



# Community Approaches to **REDUCING STDs**

*Phase 1 Evaluation Report*



**Centers for Disease  
Control and Prevention**  
National Center for HIV/AIDS,  
Viral Hepatitis, STD, and  
TB Prevention

## Acknowledgements

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## For more information

For more information about STD disparities, visit CDC's Division of STD Prevention Office of Health Equity Web site at: <https://www.cdc.gov/std/health-disparities>.



## Executive Summary

From 2011-2014, CDC's Division of STD Prevention (CDC) conducted the demonstration program *Community Approaches for Reducing STDs (CARS)*. Awards (i.e. cooperative agreements) were granted to four sites across the United States through a competitive process to implement and evaluate community engagement methods in designing and implementing STD prevention programs and STD prevention services through community-based activities and interdisciplinary interventions.

Using this method Community Advisory Board (CAB) members prioritized the following: access to healthcare, education, employment and incarceration as the major social determinants of health (SDH) that needed to be addressed to reduce STDs in their respective communities.

As a result, the CARS projects implemented the following activities:

- Opening STD screening and clinical resource centers in low-income public housing communities;
- Conducting STD/HIV testing via mobile unit and hosting health fairs in high morbidity neighborhoods;
- Collaborating with adolescent health partners to offer screenings at local high schools;
- Offering GED, literacy, computer and SAT prep classes; and
- Providing job readiness trainings.

Successful intervention efforts were achieved by effective community engagement techniques that led to improved relationships with local housing authorities and strategic partnerships with local universities, health departments and clinical providers. Outcomes included:

- Establishing interactive CABs comprised of at-risk populations;
- Increasing STD screening services at community resource centers in low-income public housing communities by over 25%;
- Hosting outreach STD screening services at community, drop-in center, and university events that screened 1,300 people, resulting in an average STD positivity rate of 17.6%;
- Increasing the number of males screened at centers by more than 50%;
- Creating rent and utility-free wellness centers in public housing developments, leveraging partnerships with the local housing authority; and
- Making 1,093 referrals to address prioritized SDH, such as education, employment and incarceration, within target communities.

Insights gleaned from this evaluation can guide organizations in implementing a community engagement approach to design public health disease prevention programs. The lessons learned and recommendations from awardees will help future programs avoid unnecessary pitfalls, while taking advantage of valuable resources to ensure program success. The CDC CARS Team utilized evaluation findings to make program implementation changes each year and to strengthen subsequent CARS funding announcements.

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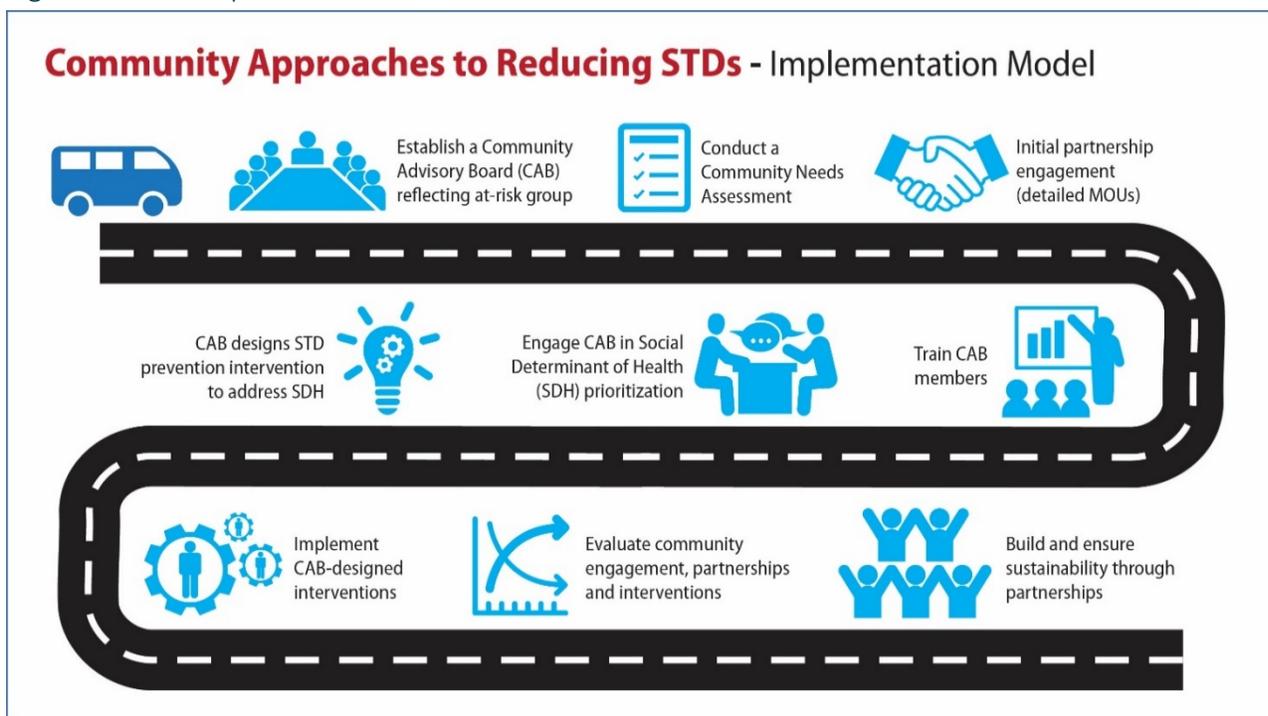
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## Background

