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Background: Health inequities in the Gulf states are complex issues to resolve, and no single solution or strategy can improve the health rankings in each state. Yet, using grassroots approaches and building community partnerships are promising strategies to identify important health issues and opportunities for policy change. *Purpose:* This paper illustrates how the Gulf States Health Policy Center coalitions in four different locations used the same community-based participatory research model, but with distinct differences in processes, across nine projects to address issues that negatively affected population health. *Methods:* Recognizing that communities have unique needs, resources, and complementary health efforts, we illustrate how the community-based participatory research process is adaptable and can be applied across these different environments. *Results:* While numerous community-based participatory research tool kits and single case studies are available in the extant literature, this article highlights the various and effective ways that community-based participatory research can unfold through viewing these nine cases side by side. *Conclusions:* We conclude by highlighting the benefits of the adaptability of community-based participatory research methods and making recommendations for future efforts in community-based participatory research.

Keywords: community-based participatory research, adaptability, public health, health coalitions, Gulf States Health Policy Center

Background

A government report issued every 10 years, *Healthy People* has historically offered science-based objectives and established benchmarks designed to improve the nation's health for all people (U.S. Department of Health and Human Services, 2014). The original goal of *Healthy People 2010* was to "eliminate" health disparities; however, the revised *Healthy People 2020* goal not only includes eliminating health disparities, but also attaining health equity and improving health for all citizens (U.S. Department of Health and Human Services, 2014). Health disparities are the result of multifaceted, complex issues that are closely associated with socioeconomic, genetic, economic, geographic, and environmental disadvantages, which disproportionately affect certain populations that have traditionally experienced greater impediments to good health (Braveman, 2014; U.S. Department of Health and Human Services, 2014). Unfortunately, many of these issues exist for vulnerable populations in the Gulf states.

Vulnerable populations in the Gulf states (Alabama, Mississippi, Louisiana, Texas, and Florida) are disproportionately burdened with health inequalities, which are primary contributors to health disparities and poor health outcomes (Braveman, 2014; Holden et al., 2019; United Health Foundation, 2019). Specifically, three of the five Gulf states, Mississippi (50), Louisiana (49), and Alabama (47) are in the bottom five lowest ranked states regarding overall public health measures. Although Texas is ranked 34th and Florida is ranked 33rd, these two states score consistently with the U.S. in international public health rankings, where the U.S. ranks 33rd in infant mortality, 36th in obesity, and 28th in life expectancy, out of 36 OECD nations (United Health Foundation, 2019).

To help improve health equity and health outcomes in the Gulf states, in 2013, Dr. Regina Benjamin, the 18th United States Surgeon General, created the Gulf States Health Policy Center (GS-HPC) in Bayou La Batre, Alabama. The GS-HPC, in partnership with the University of Alabama at Birmingham and the University of Southern Mississippi, was established to conduct health policy research and to build community coalitions to improve health outcomes and reduce health disparities in the Gulf states.

As health inequities in the Gulf states are complex issues to resolve, no single solution or strategy can improve the health rankings in each state. Yet, using grassroots approaches and building community partnerships are promising strategies to identify important health issues and opportunities for policy change. The GS-HPC used community-based participatory research (CBPR) to employ these strategies. CBPR's core principles include collaboration among all stakeholders, recognition of each partner's strengths, involvement of multidisciplinary scientific researchers, and equal participation by community members in all aspects of the project. These components help to address health disparities among vulnerable populations and to ensure that proposed interventions are responsive to the needs of the targeted community (National Institute on Minority Health and Health Disparities, 2018). Thus, CBPR is about the ability to adapt to the

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needs of the community and conduct research that meets these local needs (Beckerman-Hsu et al., 2020).

Purpose

The purpose of this paper is to illustrate how GS-HPC coalitions in four different locations used the same CBPR model across nine projects to address issues that negatively affected population health, but different processes and outcomes emerged. Recognizing that communities have unique needs, resources, and complementary health efforts, we illustrate how the CBPR process is adaptable and can be applied across these different environments. While numerous CBPR tool kits and single case studies are available in the extant literature, this article highlights the various and effective ways that CBPR can unfold through viewing these nine cases side by side. Although it is well established that adaptability is central to CBPR (Belone et al., 2016; Chang et al., 2013), there is a paucity of literature that highlights and compares different CBPR applications that have adapted the same model to meet individual community needs.

