

Local Health Departments' Capacity to Prevent and Control Diabetes in Priority Populations



Introduction

Diabetes is a chronic disease that affects 25.8 million people in the United States: 18.8 million people have been diagnosed, while an estimated seven million remain undiagnosed.¹ The seventh leading cause of death in the nation, diabetes is a major risk factor in the development of heart disease, stroke, kidney failure, non-traumatic lower-limb amputations, and blindness. Local health departments (LHDs) play an important role in mitigating this epidemic. Each day, LHDs work with community partners, schools, businesses, restaurants, and city planners to inform community members about diabetes and its risk factors and to develop programs and policies that support diabetes prevention and control.

In 2010 through 2012, the National Association of County and City Health Officials (NACCHO) trained 36 LHDs in Diabetes Today, a training program from the Centers for Disease Control and Prevention (CDC) that helps public health practitioners develop knowledge and skills to organize a strong coalition and to develop an effective action plan for diabetes prevention and control.

The delivery of Diabetes Today trainings supported NACCHO's initiative to promote effective diabetes prevention and control strategies to LHDs. Through the project, NACCHO supported LHD efforts to do the following:

- Determine and understand the burden of diabetes in the community;
- Organize a community coalition to reduce the diabetes burden; and
- Develop effective strategies and implement action plans to prevent diabetes morbidity and mortality via evidence-based diabetes prevention and management programs.

Methodology

NACCHO fielded the survey in July 2014. The survey was delivered via Qualtrics, a Web-based software package, and included 46 open- and closed-ended questions. A total of 19 LHDs completed the survey, for a response rate of 52%. Respondents represented a range of LHD staff at management and programmatic levels. Sixty-three percent of respondents represented active coalitions (those that had met during the past six months). Questions examined the following:

- Impact of training on LHD surveillance, coalition development, and diabetes-prevention action-planning activities;
- LHD evidence-based diabetes prevention/control translation and dissemination activities;
- Coalition health, partnerships, and collaborations;
- Challenges and barriers; and
- Technical assistance and resource needs.

Data, which represent only the needs of trainees that participated in NACCHO's project, were not stratified by size and jurisdiction type of LHD. Therefore, data are not generalizable to all LHDs across the nation.

Impact of Diabetes Today Training

Diabetes Today appears effective in initiating coalition start-up activities at the local level. More than half (58%, 7/12) of respondents successfully launched diabetes coalitions following the Diabetes Today training, and many started developing coalition structures and processes, including defining coalition member roles (81%, 13/16), goals/objectives (87%, 14/16), and action plans (75%, 12/16). Additionally, the survey asked LHDs to report their perception of the impact of Diabetes Today training. Sixty-nine percent (11/16) of respondents strongly agreed or agreed with the following statement: "Our participation in Diabetes Today training and follow-up contact after the training has improved our coalition's ability to address diabetes control and prevention in our community."

Respondents made significant progress toward completing various steps involved in surveillance of diabetes in their local communities, organizing coalition diabetes-prevention activities, and developing effective diabetes-prevention strategies. More than half of respondents fully completed activities to define the diabetes burden including gathering epidemiological diabetes data (76%, 13/17), conducting a diabetes assessment (61%, 11/18), and identifying sources of data (55%, 10/18). A significant number of respondents began mobilizing a community response to diabetes, e.g., identifying potential stakeholders (61%, 11/18), but faced challenges with planning approaches to their recruitment and engagement (29%, 5/17).

Generally, the majority of respondents had initiated various steps in the strategic planning process, although less than a third of respondents had fully completed action plans. According to assessment results, participants were further along in prioritizing various diabetes-prevention program/intervention options than in preparing, implementing, or evaluating the action plan.

Overall, respondents struggled most with completing evaluation activities. Few participants had begun organizing an evaluation planning committee (11%, 2/17) or had shared their evaluation plans with their communities (17%, 3/17). However, some respondents had begun determining evaluation measures (47%, 8/17), identifying evaluation variables (41%, 7/17), and completing an evaluation plan (53%, 9/17) (Table 1).

