

Assessment for Active Living

Harnessing the Power of Data-Driven Planning and Action

Philip A. Bors, MPH, Ross C. Brownson, PhD, Laura K. Brennan, PhD, MPH

Background: Robert Wood Johnson Foundation's Active Living by Design (ALbD) grant program funded 25 communities across the U.S. The ALbD National Program Office (NPO) supported grantee community partnerships with technical assistance for assessment, planning, and implementation activities intended to increase population levels of physical activity.

Purpose: This paper analyzes and summarizes the range of assessments conducted to identify local barriers and opportunities for active living as important elements of a thorough intervention planning process.

Methods: Evaluation of the partnerships focused on documenting community changes and strategies used to produce those changes. With support from NPO staff and external evaluators, partnerships tracked and summarized their community assessment approaches as well as strengths and challenges in conducting assessments.

Results: The partnerships documented a range of assessment strategies and methods. Partnerships used several qualitative methods, including focus groups, individual and group interviews, and public meetings. Quantitative methods included surveys, audits, observations, and analysis of existing data, among others. The environmental audit was the most common assessment method used by the partnerships. Assessment processes and findings were used for not only intervention planning but also community engagement and direct advocacy. Assessment data collectors varied from professional staff to community volunteers.

Conclusions: Assessments were essential to the identification of local barriers and assets related to active living, which in turn helped ALbD partnerships prioritize and refine their action strategies. Assessment processes were also valuable in building relationships with new partners, community members, and local officials.

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Introduction

Community assessments identify the health concerns in a community; the factors in the community that influence health (i.e., determinants of health); as well as the assets, resources, and challenges that influence these factors.^{1,2} Often, assessment is a pro-

cess in which community stakeholders, including community members and a broad array of community-based and governmental agencies, become partners in evaluating current conditions and moving to action planning.³ Community assessment typically occurs early in a planning cycle before the development of a program or policy.^{4,5} There can be numerous purposes of an assessment, including the use of data for (1) setting priorities at a community level; (2) engaging members within a coalition or partnership; (3) informing advocacy efforts for policy change; and (4) planning an evaluation (i.e., formative evaluation).

Community assessment processes often involve a mixture of examining existing data sources and collecting new information. Data for a community assessment may be qualitative, quantitative, or a combination of the two.

From Active Living by Design (Bors), North Carolina Institute for Public Health, Gillings School of Global Public Health, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina; Prevention Research Center in St. Louis (Brownson), Division of Public Health Sciences and Alvin J. Siteman Cancer Center (Brownson), Washington University in St. Louis; and Transtrria LLC (Brennan), St. Louis, Missouri

Address correspondence to: Philip A. Bors, MPH, Active Living by Design, 400 Market St., Suite 205, Chapel Hill NC 27516. E-mail: phil_bors@unc.edu.

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Qualitative data collection, such as individual or group interviews, can be used to determine whether an element of a program or policy is feasible, appropriate, and meaningful for the target population.⁶

For example, in developing an active living program to promote children's travel to school by foot or bike, one might collect focus group data among parents to determine key barriers to walking and bicycling. Quantitative data for a community assessment may include a range of information on risk factors or social indicators, such as those in the BRFSS⁷ or U.S. Census⁸; each may be available as an existing source or secondary data. Initiative planners often collect new information, or primary data, using methods such as surveys, environmental audits, or direct observations. Use of qualitative and quantitative data sources is often referred to as "triangulation" of the data collection and analysis processes.^{9,10} Such mixed-methods approaches often result in greater validity of inferences, more-comprehensive findings, and more-insightful understanding of the data.¹¹

In November 2003, the Robert Wood Johnson Foundation (RWJF) awarded grants to 25 communities across the U.S. as part of the Active Living by Design (ALbD) national program.¹² "Active living" refers to the accumulation of at least 30 minutes of physical activity each day for adults, and 60 minutes for children. With 5 years of funding for a maximum of \$200,000 per community, these grantees intended to make it easier for people to be active in their daily routines through innovative approaches to community design, public policies, and communication strategies.¹³