Methods

Community-Based Participatory Research

Drawing from Talcott Parsons' theoretical contributions on the application of scientific approaches to address real-world problems (Wallerstein & Duran, 2008), CBPR is increasingly recognized as a valuable approach for addressing health disparities (Minkler et al., 2003; Vásquez et al., 2006). Defined as "systematic inquiry," which is the careful and intentional method used to understand a challenge or a problem with members of the targeted population being studied in an effort to educate and initiate social change (University of British Columbia et al., 1995), CBPR takes a positivist approach to research in its goals of research, action, and education (Hall, 1992; Wallerstein & Duran, 2008). CBPR posits that institutional changes often occur because of policy based on new data, education about that new knowledge, and self-reflection by the targeted community (Bright et al., 2018). It is in the focus on action and the strong role of the community that CBPR stands apart from traditional research (Lazarus et al., 2012).

CBPR is a results-oriented process that emphasizes community collaboration in all phases and taking action to address health issues. Much of the literature on CBPR highlights the role of community coalitions in addressing common goals (Center for Community Health and Development, 2016; Johnson et al., 2009; Weiner & McDonald, 2013) and impacting policies (Brown et al., 2012; Hatton & Fisher, 2011; Hicks et al., 2012; Jernigan et al., 2012; Jilcott Pitts et al., 2013; Wennerstrom et al., 2011; Wynn et al., 2011). It is well documented that social change research must include members of the affected communities (Johnson et al., 2009). As such, there is a growing interest in approaches that promote the effectiveness of community-academic partnerships (Wallerstein & Duran, 2010).

A core strength of the CBPR approach is its adaptability to community needs, opportunities, and assets. By its very definition, the community is involved, but community also equally guides the project from its inception. From a research standpoint, this means that both community members and academicians generate research questions to address community health issues. Thus, community members and researchers are equally valued as "experts." Belone et al. (2016) discussed the importance of adapting CBPR models based on the needs of community and academic partners. Fletcher et al (2017) added that adaptability is also important for the partnership to be effective, even integral, to capacity building. Throughout CBPR, community and academic partners learn how to work together and must adapt in this process (Fletcher et al., 2017). Similarly, Tobias et al. (2013) argued that continuous collaborations on research projects that focus on building partnerships through sustained communication and compromise are essential, and Serrell et al. (2009) noted adaptability as a core value of CBPR, alongside consistency, shared authority, and trust.

This is particularly empowering for vulnerable communities and can help to build trust between researchers and communities that have been mistreated and/or underrepresented in past research (Sydnor et al., 2010). Additionally, community members report an increased sense of agency when participating in projects that empower them to make a tangible difference in their communities instead of merely being the subjects of the study (Malone et al., 2013). This relationship is also vital for academics, who gain a deeper understanding of not only the issues at stake, but the challenges communities face when seeking to address these issues and make community improvements (Pivik & Goelman, 2011). Understanding these real-world constraints helps the researcher to design studies and produce results that are more relevant and usable to communities (Wilson et al., 2013).

An Applied CBPR Model

Although flexible to community needs and the social issues being addressed, CBPR commonly follows established steps with a commitment to combining research with action for the purpose of effecting change (Vásquez et al., 2006). First, the partners in this process define and identify the problem. They then set an agenda, create awareness around the problem, and construct policy alternatives. Finally, they decide on a new policy to pursue, then advocate for it (Vásquez et al., 2006). Across CBPR models and examples in the extant literature, the shared factors are an emphasis on both knowledge/research, action, and participation (Lazarus et al., 2012).

Bright et al. (2018) adapted the Vasquez et al. (2006) model to emphasize the four broad phases of CBPR for health coalition-based work. In this model, the coalition identifies the policy area, focusing on evidence that indicates a problem. Next, the coalition conducts a policy scan to identify the opportunity for change within the broader policy area to improve health outcomes in the community. Third, the coalition develops a community action plan (CAP), which is a plan to define mutually agreed upon actions to bring change related to the policy focus areas, to identify the steps needed to make the change, including resources, partnerships, and evaluation of the

change. Finally, the coalition implements a policy change (Bright et al., 2018). Together, these steps are designed to produce scientific knowledge that informs collaborative change at the community level (Vásquez et al., 2006).