LHD Diabetes Prevention/Control Translation and Dissemination Activities

The assessment asked respondents to report on their provision of diabetes prevention and control services, specifically evidence-based services. When asked about the provision of evidence-based diabetes-prevention services, the majority of LHDs reported they had referred participants to programs/services in the community that prevent/control the onset of Type 2 diabetes (95%, 18/19). Respondents most commonly directly provided nutrition education (84%, 16/19), physical activity promotion (79%, 15/19), awareness/marketing/education (79%, 15/19), and obesity-prevention, (79%, 15/19). A significant number of LHDs were providing diabetes risk assessments (63%, 12/19), lifestyle-modification programs (63%, 12/19), and policy, systems, and environmental change strategies (58%, 11/19) to prevent and control diabetes. Fewer LHDs were conducting diabetes and pre-diabetes screenings (47%, 9/19) (Figure 1).

Only 42% (8/19) of LHDs offered the CDC-recognized National Diabetes Prevention Program (NDPP), an evidence-based program proven effective in decreasing risk for diabetes among pre-diabetic persons. However, 50% (4/8) of those that did not

TABLE 1.

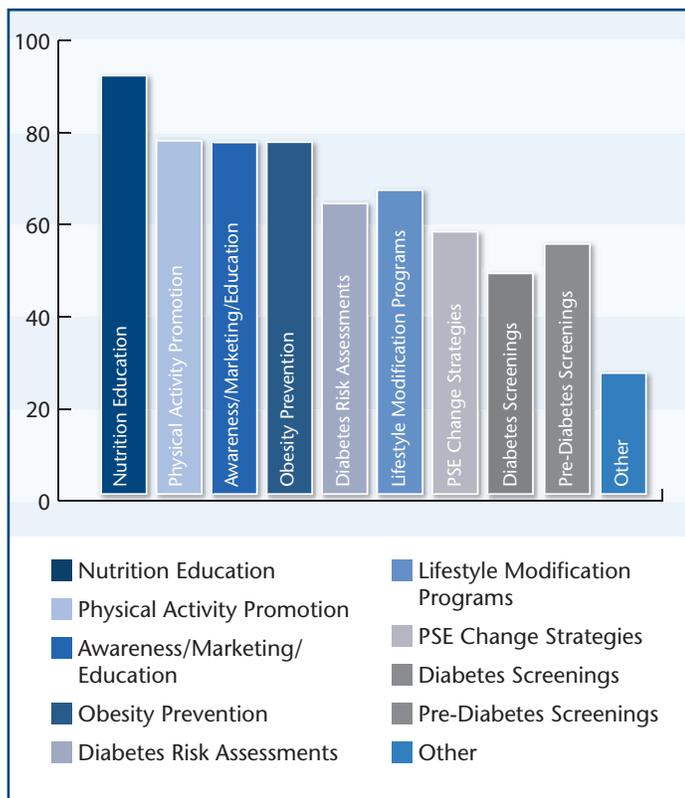
Percentage of LHDs Completing Diabetes Today

Defining the Diabetes Burden	
Gathered epidemiological diabetes data	76%
Conducted a diabetes assessment	61%
Identified sources of data	55%
Mobilized a community response	
Defined community	64%
Identified potential stakeholders	61%
Developed recruitment and engagement plan	29%
Developing a diabetes-prevention plan	
Identified effective diabetes-prevention strategies	53%
Prioritized diabetes prevention and management program options	41%
Completed a diabetes-prevention action plan	23%
Implemented or evaluated action plan	18%
Evaluating diabetes-prevention program activities	
Completed evaluation plan	53%
Determined evaluation measures	47%
Identified evaluation variables	41%
Shared evaluation plan with communities	17%
Organized an evaluation planning committee	11%

directly provide the program either partnered with or referred participants to another NDPP in their community. Over two-thirds of LHDs surveyed (68%, 13/19) directly provided or referred participants to (79%, 15/19) evidence-based diabetes or other self-management education programs including Stanford’s Chronic and Diabetes Self-Management Programs (CDSMP and DSMP) and the American Diabetes Association’s Diabetes Self-Management Education Program (DSME) (Figure 2).

