

## Lessons Learned from Health Centers and Community Partners, 2021-2022

# Non-Clinical Approaches to Diabetes Prevention

## Background

Housing status, socioeconomic status, and other social determinants of health (SDOH) are predictors of population health outcomes and contribute to health inequities at local, regional, and national levels. Health disparities driven by SDOH are evident in the outcomes of chronic diseases, which are often poorer among individuals experiencing homelessness and poverty than in the general population. One of the most pressing examples of chronic disease with poor health outcomes for these groups is diabetes.

There is no consensus about the overall prevalence of diabetes among persons experiencing homelessness (PEH) in the U.S., although some studies suggest it occurs about as frequently as it does in the general population (11.3%).<sup>1,2</sup> While the prevalence may not differ, diabetes outcomes paint an entirely different picture. Consumers of Health Care for the Homeless (HCH) health centers<sup>3</sup> experience substantially higher rates of uncontrolled diabetes than the general population. 35.5% of all HCH health center patients with diabetes were listed as having poor glycemic control in 2020.<sup>4</sup> This is more than twice the rates of the general population, which show 12-14% having poor glycemic control.<sup>5</sup>

Prediabetes, which puts one at risk of developing type 2 diabetes, is a concern for PEH and consumers of health centers. Predictors of prediabetes include obesity, dietary limitations, inactivity, interrupted sleep, and low income, which are also variables commonly associated with a lack of housing.<sup>6</sup> This risk is mirrored by health center data from 2020, which indicates that the three most common conditions experienced by patients were obesity, hypertension, and diabetes.<sup>4</sup>

1 CDC National Diabetes Statistics Report, <https://www.cdc.gov/diabetes/data/statistics-report/index.html>

2 Diabetes and Hypertension Prevalence in Homeless Adults in the U.S., <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4318300/>

3 Health Care for the Homeless Program Background, <https://www.nachc.org/health-center-issues/special-populations/health-care-for-the-homeless/>

4 2020 UDS Data, <https://www.hrsa.gov/foia/electronic-reading>

5 Change in Testing, Awareness of Hemoglobin A1C Result, and Glycemic Control in US Adults, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5820708/>

6 Social Determinants of Health and Diabetes: A Scientific Review, <https://care.diabetesjournals.org/content/44/1/258>

Data overwhelmingly points to the need for high quality diabetes prevention efforts for people experiencing homelessness, housing instability, and poverty. The social needs of these groups, which are inextricably tied to SDOH, elevate risk for prediabetes and diabetic complications. To improve prevention efforts, it is critical that service providers bolster clinical services in tandem with services that address social needs.

## HEALTH CENTERS AND COMMUNITY PARTNERS IN DIABETES PREVENTION

Health centers and other community-based providers are well-positioned to not only meet the diabetes-related clinical needs of consumers (e.g., HbA1c screenings, prediabetes screenings), but to also link their patients with the necessary resources and skills for prevention. For many PEH, health centers and other community-based organizations are points of entry for receiving social support or accessing essential resources. Clinicians are equipped to identify and respond to health risks, but the practical prevention activities mostly occur outside of the clinical setting. By developing how they support consumers in- and outside of the clinic, health centers and other types of providers will improve their preventative services and set the stage for better health outcomes.

Succeeding in this work demands numerous competencies, skills, and tools. Many agencies have adopted strategies that leverage community partnerships, national resources, and even new funding opportunities to fill these gaps and rise to the challenge. Examples include case management, diabetes education classes, cooking classes, exercise programs, and more.

### PURPOSE

The purpose of this publication is to share lessons learned from health centers and other community-based partners that are implementing new strategies for preventing diabetes in their communities. These lessons emerged from Learning Collaboratives hosted by the Corporation for Supportive Housing (CSH) from 2021-2022, which were comprised of health, housing, and homeless services providers. The results will be useful for community-based providers as they initiate new prevention strategies or improve their existing efforts.

## Learning Collaborative Approach

In 2021 and 2022, CSH hosted two separate Learning Collaboratives (LCs) focused on diabetes prevention entitled “*Non-Clinical and Case Management Support for Diabetes Prevention.*” The LCs had the following learning objectives:

1. LC participants will identify alignment in diabetes prevention promising practices.
2. LC participants will learn approaches for continued care for diabetes prevention outside of the clinic setting.
3. LC participants will communicate their needs for supportive diabetes prevention after clinic visits.
4. LC participants will create a change map, outlining their plan to implement new diabetes prevention activities.