The Bright et al. (2018) model also aligns with the Lazarus et al. (2012) integral components of knowledge, action, and participation. Regarding knowledge, the coalition reviews publicly available data to select a health disparity issue that exists in the community and then conducts a policy scan to gather additional evidence regarding policies or the lack of that may be contributing to identified disparities. Regarding action, the steps in the model are taken to lead to the CAP, which is focused on how the policy change will take place. The CAP is then enacted in the final stage. Regarding participation, all four stages of the Bright et al. (2018) model require collaboration between academic researchers and community members.

The Gulf States Health Policy Center (GS-HPC) Coalition

Through its coalition, GS-HPC fosters community-academic partnerships to identify health policies that are effective, relevant, and timely when applied to real-life communities. Comprised of over 90 organizations, the coalition unites communities, academics, nonprofit organizations, governments, and policymakers in this work. Members met monthly in four locations (Bayou La Batre and Birmingham, Alabama, and Hattiesburg and Gulfport/Biloxi, Mississippi). They collaborated, planned, and conducted research in nine policy focus areas to understand the multiple ways policies affect health in their communities. Focus areas included health literacy, financial literacy, education, domestic violence and prenatal health, healthy foods, school wellness, transportation, tobacco-free living, and Narcan adoption. Many of these efforts are highlighted in the GS-HPC special issue of *Progress in Community Health Partnerships*, published by Johns Hopkins University Press (Project MUSE, 2018). All coalition projects received IRB approval at their respective institutions.

GS-HPC Coalition Process

In October 2014, the GS-HPC Coalition was launched via a series of community meetings held in Bayou La Batre, Birmingham, and Hattiesburg to recruit members. The coalition joined representatives from a wide variety of sectors, including nonprofits, public health departments, educational institutions, local businesses, housing bureaus, senior services, childcare facilities, faith-based organizations, mental health services, public interest organizations, law enforcement, and city government, among others.

By holding meetings in three locations, GS-HPC covered a wide geographic area and increased coalition membership and momentum. Having three locations also allowed GS-HPC to operate at a true community level, enabling the coalition to address local concerns and take advantage of local policy opportunities, knowledge, and resources.

Community members were invited to attend informational meetings where they learned about the GS-HPC, health policy and health policy research, and potential focus areas. Meetings included dialogue about the coalition's purpose: to foster partnership, resource-sharing, and

community mobilization in order to inform health policy. The GS-HPC Coalition continued to meet monthly, and early meetings focused on discussions around health issues that led to identification of policy focus areas. When needed, GS-HPC provided training in research and policy and recruited subject matter experts to address the coalition. Because each coalition met locally, nine different policy focus areas eventually emerged. These policy focus areas were based on the assets, needs, opportunities, and partners present locally. Coalition members then worked within these smaller groups to create and implement the community action plans.

Birmingham, Alabama

As a first step, the Birmingham coalition provided training to community stakeholders on policy and health research. Topics included understanding health policy, developing policy briefs, and creating a community action plan. Members developed their own CAP based on the results of a community policy scan that assessed policy implementation and adherence, and facilitators and barriers to implementation. Results of the scan led the Birmingham coalition to select transportation and school wellness as their policy focus areas.

Transportation

Coalition members developed and distributed an active transportation policy assessment to city government and businesses, including the Birmingham police, planning, and traffic engineering departments, and the 25 largest companies in the Birmingham metropolitan area. Based on the results, the coalition decided to focus on improving transportation safety for kindergarten to 8th-grade (K8) students.

Along with support from the administration at a K8 school selected for a pilot program, the coalition developed a pre- and post-Pop-Up Project survey of parents to assess parental perceptions regarding safety issues at school arrival and dismissal times. The survey was developed in English and Spanish and distributed online and in person at school meetings and during dismissal. Results of the pre-survey yielded the following most ranked responses related to parental safety perception: scary people and long distances to walk both ranked 52%; no safe paths to school and crossing railroad tracks both ranked 48%; and unfriendly dogs and no sidewalks both ranked 38% of the responses.

Simultaneously, the coalition worked to advocate for, develop, and implement a Pop-Up Project to improve traffic safety at the crossing intersection at the K8 school. Members attended a Birmingham mayor and city council meeting in support of the project. Although the project was unanimously approved by the council, the project was not funded, and, therefore, the post-survey was not administered.

