target population in completing the CHA is crucial to the process. As the residents become aware of the existence of the CHA as well as the importance of participating in the process, this will increase the response rate for the CHA as well as increase sustainability. Kronstadt et al. (2018) noted that a "collaboration between the health department and other community groups has been observed to be beneficial, and a history of collaborative activity among community stakeholder groups appears to bolster CHA [CHIP] completion." Creating ways to incorporate the community into the CHA process means that there are more contributors, not just residents giving permission to plans that were already made without their knowledge (Rabinowitz 2018). Including the community in the CHA prepares them for interventions that may arise out of the CHA, involves those at the start of the process that may have the power to enhance community improvement efforts, unites the community to work on its issues, and increases trust in the system (Rabinowitz 2018). Rifkin (2009) noted that community participation is an important contributor to health improvements, especially in those that are disadvantaged.

Program Implementation. The purpose of the proposed program plan is to implement a campaign to increase awareness of the CHA in Northampton County, NC, mobilize the community to social action on the issues they select during the CHA, and evaluate the program plan. The plan will be guided by the COOPM framework and will include individual, interpersonal and community levels of the socioecological model since the CHA focuses on individual participation but relies on interpersonal word-of-mouth to expand participation by the target population and use social action through community involvement to resolve issues in the community (Appendix 2).

The NC Department of Public Health (2014) suggests that those conducting a CHA create CHA advisory teams to assist with the process. The Northampton County Health Department director and the Health Educator will create a team to carry out the goals, objectives, and activities of this proposed program plan. The team will comprise people from the health department and community coalitions such as Healthy Carolinians, all with knowledge of the CHA and involved in the CHA the process in the past. Their expertise will be valuable in moving the program plan into the community and expanding the program. As the process evolves and more community members become familiar with the CHA process, lay resident volunteers will be trained as community champions to expand awareness of the CHA.

The planning and implementation plan covers a 4-year period. During the first one and a half years for the awareness campaign, Northampton County residents will be empowered to participate in the CHA process. The remaining two and a half years will be used to increase community capacity, make issue selections based on data from the CHA, formulate relevant agendas for the community to work on the issues, and use critical consciousness to uncover the origins of the problems discovered on the CHA.

The CHA advisory team will be formed in the beginning of Year 1. The health department Health Educator will refresh the CHA advisory team on the purpose and importance of the CHA, how the information is used, how to recruit more community champions and how to tabulate the data received from the CHA. She will also give the CHA advisory team a list of the churches and media outlets that the health department has already built a relationship with so the team can contact those collaborators. The team will also use this time to solidify the roles that they will perform based on the proposed program plan time line and formulate a proposed budget that will be assessed and approved by the health department director. If more funds than those

provided by the health department are needed, the CHA advisory team will reach out to the community coalitions to obtain aid. Also, some of the media outlets such as the newspaper may be willing to donate space in the paper for free.

Also, in the beginning of the Year 1, the CHA advisory team will use social marketing techniques with the purpose statement, goals and objectives as they write a draft script to air on the radio. This script will include what the CHA is and why it is important; that all Northampton County residents can participate; how the information from the CHA is used to benefit the community; why inclusion of all members and the response from the community is crucial; how they can participate; and where they can get more information about the process. The CHA advisory team will propose optimal frequency and timing of the radio advertisement to share with the station. The same script content will be used for the local newspapers and the health department Facebook page.

By Month 8 of Year 1, the CHA advisory team will utilize the guidelines of the COOPM to reach out to and train faith leaders in the area as well as community champions. The CHA advisory team will set up meetings with the faith leaders to encourage buy in from them. Those faith leaders that agree to be trained in the process as well as any of their delegates will be set up for training. Also, any other Northampton County residents that pledge to volunteer will be contacted to attend community champion training sessions. There will be one training session each week for 3 months to train the faith leaders and community champions in what the CHA is and why it is important; its benefits to the community; how the data are used; and the meetings that will take place to follow up on the data and create social action. The training sessions will empower the faith leaders and community champions to take the message back into the

community to enhance awareness of the CHA. This will expand the inclusion of more residents in the process as well as build community capacity through networking.

One of the most important parts of the CHA is the survey. The CHA advisory team will review the CHA survey with the Health Educator to make sure that the survey is relevant and up to date. They will also proofread the survey to remove any redundancies, shorten the survey if needed and clarify any vague questions. Copies of the survey will be created and the survey will be scanned into the computer so that it is accessible from a link on the Internet. This will occur on Month 9 of Year 1.