CSH invited organizations to apply for either LC cohort if they were a Health Center or a group interested in improving diabetes outcomes among people experiencing homelessness. **Tables 1** and **2** show the types of organizations represented in the application pool.

**Table 1: Learning Collaborative Cohort 1: 2021**

20 Unique Applicant Organizations	
Community Health Center (Federally-Qualified Health Center (FQHC) or Look-Alike)	13 (65%) Total Health Centers 4 (20%) HCH Health Centers
Government	1 (5%)
Health and Housing Provider (Combined)	3 (15%)
Hospital	1 (5%)
Housing Partner/Provider	1 (5%)
Other Community-Based Organization	1 (5%)

**Table 2: Learning Collaborative Cohort 2: 2022**

17 Unique Applicant Organizations	
Community Health Center (FQHC or Look-Alike)	12 (70%) Total Health Centers 3 (17.5%) HCH Health Centers
Behavioral Health Provider	1 (6%)
Government	1 (6%)
Health Care Non-Profit (non-FQHC)	1 (6%)
Housing Partner/Provider	1 (6%)
Primary Care Association	1 (6%)

## LEARNING COLLABORATIVE STRUCTURE: THE CHANGE MAP MODEL

A primary aim of the LCs was to prepare participants for substantive change in their organizations. To best align with this aim, CSH structured the LCs around an emerging implementation tool known as the Change Map. The Change Map approach (**Figure 1**), developed by Lauryn Berner with the National Health Care for the Homeless Council<sup>7</sup>, breaks program initiatives down into critical steps by focusing on problem-solving, cultural appropriateness, implementation, evaluation, and scalability. National organizations, including HRSA National Training and Technical Assistance Partners (NTTAPs), have successfully adopted the Change Map model to guide health centers toward scalable program implementation.<sup>8</sup>

The four sessions of this LC corresponded to the stages of the Change Map model, each centered on a distinct phase of program planning (**Figure 2**). The Change Map encourages participants to ask fundamental questions about the individual and systemic factors contributing to the problem they hope to solve and the necessary steps to enact a solution. CSH adapted these questions to prompt discussion on the various steps involved in implementing diabetes prevention programs. With this structure in place, all participants had the opportunity to emerge from the LC with a complete step-by-step plan to implement a new program.

## LEARNING COLLABORATIVE CHALLENGES & SUCCESSES

Several themes emerged from the eight LC sessions that CSH facilitated across the two cohorts. The themes can be grouped into the following categories:

### 1. Challenges and Common Needs in Diabetes Prevention

- Social Needs Related to the Social Determinants of Health (SDOH)
- Comorbidities
- COVID-19
- Patient & Provider Engagement
- Care Coordination