Coalition members then decided to start and implement a weekly activity, Walking School Bus, at the K8 school, where groups of children from the school walked home from school with several adults. This activity was a success with the students, who reported feeling safe during the walking activity; some students even revealed other safety concerns such as

unwanted solicitation. The coalition also helped the school to obtain bus services for children who walked more than 2 miles to and from school.

School Wellness

The Birmingham coalition distributed policy assessments on school wellness to 44 Birmingham city school principals, three city officials, and the 26 largest employers in the Birmingham metro area. Based on the results, the coalition identified a lack of school wellness councils as a significant barrier to improving school wellness in Birmingham schools and disadvantaged neighborhoods, and reviewed literature supporting such councils.

The coalition developed a pilot program at a K8 school in Birmingham. Coalition members assisted school leaders with developing a school wellness committee, which assesses the school's health environment and current programs and policies to strengthen and improve health outcomes for students and staff. The K8 school wellness committee consisted of school leaders, teachers, students, and community stakeholders, who met monthly. The school wellness committee's vision statement was: "To develop and foster a holistic approach to healthy living through making positive choices."

The school wellness committee identified several concerns that it promptly addressed by identifying resources for bullying prevention/intervention; cyberbullying/social media usage; after-school activities/clubs; sports/summer camps; mentors for boys; personal hygiene and etiquette class for girls; and dress code for all staff, students, and parents. To address mental health issues that negatively impact many of the students, the coalition decided to provide school staff and coalition members the opportunity to attend a Mental Health First Aid training. The purpose of this training is to help participants recognize when students or staff may be experiencing or developing a mental health problem or mental health crisis, and make the appropriate referrals.

Hattiesburg, Mississippi

The Hattiesburg coalition discussed community needs at monthly meetings from January to March 2015. In addition to anecdotal evidence, the coalition reviewed all available data to identify areas in which the community might be underperforming relative to other communities, counties, or states. After reviewing local data, coalition discussions focused on disparities surrounding workplace access to healthy foods, opioid addiction, and infant and maternal health.

Workplace Access to Healthy Foods

The coalition surveyed top employers in Hattiesburg to collect data on worksite access to healthy foods. Fifteen employers (six manufacturing/distribution employers and the top 10 services employers) responded, collectively representing 13,091 employees. The survey instrument collected data on vending options, cafeteria options, company policies around food for meetings, interest in improving on-site access to healthy foods, and other employer-related health policies. The survey was delivered through a Qualtrics link to the human resources

directors. Of employers surveyed, 62.5% reported having a formal worksite wellness program. Specifically, 14% of employers had formal policies on worksite access to healthy foods and 75% indicated they would like to improve their internal policies in this area. Results revealed several areas in which policy could improve quality of food options in the workplace. Recommendations discussed by the coalition included pricing strategies to encourage healthy purchasing behaviors, healthy options at company-sponsored events, and healthier vending options.

As most employers indicated a desire to improve their internal worksite wellness plans, especially access to healthy foods, the community action plan for this focus area was designed to work with local employers to improve access to healthy foods. The local division of the state health department was active in the coalition and included a staff position with the specific task of working to improve employer workplace policies around health. In this case, the coalition served a liaison role and presented the survey data to the health department. The public health worker then reached out to individual employers who expressed a desire to improve workplace access to healthy foods.

Opioid Addiction

The coalition began work in this policy area by inviting guest speakers on the topic from the local community and the health department to gain a better understanding of how the opioid epidemic impacts the community, including its evidence in prescription rates and overdose rates. These conversations turned the coalition's focus to the adoption of Narcan, the drug that can be administered as a nasal spray to an individual who has experienced an opioid drug overdose.

Although Narcan can be administered easily with no side effects, many Mississippi first responders did not have policies to encourage the carrying of Narcan. Prior to the data collected under this policy scan, there was no comprehensive data on the adoption of Narcan. With input from the Mississippi Bureau of Narcotics and the Mississippi Department of Mental Health, the policy scan instrument for this area involved compiling a database of the Narcan adoption policies of Mississippi sheriff's departments and police precincts by conducting a phone survey of sheriffs and police chiefs. The coalition collected contact information for all 261 Mississippi police chiefs and sheriffs.