### Program Description

The *Community Approaches to Reducing Sexually Transmitted Diseases (CARS) PS11-1114* is a program funded by the Division of Sexually Transmitted Disease (STD) Prevention (DSTDP) in the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP) at the Centers for Disease Control and Prevention (CDC). The program is managed by DSTDP's Office of Health Equity, currently in collaboration with the Program Development and Quality Improvement Branch. The primary aim of the CARS Project is to support the planning, implementation, and evaluation of innovative, interdisciplinary, projects to: *1) reduce STD disparities and 2) promote sexual health; and 3) advance community wellness* by applying community engagement and partnership methods according to a public health ethics framework [1] to build sustainable local STD prevention and control capacity. Figure 1 describes the model used by CARS awardees to implement this effort, commencing with the establishment of a Community Advisory Board (CAB) that reflects the at-risk group and ending with a sustainability of efforts through partnerships.

Figure 1. CARS Implementation Model



### CARS Phase 1 Awardees

Launched in 2011, the first set of awardees included a state health department, an academic institution, and two non-governmental organizations. The funded sites were:

- Health Research Association, Inc. (Los Angeles);
- Urban Affairs Coalition (UAC) / YOACAP (Philadelphia);
- University of Texas Health Science Center at San Antonio; and
- Virginia State Department of Health (Richmond City Health District).

Table 1 lists CARS Phase 1 awardees and the populations they identified for their CARS STD prevention interventions.

Table 1. CARS Awardee and Populations Served

Awardees	Target Population
<b>Health Research Association, Inc.</b> Los Angeles, California	Women of color (12-25)
<b>Urban Affairs Coalition</b> Philadelphia, Pennsylvania	African American men & women (15-34) and their families
<b>University of Texas Health Science Center</b> San Antonio, Texas	Minority women (15-34) and their male partners
<b>Virginia State Department of Health (Richmond City Health District)</b> Richmond, Virginia	African American men & women, and MSM (15-29)

## Evaluation Approach

The purpose of this evaluation was to measure the extent to which CARS awardees were able to successfully implement the funding opportunity announcement activities as written, to document successes and challenges, and also evaluate CDC’s management of the project.

## Evaluation Questions

- To what extent were the funding awardees able to fulfill the program implementation activities (i.e., community engagement, partnerships, interventions and evaluation) as identified in the funding opportunity announcement?
- What challenges, if any, did CARS funding awardees experience that impeded successful implementation? What facilitators, if any, propelled successful implementation of CARS activities among CARS funding awardees?
- To what extent were CARS funding awardees satisfied with the technical assistance, communication, recommendations provided by the CDC CARS team? What challenges, if any, were addressed? How, if at all, did the CDC CARS team utilize evaluation to improve administration of the project?

## Evaluation Methods

The following mixed methods were used for this evaluation:

- Document review of progress reports, site visit reports, meeting minutes and awardee collaterals;
- Site visit observations;
- Key informant interviews with each awardee (including project manager and Principal Investigator); and
- Quantitative evaluation assessments of CARS’ efforts and CDC management of the project.

Key informant interviews were transcribed and coded using NVIVO qualitative analysis software. These findings were triangulated with a document review of reports, observations and quantitative evaluation assessments conducted throughout the project.

## Findings

In this report, evaluation findings are described using the CARS implementation model. The model flowed as follows: establish a Community Advisory Board (CAB) reflecting at-risk groups; conduct a community needs assessment; initialize partnership engagement (including detailed Memoranda of Understanding); train CAB members; engage CAB members in prioritization of Social Determinants of Health (SDH) and the design of STD prevention interventions to address the prioritized SDH; implement CAB-designed interventions; evaluate community engagement, partnerships, and interventions; and build and ensure sustainability through partnerships. The first three steps in the implementation model occurred in tandem, as CAB development, Community Needs Assessment and Memoranda of Understanding (MOUs) were carried out in the first 3 months of the project period (see figure 1).



### Establishing a Community Advisory Board (CAB) Reflecting At-Risk Group

To ensure a health equity and community engagement approach to addressing STD disparities, all CARS awardees established respective CABs that were comprised primarily of persons who were members of the awardees' respective target populations, i.e., persons at high risk for acquiring STDs based on local morbidity data. CAB member recruitment efforts were often labor- and resource-intensive. CAB recruitment methods included several different approaches: mailing postcards within target zip codes, engaging existing CABs through community partners, word-of-mouth and "on-the-ground" recruitment at public housing communities. The most successful CAB recruiting methods were utilizing existing CABs, community power meetings and word-of-mouth/referrals. Some CARS awardees experienced recruitment and retention challenges during early stages of the project, and expressed difficulty with reaching the populations of interest and retaining them in the CAB due to competing priorities such as work hours, childcare, family and other life demands.