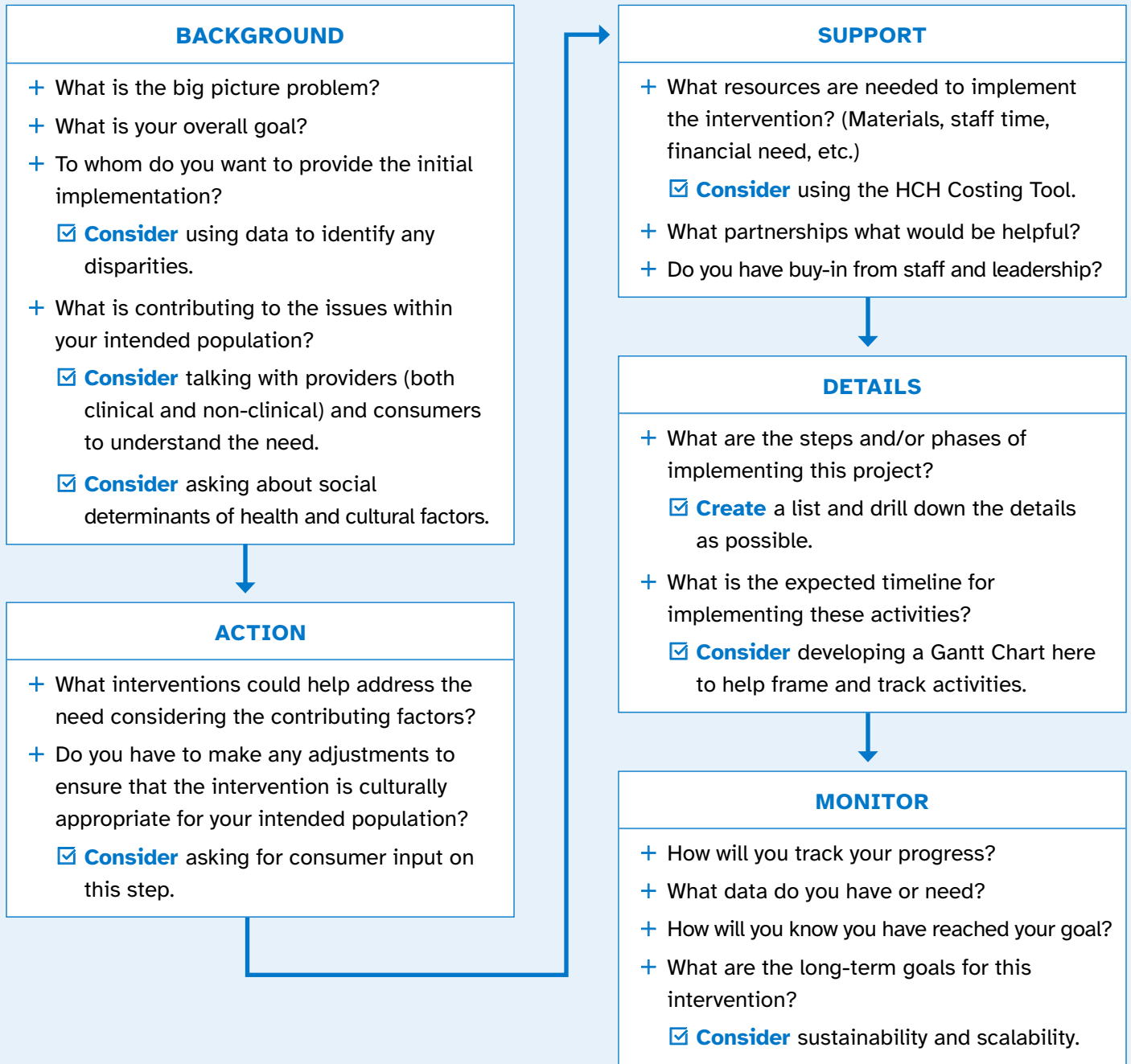
### 2. Successes and Promising Strategies in Diabetes Prevention

- Enabling Services
- Diabetes Prevention Education
- Service Integration
- Cultural Appropriateness

7 National Health Care for the Homeless Council, <https://nhchc.org/>

8 Social Determinants of Health Lessons Learned, Challenges, and Barriers: A Resource for Health Centers, Vol. 1, <https://aapcho.org/social-determinants-of-health-lessons-learned-challenges-and-barriers-a-resource-for-health-centers-vol-1/>

**Figure 1. Change Model Map**



**Figure 2: Learning Collaborative Session Outline**

SESSION 1	SESSION 2	SESSION 3	SESSION 4
Overview and Introduction to the Learning Collaborative	Cultural Appropriateness and Required Resources	Implementation and Tracking Progress	Defining Success and Scalability

## CHALLENGES AND COMMON NEEDS IN DIABETES PREVENTION

As part of the LC, CSH identified substantial challenges that PEH face in preventing diabetes as well as the challenges that care providers face supporting prevention. These challenges are listed and summarized in **Table 3**.