Active Living by Design's Community Action Model provided five complementary intervention strategies (5Ps) to influence community change: preparation, promotions, programs, policy influences, and physical projects.¹⁴ The 5Ps represent an integrated, comprehensive approach to increasing physical activity through cross-sector, multidisciplinary partnerships working across many settings and populations. Best practices from many of these communities have been reported in a previous supplement to the *American Journal of Preventive Medicine (AJPM)*.¹⁵

Although the ALbD National Program Office (NPO) provided an action framework for ALbD grantees, it did not prescribe specific expectations regarding community assessment. Further, ALbD grant funds were not dedicated specifically to assessment, and grantees' investment in data collection varied. The NPO shared assessment tools with grantees, provided occasional learning teleconferences, and convened assessment-related sessions during annual grantee meetings. This paper analyzes and summarizes the range of assessments conducted to identify local barriers and opportunities as important ele-

ments of a thorough intervention planning process across a diverse set of 25 grantees. The methods, personnel, and uses of the assessments offer examples for community partnerships seeking to implement policy and environmental changes to support active living.

Methods

A 3-year cross-site evaluation started near the end of the third year of funding for the ALbD grantees (November 2006). Evaluation activities, described in detail elsewhere,^{16,17} focused on three primary aims: (1) to assess the environmental impacts of physical projects and policy changes; (2) to document intervention strategies implemented, as well as intended and unintended consequences; and (3) to identify strengths and challenges in planning, developing, and implementing interventions. Using a mixed-methods approach, investigators analyzed multiple data sources collected before site visits, during site visits, and over the course of the intervention or evaluation activities.

Data sources for this paper included findings from focus groups and interviews as well as community reports in the Progress Reporting System (PRS).¹⁸ Quantitative results summarized counts and means for PRS data. Qualitative results were analyzed using focused coding procedures to identify indigenous themes, or ideas and concepts derived from the data. Themes were organized into categories, or sensitizing concepts, through discussions with grantees, the evaluation national advisory group, and ALbD National Program Office and RWJF staff.^{19,20} This process allowed themes not fitting into predetermined categories to emerge; later, these themes formed the basis for a systematic qualitative coding procedure using Atlas.ti,²¹ in order to ensure consistency in the analysis across the 25 community partnerships.

Results

Throughout the grant period, ALbD grantees conducted assessment activities in their communities for a variety of reasons. Virtually all partnerships used assessment methods to determine individuals' awareness, perceptions, or behaviors related to physical activity and environments to support active living. They also directly observed their local environments, reviewed policies, and inventoried other community active living supports (e.g., programs, services).

Assessment Methods

All 25 grantees reported some form of assessment activity (Table 1). Environmental audits of streets or other physical features (e.g., parks, trails) were the most common assessment method. Twenty-two grantees conducted environmental audits during the grant period. These were typically walking audits, in which professionals, advocates, citizens, and occasionally, elected officials evaluated the community environment or specific neighborhoods for the presence of pedestrian and bicycling facilities and safety features. These facilities and safety features generally included sidewalks, crosswalks, bike

Table 1. Assessment methods used in Active Living by Design communities ($n=25$)

Assessment methods	No. of grantees
Environmental audit	22
Survey	15
Focus group	15
Mapping (including GIS)	10
Feasibility study	9
Other (e.g., resource inventory, health screening, soul testing)	7
Interview	6
Community meeting/discussion forum	5
Charrette	5
Secondary data analysis	5
Policy analysis	2
Direct behavior observation	2

lanes, traffic speed/volume, and amenities (e.g., benches, trees, and street lighting). In some cases, parents and students participated in street assessments of nearby school environments.

Findings from these audits yielded practical information for planning future interventions (e.g., presence, absence, or continuity of facilities) and refining current efforts (e.g., retrofitting streets for bike and pedestrian accommodations). In addition, audit results were sometimes used to advocate directly for specific capital improvement priorities of local governments (e.g., installing countdown timers at intersections).

Nearly two thirds of ALbD grantees ($n=15$) conducted some form of survey during the grant period. In most cases, grantees surveyed citizens, students, and parents about their physical activity patterns as well as perceived barriers to and opportunities for active living. Several grantees administered large-scale community surveys with the assistance of academic partners. Others capitalized on participation in community events and meetings to gather survey data on personal motivators for physical activity, elicit recommendations for improvement to environments, or gauge support for changes to policies and environments.