Once the CABs were established, power dynamic issues arose. CARS awardees were not accustomed to authentic community engagement approaches that facilitated CAB member decision-making power regarding SDH priorities for their communities, STD prevention intervention selection and design, and CAB approval of partners needed to implement and support the project. Several CARS program staff expressed that this level of community engagement was very different from previous efforts. In some instances, the awardee staff indicated they initially thought that they would be able to use the CABs to simply approve predetermined intervention plans instead of allowing CAB members the power to work collaboratively with the awardees to develop intervention activities and identify partner organizations.

During CAB meetings, some members reported feeling that the meetings were more for reporting than engagement because meetings were facilitated by CARS program staff, with few opportunities for CAB members to provide feedback. CAB members wanted more transparency regarding how decisions were being made. As a result, CARS awardees quickly worked to assess CAB member's perceived power (by implementing CAB power surveys) and assure

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*I feel like these meetings are more of reporting to the community than engaging the community.*

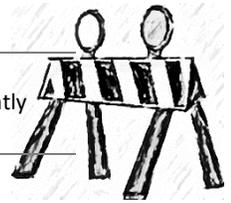
*---Community Stakeholder*

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them that they would be making the decisions and prioritizing the SDH and not CARS program staff or partnering organizations. CARS program staff facilitated a series of brainstorming meetings where program staff solicited ideas from CAB members and took those ideas to partners for feasibility discussions. When warranted, changing direction did take more time, as some awardees had already started planning for implementation based on the previously determined plans. Because some CARS awardees felt obliged to give CDC quick deliverables and show that they were meeting their milestones, adjustments were at times challenging. To address this challenge, the CARS CDC Team worked with CARS awardees to allow more time for the community engagement process to unfold. Most CARS awardees were able to quickly adapt and develop a collaborative, community-engaged action plan at the end of year 1, with the longest transition being extended into the first quarter of year 2. The table below lists several major community engagement challenges and what CARS awardees did to overcome those challenges.

Table 2. Overcoming Community Engagement Challenges

<b>Challenge:</b>	Processing time for effective engagement
<b>Solution:</b>	Develop a timeline for the community engagement process. Utilize facilitation exercises to efficiently progress through the community engagement process and obtain feedback in a timely manner.
<b>Challenge:</b>	Establishing high perceived power among CAB members and maintaining relationships
<b>Solution:</b>	Conduct a series of CAB surveys and interviews to ascertain perceived power and address power dynamic issues (by sharing decision-making between program staff to community members) and other CAB issues that arise.
<b>Challenge:</b>	Individual differences in levels of understanding among CAB members
<b>Solution:</b>	Conduct training modules among CAB members at the beginning of and throughout the project, providing booster trainings as needed. Ensure that trainings build upon previous trainings.
<b>Challenge:</b>	Balancing patience with persistence
<b>Solution:</b>	Develop and convey expectations at project commencement. Allot time during CAB meetings to show what stage the project is in and how CAB members can contribute to each stage of the process.
<b>Challenge:</b>	Building a community coalition that is sustainable and spans beyond a single health issues
<b>Solution:</b>	Allow community members to include SDH and other health issues in their priority listing. Ensure that you are addressing as many community concerns as possible, utilizing partner resources. Convey to CAB members that you are interested in the community as-a-whole, not a single health issue.



Key facilitators included:

- Collectively defining the meaning of community engagement with CAB members and partners;
- Proactively promoting inclusivity, transparency, and collaboration;
- Consistently keeping meeting minutes and reporting progress to the CAB; and
- Sharing of power at the onset and throughout the project

A key lesson learned was to maintain frequent, regular contact with CAB members to keep the momentum and vigor going. Another major lesson learned was to establish shared power with CAB members at the beginning of the project and conduct “pulse checks” that evaluated perceived power and assessed power dynamics regularly.



Once power issues were identified, program staff were able to immediately address the concerns.



## Conduct a Community Needs Assessment

CARS program staff worked with CAB members and field staff, community members who were hired and trained by the CARS program, to conduct the community needs assessment. The goal of the community needs assessment was to better understand the context of problems plaguing the community, specifically related to social issues, healthcare access, and STDs.

Data collection methods for the community needs assessment included census data, STD morbidity data, community surveys/ street interviews, community environmental observations, focus groups, town halls, community forums, and maps of social determinant data. CARS awardees who conducted street interviews and street surveys trained community members to facilitate the interviews and surveys. Over the course of the project period, a total of 1,200 individual interviews were conducted to understand how community members felt about social issues and STDs.