**Table 3. Summary: Challenges and Common Needs in Diabetes Prevention for Providers and Consumers**

Challenge	Effects on Providers	Effects on Consumers	Example(s) and Quotes from Learning Collaborative Cohort
<b>Consumer Needs and Barriers Related to SDOH (e.g., housing, income, transportation)</b>	Challenges reaching consumers and improving prediabetes and A1c screenings; Challenges implementing non-clinical approaches related to nutrition and exercise, including the Centers for Disease Control and Prevention's (CDC's) National Diabetes Prevention Program (DPP). <sup>9</sup>	Challenges purchasing nutritious foods/ ingredients; Difficulty accessing transportation to primary care services; Limited opportunities to safely exercise; Increased rates of undiagnosed diabetes.	<ul style="list-style-type: none"> <li>+ Health center seeing high rates of cellulitis and amputations due to complications of undiagnosed diabetes. This is associated with infrequent access to primary care services.</li> <li>+ Health center consumers have difficulty getting physical activity because “neighborhood safety is a factor in walking [outdoors] or getting exercise.”</li> </ul>
<b>Comorbidities (e.g., behavioral health symptoms, substance use disorders, hypertension)</b>	Challenges with follow-up and continuity of care; Competing treatment and prevention priorities; Behavioral health symptoms needing attention; Working with a more medically fragile population.	Challenges focusing on prevention while experiencing behavioral health symptoms or active substance use disorders; Elevated risk of diabetic complications for those with hypertension.	<ul style="list-style-type: none"> <li>+ Health center sharing that many consumers have “difficulty maintaining good health to prevent medical crises.”</li> <li>+ Social services organization identified history of trauma, mental illness, physical disability, and substance use as most significant barriers to diabetes prevention.</li> </ul>
<b>COVID-19 Pandemic</b>	Staffing shortages; Challenges building buy-in for new programming during COVID-19 surges; Challenges implementing in-person diabetes prevention activities in a safe, socially distanced way.	Reduced access to health centers/preventative services; Isolation; Challenges accessing community resources that support prevention, like benefits (e.g., Medicaid connections, Supplemental Nutrition Assistance Program (SNAP) benefits) and food pantries.	<ul style="list-style-type: none"> <li>+ Diabetes prevention programming in health centers and housing programs completely halted or delayed due to the need to focus on COVID-19 testing, treatment, isolation &amp; quarantine, and vaccination efforts.</li> <li>+ Health center workforce strained due to COVID-19 positivity, hiring challenges, and staff burnout.</li> </ul>

**Table 3. Summary: Challenges and Common Needs in Diabetes Prevention for Providers and Consumers**

Challenge	Effects on Providers	Effects on Consumers	Example(s) and Quotes from Learning Collaborative Cohort
<p><b>Long-Term Consumer/ Provider Engagement</b></p>	<p>Necessary labs and screenings not completed prior to clinic appointment; Difficulty following up with consumers after screenings; Difficulty completing care plans.</p>	<p>Common trade-offs for people experiencing homelessness (e.g., housing search, securing basic needs) preventing them from accessing preventative services; Low confidence or trust in medical providers due to history of mistreatment.</p>	<ul style="list-style-type: none"> <li>+ Health center having difficulty establishing patient appointment follow up due to inconsistent phone access and no mailing address.</li> <li>+ Supportive housing residents having a “passivity to diabetes prevention,” due to prioritization of other areas of need. This leads to inconsistent participation in services.</li> </ul>
<p><b>Care Coordination</b></p>	<p>Challenges communicating between interdisciplinary teams (e.g., coordination between primary care physicians, behavioral health providers, non-clinical team members); Challenges coordinating between clinical teams and those meeting social needs (e.g., food banks, benefits counselors, housing navigators); Difficulty closing referral loops.</p>	<p>Receiving duplicative services, social needs screenings, and questionnaires that are re-traumatizing; Falling between the cracks of a broken referral system due to poor communication channels and long waitlists.</p>	<ul style="list-style-type: none"> <li>+ Health center electronic medical record software has limitations sharing up-to-date clinical information or triggering referrals to internal teams.</li> <li>+ Supportive housing program has difficulty building staff buy-in for expanding communication with clinical care because staff “do not always understand health conditions or appreciate how critical preventing and managing diabetes are” for residents.</li> </ul>

## SUCCESSES AND EMERGING PRACTICES IN DIABETES PREVENTION

The 2021-2022 diabetes prevention learning collaboratives encouraged participants to share the successes and emerging practices they are seeing in their communities. The LC participants shared diabetes prevention strategies tailored to the unique needs of their community’s despite, or in response to, the many concerns and challenges listed above. These successes and emerging practices are listed and summarized in **Table 4**.