Once the CHA advisory team has implemented the awareness portion of the CHA, the community will be ready to participate in the CHA survey. This will occur on Month 10 of Year 1. The faith leaders and community champions who underwent training in the CHA process will be given copies of the CHA survey and cards with the link to distribute to the community. This process will take about two months for the distribution of the surveys as well as receiving the responses. Also, for those who cannot fill out a survey due to visual impairment, illiteracy, or other reasons, the community champions will be available by phone two times per week to perform surveys for those that are not able to complete the form on paper or on the Internet.

The data collected from the CHA survey must be analyzed. An online data collection and analysis tool will calculate the data from completed Internet surveys. The surveys that are filled out on paper and performed by phone must have the data entered into the computer so it can be tabulated with the online surveys. This will take place by Month 4 of Year 2.

Goals and Objectives of the Program Plan: **Goal:** Increase the knowledge of the CHA process and its importance in the general population of Northampton County. Increased

knowledge and perceived importance will lead to an increase in the CHA response rate in the target audience by 20% over the previous CHA response rate.

Objective 1. Beginning of Year 1, train volunteers from the health department and Healthy Carolinians to form a CHA advisory team.

> **Activities:** CHA advisory team members will be trained by the health department Health Educator. They will become more proficient in the process to train faith leaders and community champions for the program. They will become familiar with the resources that are available for the program.
>
> **Indicator:** Proficiency in basic information about what the CHA is, its importance, participant selection, use of data from CHA, how to recruit the faith leaders and community champions.

Objective 2. By Month 3 of Year 1, draft a social media script to use as part of the awareness campaign.

> **Activities:** Contact local radio stations for air time. Contact local newspapers for ad space. Create a space on the health department Facebook page.
>
> **Indicators:** Number of radio stations and newspapers that participate. Number of hits on the Facebook page.

Objective 3. By Month 8 of Year 1, train faith leaders and community champions on the elements of the CHA.

> **Activities:** Contact all local area faith leaders and any community residents that expressed an interest in being trained as community champions to work in the CHA

process. Set up meeting times each week at the health department, church or other designated areas for training.

Indicator: Number of pastors and community champions that are trained

Objective 4. By Month 9 of Year 1, modify the CHA survey, publish to a survey website, and make paper copies.

Activities: The Health Educator and the CHA advisory team will review the previous survey and proofread it for relevance, redundancies, and vague wording. They will also post the survey to a data collection website and make paper copies for distribution. Cards with the link address to the online data collection website and due date for the survey will be printed.

Indicators: Number of survey copies and cards created

Objective 5. By Month 10 of Year 1, paper copies of the survey and cards with the survey link will be distributed to the faith leaders and community champions. Responses will be received.

Activities: All faith leaders and community champions included in the training will be called to collect paper copies and survey link cards to distribute to the community. CHA advisory team members and the community champions will set up times to receive phone calls from those who are interested in completing the survey by phone.

Indicator: Number of returned surveys on the website and in paper, survey phone calls

Objective 6. By Month 4 of Year 2, perform data analysis and evaluate the program plan.

Activities: The data from the paper copies of the survey and the phone call surveys must be added to the surveys done on the Internet. An online data collection and analysis tool

will analyze the data. The CHA advisory team, faith leaders and community champions will meet in a small group forum to assess the program plan and ways to improve the plan for the next cycle.

Indicators: Number of program plan evaluations completed

The long term objective of this proposed program plan is to enhance social action through follow up on the data that were discovered through the CHA as well as create initiatives to resolve any discovered issues. Using the COOPM framework, the residents of Northampton County will now be able to receive the results on the data, utilize relevance by creating an agenda that will work for the community, select the issues that they want to work on in the community, and practice critical consciousness by uncovering the sources of the problems that need attention in the community. The CHA advisory team will collaborate with the faith leaders and community champions to take the final data reports back to the community. Once the final data reports have been distributed to the community, the CHA advisory team, faith leaders and community champions will plan five small group forums to thoroughly discuss the data with concerned residents as well as work on planning initiatives to address the needs uncovered in the data. The community champions and concerned citizens will then meet once per month in small group forums under the supervision of the CHA advisory team to carry out the action plans and plan implementation based on the information that is received from the CHA. This will happen throughout the rest of Year 2 and also throughout Year 3. By Year 4, the community champions and the concerned residents are continuing to implement the program plans based on the CHA along with evaluation of the plans. At the end of Year 4, the CHA process is ready to begin again, except this time, the community champions who have been seasoned in the process can take more of a leadership role in the process going forward.