Community environmental observations were conducted by community members who were trained as field team members to notate community living conditions. Field team members were able to document social issues and social disorder in the neighborhoods of interest, such as abandoned cars, graffiti, and overgrown vacant lots. CARS awardees conducted 12 focus groups with people from the target population to better gauge the communities' concerns and knowledge of STIs (knowledge, normative attitudes and beliefs, and self-efficacy involving safe sexual behavior). Six town hall meetings were convened to discuss community issues.

Combined with local morbidity data, findings from the community needs assessments helped CAB members to identify: where in the community prevalence of STDs were higher; social and health issues that were of concern to community members; where in the community problematic social issues were located; and other issues of importance to community members that could help them decide which social determinants to prioritize, and what interventions would best support STD prevention by addressing social needs serving community interests.

## Initial Partnership Engagement (Detailed MOUs)

CARS awardees developed initial partnerships with detailed MOUs to ensure that partners understood expectations. Initial partnerships were based on preliminary reviews of needs, with the understanding that additional partnerships could be added after CAB members prioritized SDH and designed interventions. Because partnerships take time to cultivate, it was important for CARS awardees to engage partners early and promote mutually beneficial relationships. Awardees cited the importance of involving CAB members in the identification and selection of new partners, particularly for the social issues being addressed, to ensure that they were at ease with the types of organizations supporting the implementation of the CAB-designed interventions.

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*"...the community had expressed concerns about bringing on partners. They wanted to know more about the partners, they wanted to feel comfortable with the partners, so the approach has been to allow them opportunities to meet with the partners and have some level of contact with them so they could ask them questions and feel more comfortable."*

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-CARS Program Staff



Some CARS program staff found the partner engagement process challenging. Though their partners were supportive and provided some resources to assist with implementation, CARS program staff were not consistently sure how often to engage or meet with their partners, or even sure if partners fully understood the project. Some of the awardees did not conduct regular meetings with partners or assess their partnerships at the beginning of the project. This caused some of the partners to be passive supporters instead of playing a more active role in the project, a condition that at times threatened the sustainability of the project.



Early partnership lessons learned included the importance of maintaining frequent, regular contact with partners and CAB members and ensuring that Memoranda of Understanding (MOUs) were specific enough to identify key deliverables of the partnership. Another crucial aspect was the evaluation of partnerships to gauge partner satisfaction and ensure mutual benefit.



### Train CAB Members

During key informant interviews, participants cited skill-building among CAB members as a challenge. This challenge became more apparent to each site as they charged CAB members with the task of prioritizing social determinants of health. In general, CAB members had little experience with data analysis. Therefore, a series of trainings were provided to help them understand data and improve members' abilities to advocate for priorities.



The training needs evolved over the CARS project period, depending on the implementation stage of the CARS model. At the beginning of the project, the trainings focused on orienting new CAB members and setting expectations. CAB members had varying levels of experience participating on community boards prior to joining the CARS CABs. CARS program staff felt that it was important to lay a solid foundation to ensure that all CAB members could make informed decisions. By Year 2, the focus had shifted to evaluation training and developing CAB members' skills in public speaking and advocacy, which prepared them to work more effectively with their local community leaders. Below is a brief listing of trainings offered:

- CAB Orientation (Year 1)
- Street Interview/Field Training (Year 1)
- Data Analysis Training (Year 1)
- Social Determinants of Health (SDH) Training (Year 1)
- Action Planning Training (Year 1)
- CDC Evaluation Framework training (Year 2)
- Community Advocacy Training (Year 2)
- Community 411 Training (Year 2)
- Public Speaking (Year 2).

A major lesson learned cited by CARS awardees was the value of providing training at the beginning of the project to better equip CAB members with the skills and knowledge necessary to prioritize SDH and develop intervention ideas.



### Engage CAB in Social Determinant of Health (SDH) Prioritization



Once CAB members were trained, CARS awardees used several group decision-making techniques to engage CAB members in the process of prioritizing SDH. During CAB group discussions, CARS program staff presented community needs assessment findings and data from town halls and community forums to CAB members.

Over the course of several meetings, each CARS awardee facilitated group think tanks to refine the lists of SDH important to community members. CARS awardees helped CAB members account for feasibility concerns as they worked to obtain group consensus through the ranking and voting processes.



The importance of effective group facilitation techniques to help CAB members prioritize SDH was a major lesson learned. It was critical to use decision-making strategies that allowed CAB members to voice concerns in a manner that was engaging and fair.

### CAB Designs STD Prevention Intervention to Address SDH



Based on the CARS model (Figure 1), once the key SDH were prioritized, CAB members were to develop STD prevention interventions that incorporated prioritized health determinants. However, some awardees wanted to quickly provide deliverables by using previously determined intervention ideas rather than allowing CAB members to propose intervention ideas and design the intervention. This became a major challenge for the grantees. As a way of addressing this challenge, CARS awardees requested additional time from CDC to allow for more meaningful dialogue with their CAB members and employed a variety of meeting facilitation techniques to ensure that CAB members' voices were heard. CARS grantees responded to the community and worked collaboratively to identify key social determinants of health issues and interventions, while balancing the need to show deliverables. Table 3 displays the prioritized SDH and interventions identified by CAB members.