FIGURE 1.

Percentage of LHDs Providing Selected Diabetes Prevention and Control Services



Almost half (47%, 8/17) of LHDs surveyed did not have a formal system to identify, refer, and follow up on participants in DSMPs and CDSMPs (Figure 3).

Only one respondent had a formal agreement with clinical providers that outlined how clinical information would be shared to link patients with DSME, DSMP, and CDSMP services. Addition-

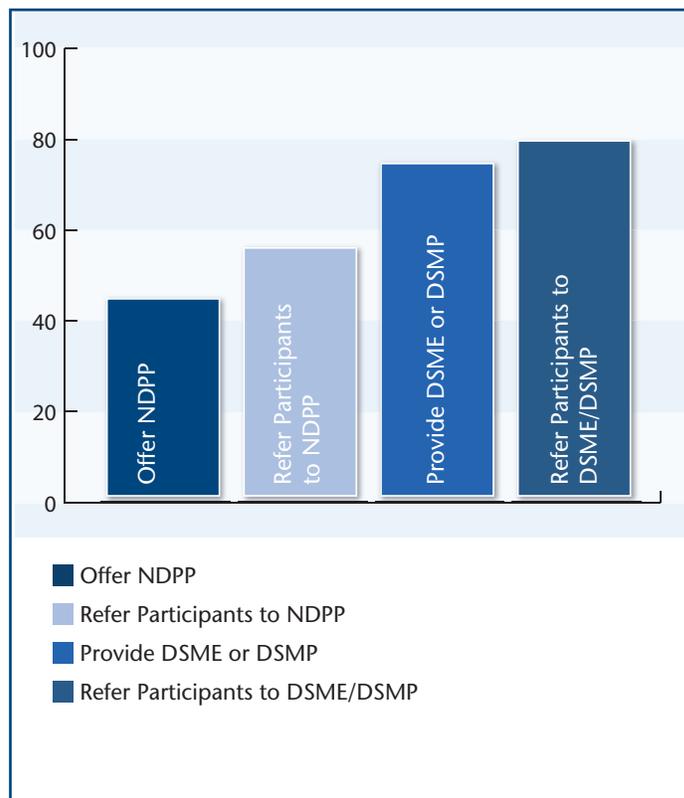
TABLE 2.

LHD Recruitment and Marketing Activities for Diabetes Prevention and Control Services

LHD Diabetes Prevention and Control Recruitment and Marketing Activities	
Using electronic health records for referrals	41%
Provider-led outreach and marketing efforts	29%
Receiving participant referrals from Medicaid or Medicare	17%

FIGURE 2.

Percentage of LHDs Offering Selected Evidence-Based Diabetes Prevention and Control Programs

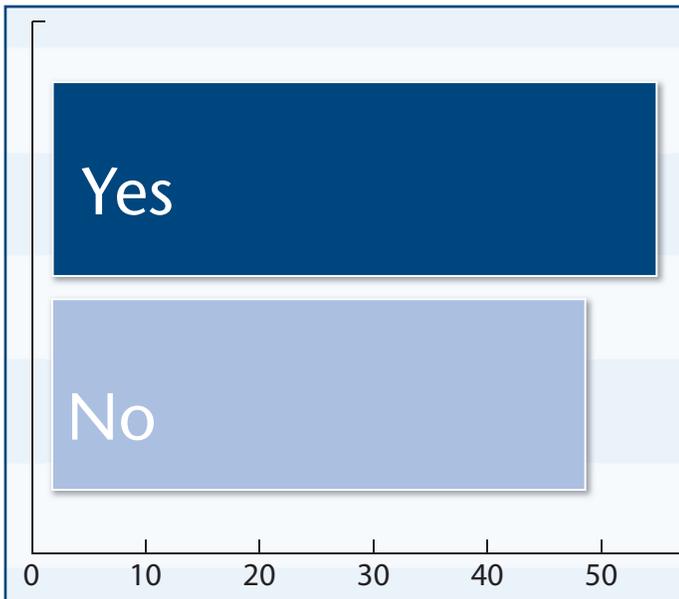


ally, only 50% of LHDs were tracking outcome data on their DSME, DSMP, and CDSMP participants. Reasons reported for lack of outcome monitoring included lack of formal partnerships to exchange clinical information with providers, low participant retention in programs, and staffing/capacity limitations. Those few LHDs that were tracking this type of outcome data were doing so via survey, spreadsheets, electronic health records, and local data systems.