Sustainability. To ensure sustainability, residents need to be included and be active in the process from start to finish. This means that the residents serve as community champions, taking the CHA awareness campaign to the community, they fill out the CHA survey, they collaborate on actions that need to be taken on issues that were raised by the CHA, and they participate in evaluating the process. One of Northampton County's strengths is that the county has a high social capital which should make them more likely to participate in program planning that meets their needs (Nimegeer et al. 2015). High social capital may lead to increased participation which is essential for effective and sustainable public health programs (Pennel et al. 2017). It is imperative that as the community is empowered, they work together to increase community capacity and participation, selecting the issues that are pertinent to address and creating relevant agendas so they can have a greater critical consciousness of the issues the community faces and can address those issues effectively.

Sustainability is created by using a "continuous cycle of sharing information with stakeholders, receiving information from stakeholders, and incorporating their feedback into the assessment and planning processes" (Pennel et al. 2017). Participation by the residents does not terminate when they return the CHA survey. The information must be shared with the stakeholders to maintain sustainability. Feedback at small group forums and other existing community meetings will also provide useful data for social action by the community. By incorporating continuous information sharing and engaging the community in the process, shared decision-making will occur and lead to developing new skills and abilities as well as strengthening relationships in the community, building capacity, and enhancing sustainability (Pennel et al 2017).

Evaluation of the Plan

A summative evaluation will be conducted by the Northampton County Health Educator, who also currently oversees the CHA process, to assess whether the program plan met the intended goals (Sufian et al., 2011). For the proposed program plan, the goal is to increase awareness, which will lead to an anticipated increased response rate on the CHA by 20% over the previous CHA. The Health Educator will perform the formative evaluation by Month 9 of Year 1 to assess whether the CHA advisory team has observed any activities that will need to be modified, such as community champion training and the social marketing techniques through the media. A formative evaluation using qualitative data can also be done by Month 12 Year 1 by the community champions and faith leaders to find ways to improve the program from their perspective. The evaluation will focus on ease of program implementation as well as suggestions for improvement. A process evaluation will also be done by the CHA advisory team to examine whether the program operated as planned. This will be done during Month 4 in Year 2 after the data analysis has been performed. This can also be done every 6 months during Year 3 and 4 by the CHA advisory team as well as the community champions.

The small group forums can provide program implementation data for the formative evaluation of the program plan. The small group forum that was held for the last CHA cycle in Northampton County only had about 20 attendees (personal communication 2018), which means that less than 1% of the population of the county attended the post analysis of the CHA. The awareness campaign for the CHA will need to increase the participation rate for the small group forums for the entire program plan to be effective since the program plan includes awareness of the CHA as well as follow up on the results through social action. The Health Educator and the CHA advisory team can used mixed methods to gather data at the small group forums.

Limitations

There are limitations to the program plan to increase awareness of the CHA in Northampton County. One of the limitations is that awareness of the CHA might not lead to action. Kenny et al. (2014) warned that there is a lack of evidence to prove that increased participation in the CHA will lead to any benefits. One of the ways to minimize this limitation is to get early buy in from community leaders. Buy in from the leaders will serve as a driving force to assist with community participation at every stage of the program plan and increase social action to improve the possibility of community benefit. Also, the program plan may not be sustainable, since some residents who continuously participate in the process may experience negative health consequences such as exhaustion and stress (Kenny et al. 2014). This can be ameliorated by having many community champions and strategically placing them in roles that maximizes their talents and interests. Furthermore, there may be other negative consequences such as unintended financial burdens as well as disappointments for some of the participants through unmet expectations (Cyril et al. 2015). This limitation can be minimized by planning a budget at the beginning of the program and discussing expectations early on with all stakeholders.

Discussion

Traditionally, the Northampton County Health Department has been the organization that has driven the CHA process. They have been effective in the past, with a response rate of 60% on the CHA survey. However, for Northampton County to experience change, it must begin with each citizen becoming aware of the fact that they have a voice and using that voice. By implementing the proposed program plan, the health department can empower the residents of the community through awareness of the CHA process to take on a leadership role. Bringing

awareness of the CHA process to the residents of Northampton County empowers them with the knowledge needed to raise their voice on issues that are important to the community as well as foster unity within the community.