Table 3. Prioritized Social Determinants of Health and Interventions Selected by CAB Members

Awardee	Target Population	Prioritized Social Determinants of Health	Interventions
Health Research Association, Inc. Los Angeles, California	Women of color (12-25)	<ul style="list-style-type: none"> <li>- Unemployment</li> <li>- Access and trust of health services and health information</li> <li>- Domestic violence</li> <li>- Poor physical environment of the community</li> <li>- Substance abuse, and</li> <li>-Gang violence</li> </ul>	<ul style="list-style-type: none"> <li>- Community Mobile STD Screening Partnership</li> <li>- Wellness Station (STD screening and treatment, chronic disease screening and management, childcare, Zumba classes)</li> </ul>

<b>Urban Affairs Coalition</b> Philadelphia, Pennsylvania	African American males & females (15-34) and their families	- Education - Employment - Incarceration	- STD/HIV Mobile Testing and Treatment - GED classes - Community 411 training - Felony-friendly employer listing - Resume workshops
<b>University of Texas Health Science Center</b> San Antonio, Texas	Hispanic & African American females (15-34) and their partners	- Education - Access to resources	- Role model stories - Health fairs - Free HPV and Hepatitis vaccine vouchers for qualified residents
<b>Virginia State Department of Health (Richmond City Health District)</b> Richmond, Virginia	African American males & females, and MSM (15-29)	- Access to health resources	- Expand STD services at Resource Centers and STD prevention devices at Drop-in Centers - STD Awareness Events on College Campuses



### Implement CAB-designed Interventions

CARS program staff assessed the feasibility of interventions designed and approved by the CABs and worked with partners to implement them. Partner resources, such as mobile van units, testing kits, structural locations for testing (e.g. housing, buildings) and utilities helped to reduce the cost, expand the reach, and ensure sustainability of the interventions.

The ability to leverage partner resources, including financial and in-kind support, was found to be the primary facilitator of intervention implementation. As a result of the CARS initiative, awardees were able to address social determinants of health and implement interventions selected by CAB members to address STD disparities. Major intervention findings are in table 4. A combined total of 2,792 people were screened for STD and HIV. Positivity rates ranged from 5.6% to 17.6%. Two awardees established community resource centers within public housing and house ball communities with high STD rates. The resource centers were not centered on STDs/HIV testing, offering chronic disease screenings, Zumba classes and childcare to meet the clients’ needs. Patients who tested positive for HIV and STDs were treated at the resource centers or by the local health department.

Table 4. Major Intervention Findings

Awardee	Target Population	Prioritized Social Determinants of Health	Interventions	Outcomes
<b>Health Research Association, Inc.</b> Los Angeles, California	Women of color (12-25)	- Unemployment - Access and trust of health services and health information - Domestic violence - Poor physical environment of the community - Substance abuse, and -Gang violence	- Community Mobile STD Screening Partnership - Wellness Station (STD screening, chronic disease screening and management, childcare, Zumba classes)	Establishment of rent and utility-free wellness center in public housing development, leveraging partnership with the local housing authority  564 community members were linked to services (i.e., HIV/STD screening and treatment, ACA enrollment, substance abuse programs)  285 total HIV/STD screenings conducted at the Pueblo Del Rio

				Wellness Station with 5.6% positivity rate
<b>Urban Affairs Coalition</b> Philadelphia, Pennsylvania	African American males & females (15-34) and their families	- Education - Employment - Incarceration	- STD/HIV Mobile Testing - GED classes - Community 411 training - Felony-friendly employer listing - Resume workshops	1,207 people screened and treated for STDs and HIV with 6.0% positivity rate  1,093 referrals to address prioritized SDH, such as education, employment and incarceration, within target communities provided
<b>University of Texas Health Science Center</b> San Antonio, Texas	Hispanic & African American females (15-34) and their partners	- Education - Access to resources	- Role model stories - Health fairs	15 community health workers trained 2,318 persons who received outreach (including distribution of role model stories, condoms, STI information, referrals for testing etc.
<b>Virginia State Department of Health</b> Richmond, Virginia	African American males & females, and MSM (15-29)	- Access to health resources	- Expand STD services at Resource Centers and STD prevention devices at Drop-in Centers - STD Awareness Events on College Campuses	4 new community resource centers established  1,300 people were screened and treated at community, drop-in center, and university events, and STD/HIV positivity rates averaged 17.6%.  Number of males screened at centers increased more than 50%  Increased STD screening at community resource centers in low-income public housing communities by 25%

There were notable barriers to intervention implementation:

- Awardees initially introduced previously selected interventions for the approval of CAB members instead of allowing CAB members to design their own interventions.
- There were several delays due to procurement issues, inability to move funds and conduct hiring in a timely manner.
- Although most CARS awardees were able to course-correct and implement CAB-approved interventions, in one case, power dynamic and organizational political issues delayed the project start by more than a year and caused the CARS program to sever ties with a leading partnering organization. Other awardees were also challenged by power dynamics, and readjustments contributed to delay and frequently generated confusion among CAB members.
- Partnering with school systems were uniquely difficult. Working with school administrators to build implementation momentum was a major barrier that could not be overcome within the project period; therefore, this particular component had to be abandoned.