**Table 4. Summary: Successes and Emerging Practices in Diabetes Prevention**

Emerging Practice	Description of Practice	Example(s) from Learning Collaborative
<b>Enabling Services</b>	<p>Services like transportation, case management, language interpretation, help to remove barriers to preventative services. Health centers that incorporate enabling services alongside quality health care have found success in preventing diabetes in their communities.</p> <p>Non-health center providers can similarly improve diabetes prevention efforts by emphasizing connections to health care in their care planning.</p>	<ul style="list-style-type: none"> <li>+ Health center partners with community leaders that speak Spanish and Khmer to best reach their community target population.</li> <li>+ Health center case management assessing comfortability and providing in-person warm handoffs to dietitians.</li> </ul>
<b>Diabetes Prevention Education</b>	<p>Standardized diabetes curricula or more customizable approaches to diabetes education help facilitate prevention. Curricula that focus on lifestyle changes (e.g., exercise, cooking, nutrition) can help prevent the development of type 2 diabetes.</p> <p>Programs have had success adapting existing prevention programs to better fit the needs of consumers experiencing homelessness or housing instability.</p>	<ul style="list-style-type: none"> <li>+ Health center partnering with local training and implementation body to provide the Centers for Disease Control and Prevention's (CDC's) National DPP.</li> <li>+ Health center partnering with faith organizations and volunteers to provide cooking classes based on free Cooking Matters lesson plans.</li> <li>+ Health center and housing-provider hosting exercise classes and recommendations for activities suitable for many physical environments, including outdoors, in housing, or in shelter.</li> </ul>
<b>Service Integration</b>	<p>Improving care conferencing, inter-team referrals, and multidisciplinary visits can provide a more holistic approach to prevention.</p> <p>Non-health centers can work to formalize referral paths to preventative health services for clients. They can also train staff to provide prediabetes screenings to assess risk and identify what diabetes-related needs can be met through services or referrals.</p>	<ul style="list-style-type: none"> <li>+ Health center establishing routine cross-team meetings to discuss care plans for consumers as well as keeping up-to-date list of non-clinical needs that can be met via referrals.</li> <li>+ Supportive housing program partnering with local health care providers to conduct prediabetes screenings and others at a biannual on-site health fair.</li> </ul>

**Table 4. Summary: Successes and Emerging Practices in Diabetes Prevention**

Emerging Practice	Description of Practice	Example(s) from Learning Collaborative
<p><b>Cultural Appropriateness in Diabetes Prevention</b></p>	<p>Diabetes prevention should be informed by the input, preferences, and cultural background of those participating. Providers can improve diabetes prevention by tailoring their services to the communities they serve. This includes offering food/beverages appropriate to different palates, providing diabetes education materials in a range of languages, ensuring dietary recommendations are informed by the availability and affordability of food/ingredients in the community.</p> <p>Strategies that lead to cultural competence include trauma-informed care training, consumer governance policies, hiring staff members with lived experience of homelessness (i.e., Community Health Workers.)</p>	<ul style="list-style-type: none"> <li>+ Health center prioritizing input from consumer advisory board regarding recruitment, training, and expectations for diabetes prevention programming. Input is accepted and encouraged on an ongoing basis.</li> <li>+ Housing program conducted a formal needs assessment with residents regarding diabetes prevention programming. After hearing interest in physical activity classes, this program planned community exercise opportunities including yoga and walking groups.</li> </ul>

## Change Map Results

The Change Map tool helped facilitate brainstorming sessions for implementing or improving prevention programs. At the end of the 4-session LC, those that elected to do so had a complete Change Map that they could take back to their colleagues for feedback or implementation. Examples of completed Change Maps are provided on the following pages. Organizational names have been removed to respect the privacy of participants and ensure that the challenges they shared remain anonymous.

### Some notes on the Change Map process:

**+ Diabetes Prevention and Management:**

Although the LC focus was on diabetes prevention, many participants decided to incorporate strategies for diabetes management practices as well, due to the similarities in non-clinical approaches for management and prevention. Another reason for the inclusion of diabetes maintenance strategies was that many participants represented teams leading simultaneous diabetes prevention and diabetes management programs.