The preliminary data showed that 17% of respondents were early adopters. The majority of first responders in Mississippi, as of August 2017, were not committed to using Narcan (Bagley & Bright, 2020). The data collected through the policy scan were used to (1) provide a baseline for ongoing efforts around Narcan adoption; (2) identify opportunities for education around Narcan need, usage, and adoption; (3) distribute available doses of Narcan to interested parties; and (4) develop maps for constituents interested in advocating for Narcan. Funded by the State Targeted Response to the Opioid Crisis Grant under the 21st Century Cures Act, a partnership between the Mississippi Bureau of Narcotics and the Mississippi Department of Mental Health seeks to promote the adoption of Narcan by law enforcement. Partners in the policy scan group had an interest in advancing their own understanding of adoption and reasons for or against adoption. Thus, a fifth outcome of the policy scan was to provide representatives of

the State Targeted Response with summaries of the data that included contact information of respondents who needed additional follow-up or information.

Infant and Maternal Health

The coalition developed a survey instrument to collect data on policies related to prenatal healthcare from the office managers of two prenatal providers in Forrest County, Mississippi. The coalition discussed the infant and maternal health policy scan data in the context of community needs to identify any gaps in services or policies of the local prenatal care providers, which led to a focus on domestic violence and pregnancy. One provider only discussed domestic violence if it was mentioned by the patient first. There was no indication of policies to discuss it routinely, and it was not indicated that information was provided by pamphlets, televisions in the waiting room, patient portals, or referrals to other services. For the other provider, domestic violence was discussed at the first prenatal visit and postpartum visit. However, no information was provided by pamphlets, televisions in the waiting room, patient portals, or referrals to other services.

The coalition assessed the expertise available within the group. Although many disciplines of healthcare were represented, the coalition did not have membership from anyone working specifically in the domestic violence arena. The coalition invited representatives from Hattiesburg's women's shelter to a meeting in order to include community members with specific expertise essential for the project's success. The resulting CAP emphasized the need to screen, make referrals, and provide information on domestic violence during prenatal visits. Such policies would standardize clinic processes to be systematically implemented by all prenatal care providers. To facilitate these policy changes in collaboration with local providers, the coalition assisted with the development of policy-related materials.

The policy changes outlined in the CAP were implemented at the Southeast Mississippi Rural Health Initiative (SeMRHI[1]), one of two clinics surveyed by the coalition and represented in the coalition by three of its members. As part of the CAP, the coalition developed three materials to support the policy changes: a one-page information document, a trifold information document, and a poster document. Domestic violence is now included as a screening question for all prenatal patients receiving care at SeMRHI. If a patient answers affirmatively to the screening question, the one-page information document is printed by the system, giving the patient immediate information and resources.

Bayou La Batre, Alabama

Following several discussions of community needs, the Bayou La Batre coalition selected three policy focus areas: health literacy, education, and financial literacy. To assess policies in

[1]The Southeast Mississippi Rural Health Initiative (SeMRHI) has been providing healthcare to underserved patients since 1980 and currently operates 17 health clinics and 22 school clinics in southeast Mississippi. In 2016, SeMRHI served 36,200 patients across 101,745 visits. Of these patients, 284 were receiving prenatal care.

these areas, coalition members elected to hold community forums in lieu of a formal policy scan. The coalition held six 90-minute forums on three policy focus areas in three locations in Mobile County (Bayou La Batre, Mobile, and Prichard). The forums were attended by a total of 140 participants with a diverse mix of community members. They were facilitated by the David Mathews Center for Civic Life, whose staff provided detailed notes and a report on each forum.

The community forums involved participants from various walks of life, generated constructive discussion around community needs, built collective motivation to improve the community, identified assets and action opportunities, validated the coalition's previous discussions, and surfaced issues previously unknown to the coalition. The forums did reveal differences between what coalition members and community members identified as critical needs. Although the coalition consists largely of professionals who serve Mobile County, and these service providers contributed valuable information to the policy process, they could not fully speak for the communities they serve. Community members presented—and gathered consensus around—several issues that coalition members had not identified.

Health Literacy

The coalition developed and conducted a research study to evaluate the effectiveness of diabetes education provided at pharmacies and the inclusion of pharmacists in the healthcare team. The group included members from the University of South Alabama, American Cancer Society, and Ozanam Charitable Pharmacy. They published a paper titled "Improving health in an integrated healthcare system: Empowering pharmacists to function as key agents of change" in *Pharmacy and Pharmaceutical Sciences* (October 2016). In 2017, they launched the study to evaluate the effectiveness of three different types of medication therapy management (MTM) provided to vulnerable populations at a charitable pharmacy in Mobile, Alabama.