Another major lesson learned cited by CARS awardees was to quickly resolve procurement and power dynamic challenges rather than waiting for the issues to work themselves out over time.



## Evaluate community engagement, partnerships and interventions

Awardees evaluated their programs' community engagement, partnership, and intervention activities using individual program-specific objectives, and common methods and timelines. Each program was also expected to engage CABs in the program's evaluation to facilitate transparency, develop community capacity, and aid quality improvement efforts. In some cases, community members and/or college students interns were responsible for the daily collection, management, and analysis of data.

Sample evaluation measures and collection methods used by CARS awardees are listed in table 5.

*"So it was a great learning opportunity for the community—for them to see how to create a survey, get data, put it in a spreadsheet or SPSS, and see it comes out, and say 'let's use this to help us make a decision about what we're going to do.' I think that was a great learning experience for people...They wanted to see results, and get involved, and take control, so I think that was a major impact."*

---CARS Program Staff

Table 5. CARS Sample Evaluation Measures and Data Collection Methods

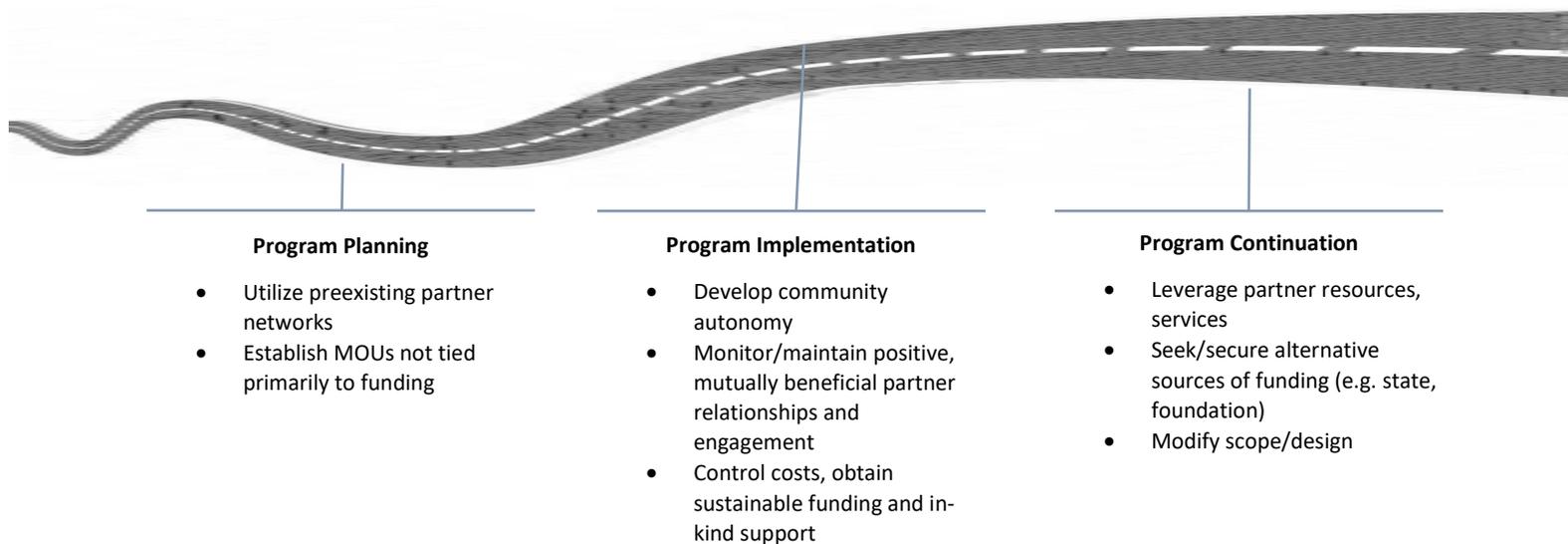
	Evaluation Measure	Data Collection Method
<b>Community Engagement</b>	<ul style="list-style-type: none"> <li>• CAB member participation, satisfaction and perceived power</li> <li>• Perceived meeting efficiency</li> <li>• CAB-approved/ CAB-designed activities implemented</li> <li>• CAB perceived empowerment</li> <li>• CAB skills developed</li> </ul>	<ul style="list-style-type: none"> <li>• CAB meeting minutes</li> <li>• Attendance sign-in sheets</li> <li>• CAB member surveys and power assessment</li> <li>• CAB interviews (meeting exit interviews and key informant)</li> </ul>
<b>Partnerships</b>	<ul style="list-style-type: none"> <li>• Perceived partner satisfaction and perceived benefit</li> <li>• Partnership commitment and involvement in intervention implementation</li> </ul>	<ul style="list-style-type: none"> <li>• MOUs</li> <li>• Partner meeting minutes</li> <li>• Partner surveys</li> <li>• Partner event and idea logs</li> <li>• Resource logs</li> </ul>
<b>Interventions</b>	<ul style="list-style-type: none"> <li>• Improved access to healthcare</li> <li>• STD screening at-risk groups</li> <li>• STD positivity rates</li> <li>• Event participation</li> <li>• Social referrals</li> <li>• Provider referrals</li> </ul>	<ul style="list-style-type: none"> <li>• Surveys</li> <li>• Health department/event testing reports</li> <li>• Observations</li> <li>• Service/call logs</li> </ul>



