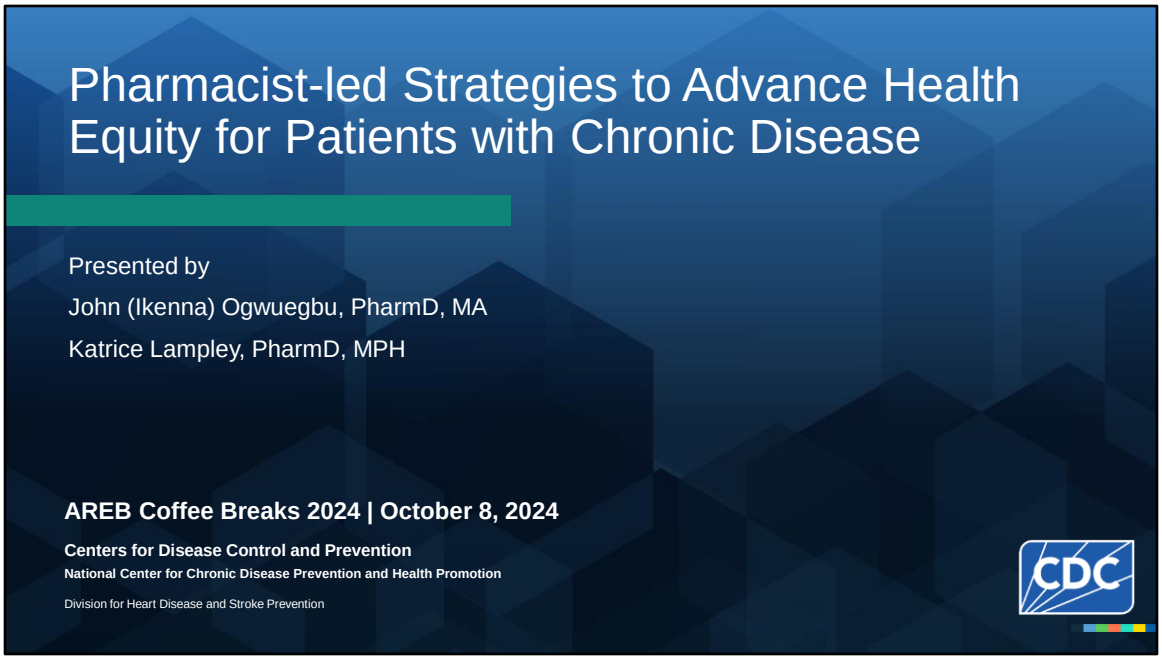

Hello and welcome to today's Coffee Break presented by the Applied Research and Evaluation Branch in the Division for Heart Disease and Stroke Prevention at the Centers for Disease Control and Prevention.
My name is Yu-Jan Huang, and I am an ORISE fellow with the branch. I will be acting as today's moderator.

Our presenters today are Ikenna Ogwuegbu, an ORISE fellow; and Katrice Lampley, a contracted pharmacist on the Applied Research and Translation team within the Division for Heart Disease and Stroke Prevention's Applied Research and Evaluation Branch. They will be presenting Pharmacist-led Strategies to Advance Health Equity for Patients with Chronic Disease.

Before We Begin…

- Any issues or questions?
  - Use Q & A box on your screen
  - Email AREBHeartInfo@cdc.gov