The MTM study is ongoing and shows positive early results. The study has also resulted in a new process between the charitable pharmacy and the Mobile County Health Department that allows for streamlined sharing of patient information, which improves patient health outcomes and decreases patient health risk. The group has also presented the results locally and nationally to disseminate information on how community-academic partnerships work and to encourage others to embrace the model.

Education

Despite high rates of behavioral health challenges experienced by local youth, the coalition identified the lack of adequate behavioral health services and teacher training in the target school system as an area of concern. In the Gulf states, these issues can be exacerbated by educational and socioeconomic barriers, cultural stigma, exposure to trauma caused by natural disasters, and lack of opportunities for treatment. The coalition studied these issues and found that behavioral health issues affect physical health, learning ability, and general well-being for young people, and can have life-altering and dangerous impacts. Students suffering from a behavioral health issue are more likely to drop out of school and to commit suicide. Left

untreated, behavioral health issues are likely to negatively impact health outcomes over the life course.

Fortunately, early diagnosis, intervention, and treatment can greatly improve present and future health outcomes. School teachers are well-positioned to identify and refer students experiencing mental health issues to the appropriate resources. Moreover, mental health training programs for teachers have shown positive results nationally. The evaluation of the mental health training policies for teachers in the target school system included a review of literature on mental health training programs, mental health statistics, rates of mental health treatment by the region's largest behavioral health provider, and a survey of teachers post-training to gauge effectiveness and implementation. The diverse composition of the group allowed policy evaluation from multiple angles. Group members represent various disciplines, experience in the field, and connections to the school system.

The group developed and administered a survey on mental health training to teachers in the school system. Based on these results and their prior research, the group developed an educational brief that detailed several viable options for delivering mental health first aid training to teachers in the target school system. They presented the brief to the target school board for their review and consideration.

Financial Literacy

As a result of the community forums, coalition members identified correlations between financial stress and long-term health impacts. Members also reviewed local public housing data, studies on the links between financial literacy and stress, financial education programming and resources, and local data on predatory lending. Consequently, the coalition developed an understanding of the specific needs related to financial literacy among public housing residents, especially among seniors and residents with disabilities. Furthermore, coalition members worked with the community organizations that were already working in this area—Prichard Housing Authority, the Alabama Asset Building Coalition, and Bank On South Alabama—to assess the feasibility of providing financial education to public housing residents as a housing authority policy.

Gulfport/Biloxi, Mississippi

The Gulfport/Biloxi coalition was created by coalition members who originally attended meetings in Bayou La Batre, Alabama, and wanted to improve health equity and health outcomes in their home community. GS-HPC supported the formation of a coalition in this new location by providing health policy trainings, grounding the coalition members in the work of GS-HPC, connecting them to additional partners when needed, and covering meeting expenses. In Gulfport/Biloxi, the coalition was concerned about observed high smoking rates among young people and decided to focus on smoking policies in public housing.

Tobacco-Free Living

The coalition participated in on-site residential public housing meetings to better understand the issues from residents' perspectives. Members reviewed public health data as well as survey data collected from partner organizations in the region. They also partnered with the Robert Wood Johnson Foundation Community Coaching program to create and refine a project deliverable. The coalition produced an informational brochure on the dangers of secondhand smoke, particularly its impacts on children and long-term health consequences. The brochure was adopted by the Biloxi Housing Authority for distribution to all public housing residents.

Results

In this paper, we have illustrated how coalitions in four different locations, using the same model, addressed nine total issues that negatively affected population health. Figure 1 captures the differences in the four stages of the Bright et al. (2018) CBPR model for the nine policy focus areas introduced within this manuscript. Herein, we have introduced the various and diverse ways that the GS-HPC has applied this model to prioritize the specific needs of different communities and the academic-community partners that supported these efforts.

The coalitions' work yielded different but comparably effective results, demonstrating the core CBPR concept of adaptability (Belone et al., 2016; Fletcher et al., 2017; Serrell et al., 2009; Tobias et al., 2013). Beginning with Phase 1, each GS-HPC coalition identified policy areas based on each community's needs and opportunities, as well as the coalition members' own expertise and interests. The CBPR approach requires that the direction of the coalition come from the community voice, which is evident in the nine different policy areas that emerged.