**+ Long and Short Term Goals:**

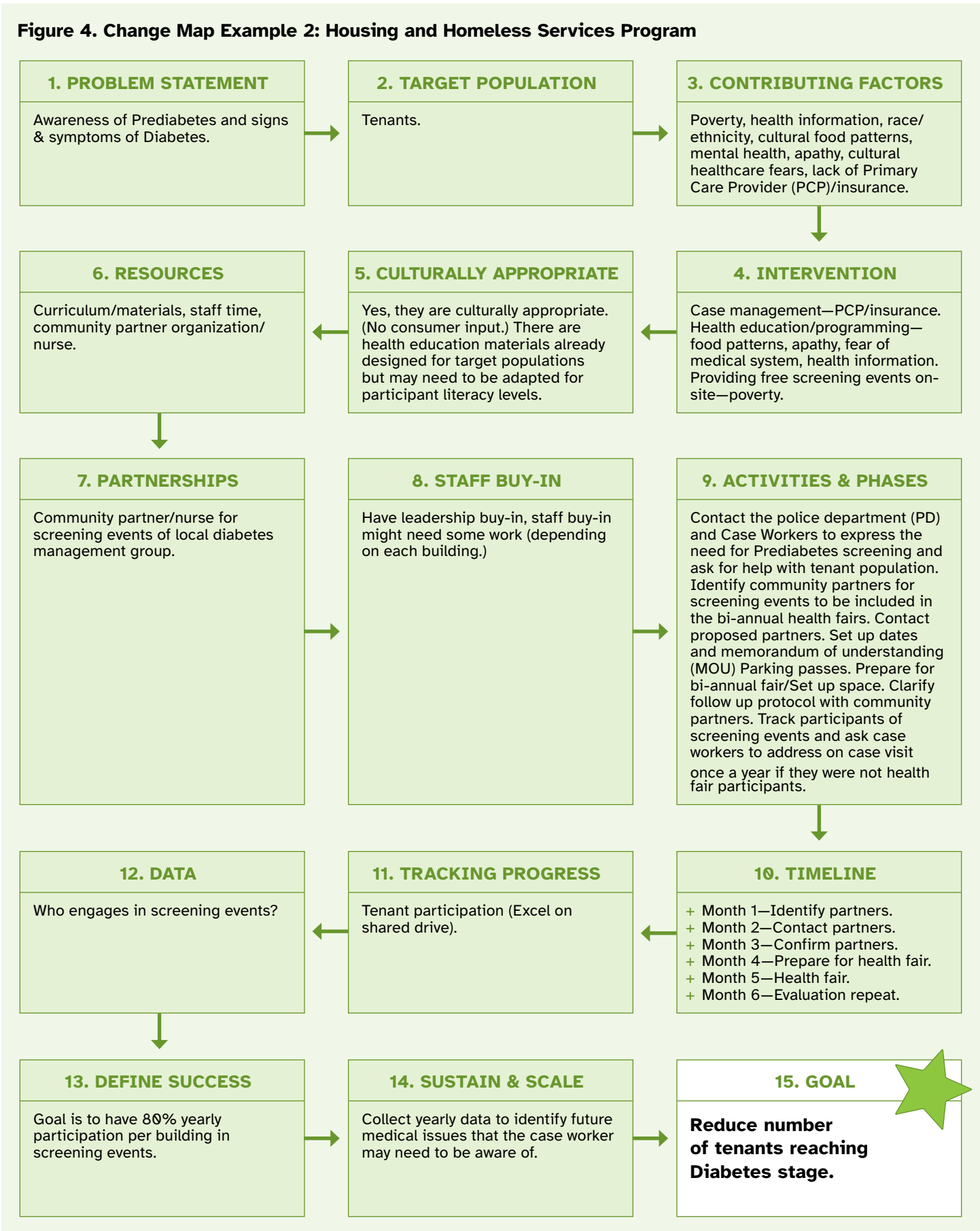
The long-term Change Map goals mostly focused on reducing the number of community members developing type 2 diabetes or, through prevention and maintenance activities, reducing A1c rates more broadly. Short-term goals depended on readiness and capacity of the participating organization. The COVID-19 pandemic was factored into short-term planning as well, with many new projects being placed on hold or significantly delayed.



**Figure 3. Change Map Example 1: Federally Qualified Health Center**



**Figure 4. Change Map Example 2: Housing and Homeless Services Program**



## Lessons Learned

The 2021-2022 LCs provided valuable insight into the challenges, strengths, and emerging practices exhibited by community-based service providers working with consumers experiencing homelessness, housing instability, and poverty. The following recommendations have been gleaned from the insights of LC participants.