Some surveys focused on physical activity programs in a particular organization or setting, such as a school, and others collected feedback from citizens on potential active living messages. In several cases, the information ultimately led to improved programs, policies, and environments for physical activity. Although the PRS was unable to clearly link assessment activities to documented

policy changes and physical projects, local project staff communicated the role that assessment findings played in creating changes to the NPO staff.

Grantees hosted focus groups and community meetings to allow citizens to directly voice perceptions of or improvements to active living environments. Fifteen grantees conducted focus groups of community members, seniors, parents, children, professionals, and/or advocates to plan for ALbD initiatives and gather feedback on existing efforts. Five grantees convened public meetings or listening sessions, typically involving presentations on active living concepts by ALbD partners with opportunities for community members to share perceptions.

Community members also provided input into neighborhood planning efforts through charrettes, which occurred in five ALbD communities. Other assessment techniques utilized by ALbD grantees included mapping approaches ($n=10$); feasibility studies ($n=9$); interviews with key informants or intercept interviews ($n=6$); secondary data analysis ($n=5$); policy analysis ($n=2$); and direct observation of physical activity behaviors ($n=2$). Assessment planning meetings, trainings, and other preparatory activities for data collection were not tallied as assessment activities. A complete summary of assessment methods and the purposes of the assessment activities for each grantee are provided in Table 2.

Purpose

The ultimate purpose for these efforts was to prepare grantees for the most-appropriate interventions with respect to the context of their communities (e.g., policies, environments, and economic and social conditions) and to adjust their actions as community conditions changed over time. Although the intention was to increase understanding of community conditions and perceptions of these conditions, data uses were diverse, ranging from general public health intervention planning to site-specific built environment analysis and advocacy. As a fundamental planning function, ALbD grantees conducted assessments to help identify, prioritize, and refine their implementation steps. Because ALbD was a place-based initiative, environmental assessments and surveys helped the partners focus on and within specific neighborhoods to remove barriers and enhance opportunities for active living.

Grantees also collected data as a method of community engagement, a critical element for success. In many instances, such as with neighborhood walking audits, ALbD partners were able to gather valuable built environment data through meaningful participation of residents and local leaders. Not only did these events benefit the ALbD initiative planners and municipal staff, exposing them to the “lived experience” of residents, they also gave

Table 2. Active Living by Design, summary of community partnership assessments^a

Community partnership	Methods	Purpose(s)
Albuquerque NM	Charrette	Evaluate physical improvement needs; design Great Streets, city plans, Ditches with Trails; generate public interest in plans for the physical environment
	Walkability audit	Evaluate physical improvement needs
	Survey	Assess recreational habits related to ditches; assess community will to allocate taxes for trail development
	Focus groups	Identify priority active living initiatives; develop a social marketing campaign
	Map generation	Create maps of walking routes for SRTS; identify and map neighborhood features
Bronx NY	Secondary data, survey, public forum	Study land ownership and condition of potential greenway
	Charrette	Gain extensive input into the design of the greenway
	Focus groups	Assess community interest and concerns related to active living and the greenway project
	Secondary data on pedestrian/bike crashes	Generate maps identifying unsafe streets and intersections; use maps as an advocacy tool with state decision makers to improve unsafe intersections
Buffalo NY	Environmental audits, photography	Evaluate physical improvement needs
	Policy analyses	Review governmental and institutional policies' influence on active living
	Survey	Collect baseline data to evaluate the impact of infrastructure improvements on physical activity
Chapel Hill NC	Neighborhood walking assessments, GIS mapping, LED light impact, pedestrian/bike mobility/safety data	Conduct mobility study to develop recommendations for reducing barriers to active living
	Facilities audits, walk zone mapping, neighborhood audits, direct observation, public forums	Develop recommendations for policies, physical projects, programs, and promotions to increase active living
	Parent and classroom survey, interviews	Develop recommendations for policies, physical projects, programs, and promotions to increase active living
	Survey	Shape transportation management plan project
	Mobility survey	Determine transportation and physical activity patterns
Charleston SC	Pedestrian/bike level-of-service assessment, walkability survey	Create an inventory of the existing bicycle and pedestrian facilities as well as other facilities related to active living
	Public forums	Obtain input on zoning and policies based on concerns, needs, and preferences for roads and bikeways
	Survey	Assess health indicators
	Interviews	Identify perceptions of active living environment
	Feasibility study	Study potential pedestrian/bike improvements
	Feasibility study	Assess street conversion into a two-way arterial for bicycles and cars
	GIS mapping	Determine accessibility for disabled people at public transit stops; identify bicycle and pedestrian accidents
	Secondary data	Create an inventory of existing facilities to support active living (bike/pedestrian, parks, recreational centers)