Of those LHDs working with providers to refer patients to DSMPs, few providers were using electronic health records to make referrals (41%, 7/17). Similarly, few providers were performing outreach to connect patients in need of self-management services with LHD diabetes-management programs (29%, 5/17). Only three respondents (17%, 3/17) reported receiving CDSMP referrals from Medicaid or Medicare health plans (Table 2). The majority of LHD respondents were recruiting participants for their evidence-based DSMPs via flyers and brochures, word-of-mouth, and provider referrals.

FIGURE 3.

Percentage of LHDs with a Formal Diabetes Prevention and Control Referral and Follow-Up System

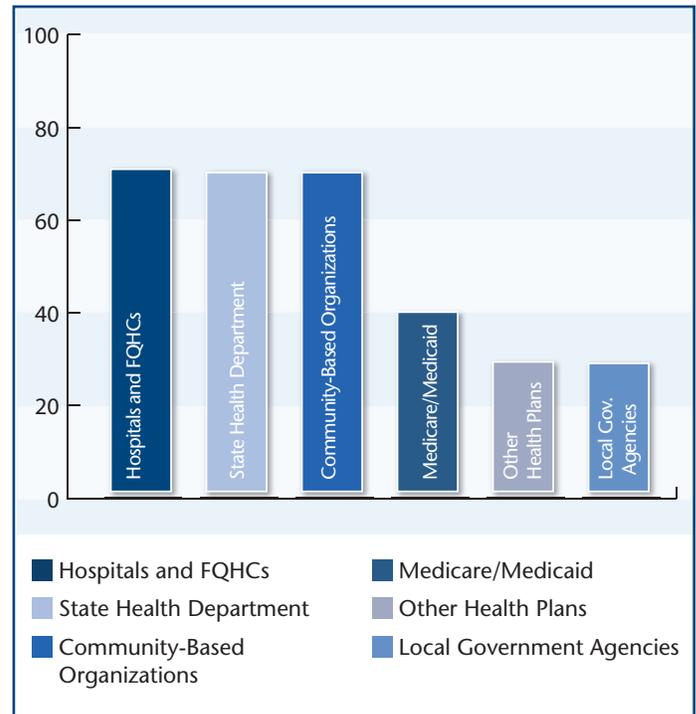


Coalition Health, Partnerships, and Collaborations

The LHDs surveyed reported partnerships with a diverse set of organizations representing several sectors in an effort to link people with evidence-based diabetes prevention and management programs. These partners included faith-based organizations, academic institutions, private healthcare providers, and businesses. The majority of LHD-led diabetes coalitions partnered with clinical care organizations to increase community access to evidence-based DSMPs. For example, 70% of LHD-led diabetes coalitions partnered with local hospitals and Federally Qualified Health Centers to link participants with the American Diabetes Association’s DSME and Stanford DSMP. Over two-thirds (70%, 7/10) of these coalitions maintained partnerships with state health departments and various community-based organizations to refer participants to self-management services. Less than half of participants (40%, 4/10) maintained partnerships with Medicaid/Medicare agencies, health plans (30%, 3/10), and local government agencies (30%, 3/10) to link communities with these programs (Figure 4). Of the LHDs that facilitated community linkages with the NDPP, the majority partnered with non-LHD entities to connect persons to lifestyle-coaching services (80%, 4/5). Such entity was most often the YMCA.

FIGURE 4.