## Build and ensure sustainability through partnerships

CARS awardees built sustainability into their program efforts throughout the funding cycle. Awardees expected some components of the projects to continue through community and partner mobilization and support, and funding from non-CDC sources.

Figure 3. Sustainability Strategies



To promote project sustainability, beyond the receipt of CDC funds, during program planning, CARS awardees built upon existing partnerships, and developed partner MOUs which were not solely reliant on federal funding. During the implementation phase, CARS awardees developed community members' ability to execute program components (e.g., facilitating meetings, developing and implementing intervention strategies, and participating in evaluation and quality improvement processes). Additionally, awardees devised mutually beneficial events and services among partners (e.g., shared resources, population access), and secured funding and in-kind support which reduced program costs (e.g., mobile vehicle unit from a university, meeting space and utilities from a housing authority). By Year 3, CARS staff were exploring alternative funding opportunities, and were transitioning ongoing program components to community members and/or partners. Some programs changed their form or scope to accommodate and support long-term sustainability.

Partnerships that were in good-standing or predated the CARS project were easier to sustain, due in large part to CAB members passionate commitment to the interventions. For example a youth-driven social media club was funded and prioritized by a key partner.

Awardees speculated that it would be more difficult to sustain comprehensive interventions if member involvement were motivated solely by compensation and if intervention components were not divided among appropriate partners.

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*"It's up to the community on whether or not they want to sustain that service or identify that as a continued need...You have the community buy-in to say 'Yes we need this service, and I'm going to put up the funding to sustain this service' or 'I'm going to save this location so that you can have your meetings.'"*

*---CARS program staff*

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## Intervention Effectiveness

### Effectiveness of Community Engagement in STD Prevention Interventions

The CARS effort enabled four awardees: Health Research Association, Inc. (Los Angeles), Urban Affairs Coalition (UAC) / YOACAP (Philadelphia); University of Texas Health Science Center at San Antonio; and Virginia State Department of Health (Richmond City Health District) to extend the reach of STD prevention services through community-based activities and interdisciplinary interventions. CARS awardees used CABs to ensure that the community's values were represented [2-4]. The awardees focused on community engagement and partnerships to build local capacity to support STD prevention and control [5], promote STD prevention strategies approved by CAB members, and advance community wellness by addressing prioritized social determinants of health identified by the CAB. Effective community engagement strategies included establishing decision-making protocols, utilizing partners that were highly regarded by community members [6], and balancing power between program staff, community members, and partnering organizations. This project improved the health status of the target population by increasing STD screening services at community resource centers in low-income public housing communities by over 25%, increasing the number of males screened at centers by more than 50%. Use of a community engagement approach to implement public health interventions in public housing communities has empowered communities and yielded successful outcomes in other public health interventions [7-8]. Moreover the projects were able to address prioritized SDH, such as education, employment and incarceration, within target communities. Rent and utility-free wellness centers were created in public housing developments, leveraging partnerships with the local housing authority. Leveraging partnerships is key to successful implementation of sustainable community interventions, as many programs are unable to successfully leverage partnerships due to their lack of assessment of partnership readiness [9-11]. CARS awardees also hosted outreach STD screening services at community drop-in centers and university events that screened 1,300 people, resulting in an average STD/HIV positivity rate of 17.6%. As a result of CARS efforts, CAB members were trained to advocate for their community's interests, a skill that many of them continue to apply post award. The CARS initiative improved CAB member's knowledge of the community's existing health and social resources.

## Monitoring and Evaluation

### Considerations for Public Health Funder Monitoring and Evaluation

Developing and monitoring evaluation activities for interventions can be difficult for funders. A major lesson for CDC was the importance of clearly defining process and outcome measures using the program's logic model. Initially, CDC started with a more open, developmental approach to the evaluation, allowing grantees to report on outcome data related to their evaluation questions. This initial approach did not yield common outcome data across the four awardees, and awardees did not feel that CDC was clear about reporting biomarkers (e.g., STD positivity and treatment rates) from intervention efforts. In Year 2, CDC modified the evaluation strategy to enhance effectiveness of interventions, community engagement, and partnership efforts. The CDC CARS team provided awardees with a menu of indicators to assist with process and outcome data reporting.