These policy areas then necessitated different approaches to data collection. The policy foci determined the data needed to make a change through the Phase II policy scan. As presented throughout and highlighted in Figure 1, data collection methods aligned with the policy foci and included community listening forums; surveys of school and school wellness committee members, prenatal healthcare providers, law enforcement, and top employers; and meeting observations. This step demonstrates another strength of CBPR: the equal importance and necessity of community members and academic researchers in the process. Just as the community is essential to identifying where more data are needed, the researcher is crucial in determining the most appropriate approaches to collecting the data.

Adaptability in Community-Based Participatory Research

Figure 1

CBPR Model as Applied Across GSHPC Chapters and Foci

Gulf States Health Policy Center	Identify Policy Area	Conduct Policy Scan	Develop Objective (Community Action Plan)	Implement Change
Bayou La Batre, Al	Health Literacy	The coalition held six 90-minute forums on the three policy focus areas in three locations in Mobile County (Bayou La Batre, Mobile, and Prichard).	Develop a research study to evaluate the effectiveness of diabetes education provided at the pharmacy and the inclusion of pharmacists in the health care team.	Research study yielded positive early results and resulted in a new process between the pharmacy and primary care provider that can improve patient health outcomes.
	Education		Evaluate mental health training policies for teachers in the Mobile County Public School System in Alabama	Results were presented to the Mobile County School Board for their review and consideration
	Financial Literacy		Assess the feasibility of providing financial education to public housing residents as a housing authority policy.	Members continue to explore ways to deliver financial education to public housing residents.
Birmingham, AL	Active Transportation	Survey of areas around schools to determine which component of a "Complete Streets Policy" is needed for the area; Survey of parents to assess their perceptions of safety during arrival/dismissal	Improve policies around walking safety during school arrival and dismissal times	Development of school travel plan "walking school bus" with adult supervision
	School Wellness	Survey of School Wellness Committee members to identify issues that negatively impact student body of the school	Improve policies around mental health issues such as in person and cyber bullying	Coalition and Washington K8 school members attended a Mental First Aid course to they can identify children in distress and help train other staff at the school
Gulfport-Biloxi, MS	Tobacco Free Living	Participated in onsite residential housing meetings to understand the issues from the residents' perspective. Reviewed public health data and survey data and partnered with Robert Wood Johnson Foundation – Community Coaching program to create and refine a project deliverable.	Address smoking policies in public housing in order to reduce tobacco's negative effects on children and on long term health outcomes.	Produced an informational brochure on the dangers of secondhand smoke, particularly its impacts on children and long-term health consequences. The brochure was adopted by the Biloxi Housing Authority for distribution to all public housing residents.
Hattiesburg, MS	Maternal Health Issues	Survey of prenatal care providers in Forrest and Lamar County, MS	Improve policies around domestic violence	Partner with providers to develop process for screening pregnant patients for domestic violence and associated referral process
	Workplace Nutrition	Survey of top employers in Forrest and Lamar County, MS	Improve on-site food options	Partner with state health department to provide consultation on nutrition policies to interested employers
	Opioid Epidemic	Survey of all law enforcement agencies in the state of MS on Narcan adoption	Increase adoption of Narcan by law enforcement	Partner with state agencies to inform and encourage adoption for law enforcement agencies

The data collected in Phase II then determined the nature of the change in Phase III. For most policy areas, the data were used to narrow the focus. For example, the maternal health focus area was narrowed to domestic violence, and the school wellness focus area was narrowed to mental health issues, such as cyberbullying. In a way, this phase also demonstrates the voice of the community, as it uses community input collected through the policy scan stage to further identify the issues related to the foci, providing opportunities for the coalitions to make changes to improve health outcomes in the communities. In Bayou La Batre, for example, the community forums highlighted the value of direct input from the individual the policy work is intended to serve. Further, it underscored the importance of validating policy plans in the early stages of the planning process, as community input has the capacity to shift and shape the policy focus. The community forums provided GS-HPC coalition and staff members with specific community concerns related to the three policy focus areas, preferred community action steps, and key players. The coalition combined this information with coalition discussions, expert presentations, and additional discussions among GS-HPC staff and policy experts to craft a CAP.

Phase III also addressed the "how." In this stage, coalition members worked together to make changes to improve the community. The CAP was designed to identify specific long-term goals, as well as the objective, strategy, target population, action descriptions, process measures, and any resources or partnerships needed to meet the objective. The coalitions were able to draft effective approaches in each of these areas due to the adherence to CBPR principles in the previous three phases; notably, relying on expertise of both the community members and the academic researchers and ensuring that the policy areas were community-specific.