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Table 2. Active Living by Design, summary of community partnership assessments^a (*continued*)

Community partnership	Methods	Purpose(s)
Chicago IL	Face-to-face surveys	Elicit adults' perceptions of levels of physical activity and barriers to physical activity
	Survey	Assess active living at school
	Focus groups	Understand motivating factors for walking and biking, identify visions and concerns related to park and trail
	Walkability audit	Assess barriers to physical activity in built environment
	GIS mapping	Show geographic distribution of parks, active living facilities, and physical activity levels of community members; demonstrate associations among childhood obesity, crime, and accessibility of parks/playgrounds
Cleveland OH	Survey	Examine youth/parent support for Safe Routes to School; understand residents' levels of physical activity, perceived barriers, and desired programs and messages
	Feasibility study	Increase safety and create better pedestrian/bike access in and around intersections, schools, parks, and trails
	Walkability audit, map generation	Identify the best biking and walking routes and "hot spots" or problem areas
Columbia MO	Survey	Develop a social marketing campaign; determine levels of physical activity, attitudes, behaviors, and perceived barriers/benefits of physical activity
	Focus groups	Follow-up on social marketing campaign progress
	Map generation	Highlight best routes for Walking School Bus
	Environmental audits	Assess the positive and negative aspects of the physical infrastructure for active living in downtown
	Direct observation	Record bike/pedestrian travelers passing through key intersections for 1 hour on each of five mornings
Denver CO	Interviews to assess health status	Guide neighborhood policy agendas without stigmatizing specific neighborhoods; collect baseline data on cardiovascular disease for NIH-funded study
	Survey	Determine resident behaviors (diet, bike rack use) and attitudes
	Walkability and bikeability surveys	Identify the need for improvements to sidewalks, bike paths, and general accessibility in the neighborhood
	Focus groups, interviews	Understand role of small businesses in promoting healthy eating and active living
	Environmental audits	Make pedestrian/bike-design recommendations
	Photovoice	Visually document barriers to getting to and from school
	Feasibility study	Study potential for a shuttle at Stapleton
Honolulu HI	Census data	Examine population density and demographics
	Survey	Determine how students get to school
	Walking audit	Gain support for street improvements
	Map generation	Identify location of stone walls aged ≥200 years in park area and guide park planning
	Policy analysis; review community petitions	Document support for preserving community green space and residential subdivision developments
	Door-to-door interviews	Determine primary concerns of residents in the area
	Secondary data (health status)	Identify common chronic conditions associated with insufficient physical activity

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Table 2. (continued)

Community partnership	Methods	Purpose(s)
Isanti County MN	Survey	Assess active living motivators, barriers, possible community changes, and commute times; generate baseline data for ALbD initiative
	Soil testing	Conduct an engineering study to develop pedestrian/bike crossing, determine construction constraints for bike trail
	Feasibility study	Study pedestrian/bicycle crossing of the Rum River
Jackson MI	Surveys	Examine bus services and ways to attract youth ridership; assess pedestrian/bike activity; evaluate parents' satisfaction with Safe Routes to School, identify worksite policies
	Online survey	Examine active transportation to and from worksites
	Survey, focus groups, interviews	Review community-level data on the physical activity environment
	Walkability audit	Assess condition of streets and sidewalks around schools
Louisville KY	Feasibility studies	Study transportation modes for schools, travel distance, cost estimates, co-benefits of Safe Routes to School, increasing participation; study cost effectiveness of reduced bus service and improved pedestrian/bike environment
	Focus groups	Determine programming/promotions for area residents
	Walkability audit	Assess the built environment in multiple neighborhoods
	Sidewalk inventory	Assess deficiencies in neighborhood sidewalk networks
Nashville TN	Environmental audit	Develop crime prevention strategies through environmental design and safety analysis
	Walkability audit	Make recommendations for infrastructure improvements
	Focus groups	Gain input into Walk-to-Shop program
Oakland CA	Map generation	Identify barriers to walking or biking to school
	Focus groups	Plan schoolyard improvements, park and street initiatives
	Map generation	Identify safe bike routes; publish user map for residents
Omaha NE	Walkability audit	Highlight problem areas in and around the schools
	Telephone surveys	Identify opinions about activity, lifestyles, opportunities, barriers, and effects of the Activate Omaha campaign
	Survey	Assess the physical environment in neighborhoods
Orlando FL	Charrette	Assess environments and resources needed
	Community-wide walking audits	Build political support for infrastructure change by including government officials in audits; identify ways to increase pedestrian/bike safety for children to/from school; and to prioritize efforts based on support and funding
	Pedestrian/bike level-of-service assessment	Establish baseline data on elements of the built environment not already in the city's GIS database
	Focus groups	Identify key issues and challenges facing older adults
Portland OR	Surveys	Assess community awareness of trail, trail use, community input on improvements, physical activity, and community involvement; evaluate walkability, bikeability, and opinions of infrastructure changes; develop walking routes for Lents neighborhood WALKS program
	Feasibility study	Produce possible sites for a trailhead; find a site that was easily visible and accessible by the community; identify potential trailhead designs