Monitoring and evaluation provide important management tools for funders and awardees. When developing monitoring and evaluation plans, it is important that funders provide clear process and outcome measures. Logic models make the development of evaluation questions [12-13], and subsequent indicators, easier to identify and articulate to awardees. Although community engagement is an organic process that is applied differently in each community, there are universal measures that can be used to help maximize outcome data potential. A logic model and evaluation measures should be included in funders' request for proposal to ensure that evaluation expectations are clear when the initial request is posted.

## Recommendations



- Share power, roles and responsibilities with CAB members early in the project. Be transparent regarding how decisions are made. Ensure that CAB members reflect the target population.



- Use a variety of methods for the community needs assessment, including data collection methods from community members in the form of street interviews, community observations, town halls and community forums.



- Maintain frequent and regular contact with partners to ensure that agreements are leveraging the deliverable that all parties have agreed to. Make necessary adjustments in a timely manner.
- Consult CAB members prior to executing MOUs with new partners to ensure that they are a “good fit” for the community.



- Provide training and capacity building to CAB members to help them successfully contribute to the project and gain life-long skills.



- Engage CAB members in a manner in which they have decision-making power in prioritizing the SDH of major concern in the community.



- Allow CAB members to design and mock-up potential interventions that would be most beneficial and factor for feasibility of the intervention.
- Encourage CAB members to consider which partners could be involved with or help implement their proposed interventions.



- Leverage partner resources and relationships to implement interventions.
- Share any changes or intervention revisions with the CAB prior to implementation to ensure transparency.



- Begin evaluation at the beginning of the project to reduce complications and confusion. Invest in developing evaluation expertise within one’s agency.
- Continually seek opportunities to make participatory evaluation less intimidating and more user-friendly.
- Share results with coalition members on a routine basis to bolster transparency and make improvements to the coalition membership, structure, and processes.



- Consider utilizing “students” or “other individuals in training” early on in the project to establish mutually beneficial relationships, and conserve funding.
- Form a leadership or steering committee from community-recommended organizations and individuals to strengthen coalition connections and bolster sustainability.

## Evaluation Utility and Implications for Future Efforts

### Evaluation Utility

The CARS Evaluation was designed to ensure use of evaluation results [14], both by CARS awardees and the CDC CARS Team. Awardees utilized evaluation results to make the necessary changes to their program. Power assessments were key and helped awardees identify CAB perceived decision-making power and their levels of satisfaction serving as a CAB member [15]. Other community engagement evaluation metrics helped awardees make changes to meeting structure, frequencies, locations and content [16]. By evaluating their relationship with partners, many awardees were able to ensure mutually beneficial partnerships and increase the likelihood of partner sustainability. Evaluation of the interventions often served as a vehicle for continuous quality improvement, where awardees would change the wellness hours of operation, location of mobile units, community testing venues and events based on positivity rate data and uptake of services. Other projects have been successful in integrating community engagement efforts with continuous quality improvement [17].

Evaluation efforts served as a management and planning tool for CDC [18]. Several changes were made during the course of the project period, based on evaluation findings, such as frequency of CDC-Awardee conference calls, timeline and flexibility of deliverables. CDC used evaluation findings to plan for future CARS initiatives: development of common evaluation measures by year, logic model refinement, proposed timelines, setting realistic and achievable expectations, and a better understanding of cascading events and lessons learned to be shared with future awardees. Though logic models typically serve as a theoretical guide for how a program should work, CDC used an iterative approach to revisit the logic model and ensure that programmatic outcomes were being addressed.

### Implications for Future Efforts

Findings from the implementation of the CARS Phase 1 offer valuable insight for organizations interested in community-based approaches for addressing STD disparities. CARS Phase 1 was a pilot program designed to use the principles of CBPR to engage the community in developing and steering the implementation of interventions aimed at addressing STD disparities, and the lessons shared by awardees in their final evaluations will offer important information and examples for future programs aiming to do the same. Understanding the importance of planning, youth and community involvement, strategic partnerships, and communication will guide future program implementation. Learning from the pitfalls of CARS Phase 1 will hopefully help other programs avoid mistakes and miscommunications, and focus on the facilitators CARS awardees have identified, thus allowing other programs to succeed with greater ease. In the years to come, the findings of this evaluation will contribute to the larger body of knowledge and evidence for using community-driven approaches to address public health disparities.

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## Appendix A: Logic Model

### Community Approaches to Reducing STD Disparities (CARS) Phase 1 Logic Model

**Purpose:** To support local implementation of community engagement methods (e.g., community-based participatory research) to achieve health equity, reduce STD disparities, promote sexual health, and advance community wellness.