The final column of Figure 1 highlights the change that was implemented related to each CAP. Changes included specific changes in partner organizations, liaison role changes (the coalition turned the project over to appropriate partners), and identification of further research.

The variation between the coalitions and the projects within each coalition reveal the strength of CBPR. It is important to note that variation and flexibility occur at all project stages. We also note that the community emphasis of CBPR is one of its most salient strengths. Communities have different compositions and different needs. In this paper, we have highlighted the various ways in which these differences unfold using the case of the GS-HPC coalition.

While coalitions handled logistics differently, they had a common value of being community-led and community-responsive. Logistics considered the communities they served in every decision, including where to meet, format of the meetings, timing of the meetings, and what food to serve. This highlights the need to follow a process while being flexible within that process.

Across all nine policy focus areas, the coalitions worked toward outcomes. Although the outcome of each area was not known until the CAP was developed, the coalitions effectively moved forward through the phases. Admittedly, the timeline was not always as efficient as possible. There were times when coalitions felt "stuck" in a phase, but the conversations that occurred during these times were important for the ultimate outcomes; sometimes, extensive

discussion was needed to understand the needs of partners and the community, and to foster feasible changes.

To remain goal-oriented, the coalitions established work groups when multiple directions surfaced. The three original coalitions have more than one policy area because of these divergent interests. In other words, multiple identified directions could have derailed one large conversation, but were instead directed into numerous parallel conversations. The Biloxi-Gulfport coalition emerged based on this need to recognize multiple directions. This coalition broke away from the Bayou La Batre coalition to meet the needs of members on the Mississippi Gulf Coast.

The organic quality of the coalition process, while important for CBPR, makes evaluation difficult. While we often think about evaluation in terms of process and outcomes, the willingness to turn over the coalition to the community means that we do not always have ownership of the outcomes or a high level of involvement when it comes time to evaluate the outcomes. While this lack of ability to conduct a robust evaluation is often considered a weakness in traditional research, it would be considered a strength in coalition-building if the ultimate evaluation metric was the degree of community ownership rather than the policy outcomes. As coalitions are increasingly grant-funded and this funding inevitably comes to an end, this successful transfer of ownership is likely the most important assessment of the CBPR process, as it determines the sustainability of the coalition. Community ownership not only determines whether the policy work moves forward, but whether the network of individuals who have been trained in these areas and have an interest in these areas can continue to improve the quality of life in the community and respond to health inequities.

Conclusions

The efforts presented here have improved the health of communities in the Gulf states but demonstrate the importance of being adaptable in the process. The CBPR efforts as outlined can be applied across diverse communities to improve health and quality of life. CBPR is particularly important for low socioeconomic status minority communities (Minkler et al., 2003). In the present article, we have highlighted the efforts of the GS-HPC through its four coalitions to demonstrate the flexibility of CBPR to meet the needs of different communities. Recognizing that these communities have unique needs, resources, and complementary efforts, we have demonstrated how the CBPR process is adaptable and can be applied across these different environments. As CBPR is based on the need to involve the community in addressing real-world problems (Wallerstein & Duran, 2008) to affect social change (University of British Columbia et al., 1995), one of its core strengths is adaptability. This adaptability is documented throughout the nine policy areas at the center of the GS-HPC coalition work. It can be seen within the phases and across the projects, but its adaptability was also emphasized in the conversations and the partnership development. Aligning the body of literature emphasizing adaptability (Beckerman-

Hsu et al., 2020; Belone et al., 2016; Fletcher et al., 2017; Serrell et al., 2009; Tobias et al., 2013), we highlight how adaptability is important in all aspects of CBPR.

The efforts outlined here demonstrate ways in which the underpinnings of CBPR can be applied in planning such research, focusing on the projects as collaborative efforts that recognize and draw from the strengths of the community-academic partnership to respond to the needs of the target community (Brown et al., 2012). GS-HPC coalition members have implemented local policy change based on community-based research; increased their networks, resources, and partnerships; embarked on new projects and programming; and streamlined existing work. It is important to note that, while we have documented the CBPR process as implemented by the GS-HPC, the sustainability of such efforts is important to consider. Future research should consider the long-term impact of the coalition work on the community, but also on the community and research partners both individually and as a partnership.

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