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Table 2. Active Living by Design, summary of community partnership assessments^a (*continued*)

Community partnership	Methods	Purpose(s)
Portland OR	TravelSmart Survey	Collect data on commuter behaviors along corridors
	Feasibility study	Identify major infrastructure barriers to capital improvements (Kelly GROW, Safe Routes to School)
	Public forum	Increase support for active living projects
	Health impact assessment	Assess a proposed bridge replacement project for the Columbia River
	Design charrette	Gain community input
Sacramento CA	Surveys, charrette, walkability audit, mapping	Identify community supports and barriers to physical activity
Santa Ana CA	Focus groups	Build trust; learn how to communicate with residents; gauge property owners' interest in joint use agreements
	Survey	Identify the role of businesses in increasing active living
	Map generation	Visualize the availability and accessibility of recreation facilities (projected bike paths, community centers)
	Walkability audit	Assess road and sidewalk conditions of high-use routes
Seattle WA	Surveys, focus groups, walkability audit, neighborhood mapping	Identify community supports and barriers to physical activity
Somerville MA	Walkability audit	Determine Pedestrian infrastructure; identify walking routes
	Environmental audit	Assess environmental factors that influence physical activity and healthy eating during the workday
	Pedestrian/bike accidents	Identify Safe-START Pedestrian/bike safety priority locations
	Youth Behavioral Risk Factor Surveillance System	Assess youth active living behaviors
Upper Valley NH/VT	Feasibility studies	Study trail and railroad bridge spanning the Connecticut River for a "rail-with-trail" connection; study trails in the conservation areas to increase accessibility
	Public forum	Build Trails Connect concept from community input
Wilkes-Barre PA	Focus groups, interviews	Develop a communications plan and health messages for physical activity media promotion; assess attitudes and motivations for active living
	Walkability audit	Assess walking routes trails, sidewalks, and roadways
	Feasibility study	Assist in the study of the Anthracite Scenic Trails Association's Ridge to River Connector
	Resource inventory	Identify community resources, partners, and opportunities for improvement
	Program evaluation	Assess programs in physical activity, nutrition, and tobacco control
Winnebago NE	Environmental audit	Assess the accessibility of facilities, sidewalks, and active living opportunities
	Focus groups, surveys	Determine how to engage residents of all ages in efforts to increase physical activity; identify preferred types of activity for residents, particularly children
	Health screenings	Identify priorities for the partnership

^aFor more on ALbD community partnerships, visit www.activelivingbydesign.org.

ALbD, Active Living by Design; SRTS, Safe Routes to School

community members a better understanding of their own neighborhoods.

Some ALbD grantees used findings from environmental audits as evidence to directly request capital improvements from local government authorities. For example, one ALbD grantee conducted regular walkability audits in different neighborhoods, inviting elected officials to participate, in addition to residents and city staff. Following each audit, a map summarized the identified priorities, such as unsafe intersections and incomplete sidewalk sections. These summaries were submitted to city public works officials as a form of advocacy for neighborhood improvements, which led to crosswalk improvements, better signage, and safer pedestrian signals. In other instances, ALbD grantees created maps of the areas and assessed and disseminated these products as bike maps and school route walking guides.