Several ways exist to increase the completion response rate for the CHA but the proposed program plan focuses on expanding the existing target population in Northampton County by 20% over the previous CHA. The previous CHA included 500 residents in the target population. Three hundred responded to the survey, which is commendable, but by increasing the response rate in the existing target population by 20%, the validity of the data that are gathered will increase and the cost per survey will decrease.

The proposed program plan will also help to mobilize the community to social action to improve conditions in the community. Since Northampton County is a rural area, there are fewer resources to solve problems in the community and there are many barriers such as mistrust of the system, lack of education, and decreased access to technology. However, the community has strengths such as high social capital and utilizing different stakeholders such as faith leaders, the media, and concerned citizens will help to overcome barriers to increasing awareness of the CHA process since early community buy in is important to achieve support (Heaven 2018). Also, by relying on community leaders as well as training volunteers to become champions, community engagement in the process and collaboration among the residents will increase (Becker, 2015). Using the COOPM framework and the elements of empowerment, community capacity, participation, relevance, issue selection and critical consciousness will help mobilize the community to social action to help ameliorate the problems that are discovered in the community through the CHA.

Expanding the target population to increase the response rate to the CHA by 20% will have other implications for Northampton County. The propose program plan will engage more people in the process who were not involved in the past. This includes a CHA advisory team that will be formed by experienced personnel for the first cycle of the program plan, but thereafter will be completely made up of lay persons from the community who have been involved in the process and can now utilize the leadership skills that they learned to continue the next cycle of the CHA. This will also increase sustainability since the process will not be driven solely by the health department, but will also include residents who want to initiate changes for the good of the entire community.

Moving forward, Northampton County should expand the response rate on the CHA from the target population, but it would also be important to include those from different areas of the county and from various backgrounds who may be at increased risk for health disparities (Pennel et al., 2017). Increasing inclusivity by engaging those who are at risk will yield more information on the CHA that can be used to create better programs in the community as well as promote empowerment in the residents involved. Including a wider variety of residents will also contribute to greater community buy in. The proposed program plan will reach this difficult to reach population by using sources that were previously underutilized such as the church and the media. This will also benefit the community because the opinions of those who have been marginalized can influence and shape future initiatives for improvement in the community as a whole.

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Appendix 1. SWOT analysis

Strengths	Weaknesses	Opportunities	Threats
• County is not densely populated • "People know people" • Have several radio stations in the area • Have 35-40 churches in the area	• County is rural and poor • May have geographically hard to reach areas • Widely dispersed area to cover • Illiteracy rate • Lack of Internet or unreliable Internet in some areas • Older population with hearing and visual impairments	• CHA may be new to some and will give them a way to help the community • Retired population who will have more time to volunteer	• May have people who are apathetic • May have people who don't think there needs to be change • May have people who don't see the need to follow the process all the way through • Time constraints on those who have other responsibilities such as work • Mistrust of system • Concerns about confidentiality

Appendix 2. Logic Model

Planned Work		Intended Results		
Resources/Inputs	Activities	Outputs	Outcomes	Impact
People • Local pastors • Northampton County residents • CHA advisory team • Lay volunteers Organizational • Local churches • Northampton County Health Department • Community coalitions such as Healthy Carolinians • Newspaper editors • Radio station owners Materials • Radio broadcast • Newspaper article • Facebook page • Web based CHA survey • Printed CHA survey Physical sites • Health department • Churches • School auditoriums	• Creating a CHA advisory team • Contacting radio stations for air time • Contacting newspapers for page space • Create a Facebook page with information on the CHA • Printing CHA surveys • Developing electronic CHA survey on website • Interview for newspaper and radio stations • Meetings with church pastors and lay volunteers • Survey data collection • Survey data analysis • Forum meetings to discuss post CHA results and mobilize community • Formative, process, summative evaluations	• Information on what the CHA is, its importance, how the information is used, why participation is important, where to learn more • Distribution of CHA survey paper copies, link to website, phone surveys (if needed) • Post CHA analysis of data • Small group forum follow up on results	• Increase in CHA survey participation by 20% • Increase in CHA small group forum participation by 20% • Increased buy in by community leaders through attendance at CHA awareness meetings	• Increased awareness of CHA process as evidenced by increased participation in CHA activities • Decreasing the impact of health disparities as seen by data on CHA survey