### RECOMMENDATIONS FOR HEALTH CENTERS, HOUSING PROGRAMS, HOMELESS SERVICES PROVIDERS, AND OTHER COMMUNITY-BASED ORGANIZATIONS WORKING IN DIABETES PREVENTION:

- ☑ Work to bridge clinical and non-clinical providers through **internal care coordination**. Health centers are poised to do this work internally by leveraging enabling services providers (e.g., case managers, patient educators, Community Health Workers) and by integrating care teams. Integrating care teams also better prepares organizations to serve consumers with comorbidities and underlying concerns leading to or complicating diabetes risk.
- ☑ Coordinate care across organizations through **established partnerships** that emphasize clinical and non-clinical services. This can be done through referrals and case conferencing or through more formal means (e.g., contractual agreements, sharing data).
- ☑ Offer **culturally appropriate** diabetes prevention strategies that are trauma-informed, incorporate consumer input, and take into consideration the preferences of those being served.
- ☑ **Tailor diabetes prevention education to the consumer population** by including learning opportunities in different languages, learning materials at different reading levels, and providing education in a variety of settings (i.e., health centers, housing sites, shelters, outdoors). Organizations can pursue standardized education programs like the National DPP but are recommended to adapt any existing programs to those experiencing homelessness and housing instability.
- ☑ Improve how **Social Determinants of Health (SDOH)** and other social needs screenings create referral paths to diabetes prevention programs. SDOH data is commonly collected by health centers and other community-based organizations. Programs can use this data to identify the social factors that put one at risk for developing prediabetes including age, family history, race and ethnicity, food insecurity, and more.

Though the LC revealed strengths and encouraging practices in diabetes prevention, it also revealed some limitations and opportunities for growth. The foremost of these limitations are listed below.

### LIMITATIONS AND IMPORTANT TRAINING NEEDS FOR HEALTH CENTERS, HOUSING PROGRAMS, HOMELESS SERVICES PROVIDERS, AND OTHER COMMUNITY-BASED ORGANIZATIONS WORKING IN DIABETES PREVENTION:

- ☑ The **COVID-19** pandemic created an enormous obstacle for organizations trying to implement new chronic disease prevention programs, due to a need to shift resources toward infectious disease. The pandemic also placed burden on the workforce of community-based providers, leading to burnout and shortages in many communities.

## LIMITATIONS AND IMPORTANT TRAINING NEEDS FOR HEALTH CENTERS, HOUSING PROGRAMS, HOMELESS SERVICES PROVIDERS, AND OTHER COMMUNITY-BASED ORGANIZATIONS WORKING IN DIABETES PREVENTION (CONT.):

- ☑ While some organizations have begun to establish organizational partnerships to support diabetes prevention, most have not taken the next steps in formalizing and expanding how they coordinate care. Robust partnerships are associated with a lot of red tape, like **contractual or legal obligations** that are complex when operating between different types of organizations. For example, health centers have reported that they do not feel comfortable pursuing this type of relationship because they are unsure what is allowed under the Health Insurance Portability and Accountability Act (HIPAA). There is a significant need for trainings on partnerships across sectors, including guidance on how to legally maneuver care coordination.
- ☑ While the participants of the LC agreed upon the importance of consumer input and valuing the voice of lived experience, there were many in the cohort that had not yet implemented **strategies to engage consumers in planning**. This, in part, may be due to the diverse types of organizations represented in the cohort, leading to disparate familiarity with policies like consumer engagement in governance, creating consumer advisory boards, or hiring people with lived expertise (e.g., peer advocates, peer specialists, Community Health Workers). This presents a great opportunity for all organizations that serve people experiencing homelessness and housing instability to participate in trainings on consumer engagement strategies.

## Conclusion

The 2021 and 2022 Diabetes Prevention Learning Collaboratives created a platform for service providers with diverse backgrounds to discuss, share, and troubleshoot with each other regarding the complicated landscape of diabetes prevention. While the cohorts shared challenges that they and their communities face in preventing diabetes, many are implementing new and unique strategies that are beginning to make a real impact on those that they serve. One key strength across all participants was the knowledge that, in order to successfully prevent diabetes, it is critical to meet both clinical and non-clinical needs. The takeaways, including the conversation themes, completed Change Maps, and the summarized recommendations, are useful resources to those seeking actionable advice for moving the needle on diabetes prevention in their community.



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