Respondents and Data Collectors

Audiences targeted by the various qualitative and quantitative methods varied depending on the purpose of each assessment activity (Table 2). Community members were the most common participants in surveys, focus groups, and public forums. Other respondents included students, parents, business owners/managers, school representatives, neighborhood leaders, policymakers, employees, and commuters. Environmental audits and policy analysis methods supplemented the data collected from various community representatives to compare perceptions with the inventories.

A variety of people and organizations planned and conducted the assessments. More than half of all data collection activities were led by ALbD partners, representing a mixture of professional disciplines, community members, and advocates. In many cases, community members were involved in data collection and/or data analysis (e.g., assessing the walkability of school zones). Other data collectors included government staff, college students, ALbD-funded lead agency staff, volunteers, and paid consultants. In several instances, combinations of data collectors were engaged (e.g., a neighborhood charrette with municipal staff, ALbD partners, community members, and university students) or professional services were enlisted (e.g., a private firm to conduct a feasibility or engineering study).

Discussion

Communities are faced with a vast array of opportunities to intervene to create community changes to support active living through transportation, schools, parks, greenways, land use, workplaces, faith communities, schools, and other neighborhood environments. Thus, assessment during the design and implementation of ac-

tive living initiatives is critical to understanding community needs, gaps, priorities, challenges, assets, and resources available. Community assessment typically is viewed as an initial preparatory step. Some ALbD grantees conducted discrete “up front” assessments, but many utilized alternative methods throughout the grant period to fit their community context and their process of implementing the initiative.

The ALbD community partnerships conducted assessments using a variety of qualitative and quantitative methods, taking advantage of existing data sources and generating new data. To help them plan, focus on meaningful priorities, and take direct action, the ALbD community partnerships engaged community members, including older adults, parents, and youth, through assessment activities. These citizens’ perspectives served to reinforce, and sometimes negate, intervention planners’ assumptions about barriers to and assets for active living. In addition, early participation in the planning process built constituencies for policy and environmental change. Public meetings and walkability audits brought elected officials, city staff, and citizens together to assess specific neighborhoods and the community at large. In many communities, these relationships endured beyond assessment into design, planning, and implementation.

Active Living by Design’s 5P model included a complementary set of strategies focusing on preparation; education (promotions); behavior change (programs); built environment change (physical projects); and policy. These promotions, programs, and physical projects strategies were well represented by corresponding assessment methods (e.g., surveys, focus groups, and walking audits). For policy, however, few ALbD community partnerships intentionally analyzed existing policy language as a discrete step.

It is likely that the ALbD partnerships had limited experience, technical knowledge, and comfort analyzing local policy landscapes. In addition, few resources were available to help local advocates conduct comprehensive policy assessments for active living. Additional policy analysis tools and methods are needed for community partnerships to advance their understanding and capacity to identify and effectively address policy targets.

Despite encouragement from the ALbD NPO for assessment, many community partnerships were already inclined to do so for general intervention planning. In addition, some partnerships used their newly collected data for focused advocacy. These opportunistic and practical uses of data for community action highlight new ways of conceptualizing evidence-based practice. Yet, available data from the PRS did not enable evaluators to determine which assessment techniques were most likely to contribute directly to policy changes or physical projects. From a practice perspective, it is likely that the most effective methods were those that

identified specific, actionable barriers to physical activity, such as walking audits that highlighted incomplete sidewalks. Positive outcomes of these efforts depended on whether and how staff and partners communicated these barriers to decision makers.

Conclusion

The ALbD experience of conducting community assessments illustrates many ways that assessment serves to not only enhance understanding of the substance of the community (e.g., assets, key players, priorities) and the complementary intervention approaches (i.e., mix of policy, physical projects, programs, and promotions) but also to facilitate change processes (e.g., community outreach and engagement, agenda-setting and advocacy efforts, building political will). In addition, many of these assessment findings provided a foundation for follow-up data-collection efforts to assess initiative impacts. These comprehensive community-driven approaches to assessment can inform short-term intervention approaches as well as mobilize longer-term relationships and collaborative processes to sustain change.

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