LHD Diabetes Prevention and Control Partnerships



The Diabetes Today assessment queried LHDs about the quality of their coalition health and partnerships. At least 62% (10/16) or more of LHD-led coalitions agreed or strongly agreed that they were successfully maintaining a presence of partners across multiple sectors that represented the population served and giving the community opportunities to help develop goals/vision.

Challenges and Barriers

LHD respondents reported several challenges to implementing their coalitions’ diabetes prevention and control activities. One recurring theme was the need for coalitions to develop their members’ leadership skills. Respondents indicated that local diabetes coalition leaders were engaged but needed additional training on coalition recruiting and development processes. In addition, several coalitions reported difficulty fostering member participation and involvement. Respondents noted difficulties in maintaining coalition members’ time commitment and in identifying acceptable times to schedule coalition meetings. In some cases, bad weather or lack of transportation affected attendance. Finally, LHD diabetes coalitions face funding challenges. Lack of funding inhibits coalitions from covering the costs of education, outreach, and staff to coordinate and lead the coalitions.

With respect to providers, LHDs noted barriers in working with healthcare providers to refer and monitor participants in evidence-based diabetes prevention and management programs. Common barriers cited were lack of time, staffing, and monetary resources on both the part of the provider and the LHD. In addition, LHDs located in larger communities noted that it was difficult to reach large numbers of healthcare providers and to keep them informed and knowledgeable about available diabetes education and training services without additional resources.

Technical Assistance and Resource Needs

LHDs indicated that NACCHO could provide more support for their work with diabetes coalitions. The most common request was for additional training, up-to-date data, best practices, tools, and funding for staff to support the translation or implementation of evidence-based diabetes prevention and control strategies. In addition, some LHDs noted the need for resources to strengthen referral, billing, and provider outreach efforts to establish community-clinical linkages for diabetes prevention and control services.

“Our participation in Diabetes Today training and follow-up contact after the training has improved our coalition’s ability to address diabetes control and prevention in our community.”

Conclusion

Despite successfully supporting coalition start-up and surveillance activities, Diabetes Today trainees in LHDs need additional training and technical assistance to do the following:

- Develop systems for referral, follow-up, and billing with clients;
- Plan and evaluate the impact of diabetes prevention and control efforts at the population level; and
- Maintain strategic engagement of coalition stakeholders.

LHDs are more likely to carry out nutrition education, physical activity promotion, and obesity prevention and awareness initiatives than to provide diabetes and pre-diabetes screenings. Additionally, less than half offer or refer participants to the NDPP. Resources to expand LHD diabetes and pre-diabetes screening activities will enhance health departments’ ability to identify priority populations at risk for diabetes and refer those populations to effective programs like NDPP.

LHDs making community linkages to clinical and preventive diabetes control and management programs need strong systems for assessment, referral, follow-up, and monitoring of population outcomes. Such systems support the identification of the priority populations most affected by diabetes and connecting those populations with services proven to reduce diabetes risk while ensuring payment for reimbursable services delivered directly by LHDs. However, the assessment revealed that many LHDs lack formal systems to identify, refer, and follow up on participants in DSMPs and CDSMPs. Putting in place these systems and expanding LHD capacity to screen and refer participants are key to preventing diabetes among high-risk jurisdictions.

This assessment revealed the need to strengthen referral and billing systems that could provide additional monetary support to LHDs to foster community-clinical linkages for the NDPP and other evidence-based diabetes-management programs. Key areas for increasing technical assistance and support for LHDs include training and dissemination of best practices to support the following activities:

- Improving partnerships between LHDs and providers of care to foster the exchange of clinical information for improving health outcomes;
- Implementing strategies to support participant retention in diabetes prevention and management programs;
- Developing infrastructure for effective workforce development in areas related to quality improvement;
- Building infrastructure to support and increase capacity for the use of electronic health records at the community level;
- Establishing partnerships between LHDs and Medicaid/Medicare health plans to cover the costs of screenings and evidence-based prevention and management services; and
- Translating, evaluating, and disseminating evidence-based diabetes prevention and control strategies.

[RESEARCH BRIEF]

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