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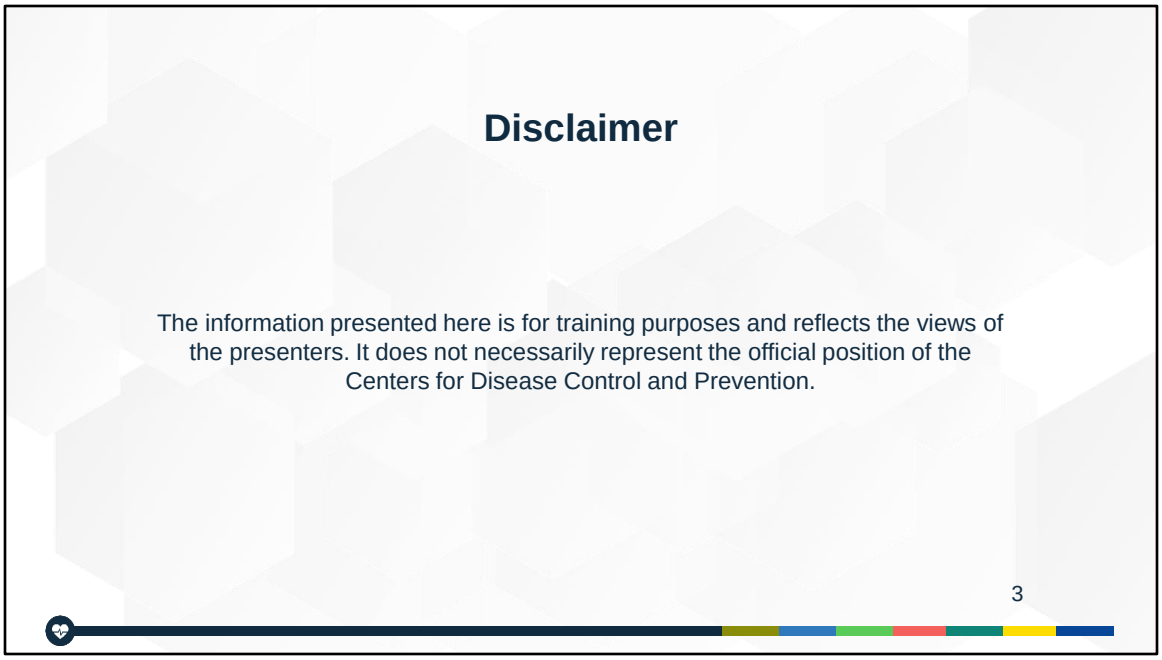
Before we begin, there are some housekeeping items. If you are having issues with audio or seeing the presentation, please message us using the Q&A or send us an email at AREBheartinfo@cdc.gov. Please submit any questions for the presenters using the Q&A as well. Since this is a training series on applied research and evaluation, we hope you will complete the poll at the end of the presentation and provide us with your feedback.

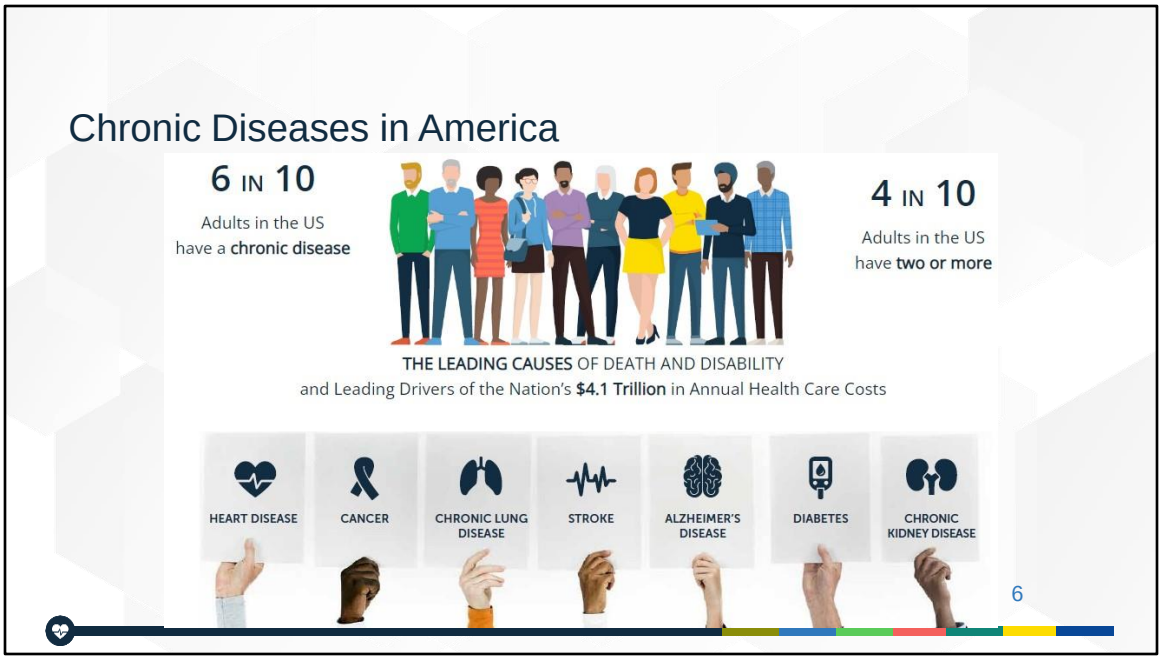


As a disclaimer, the information presented here is for training purposes and reflects the views of the presenters. It does not necessarily represent the official position of the Centers for Disease Control and Prevention.

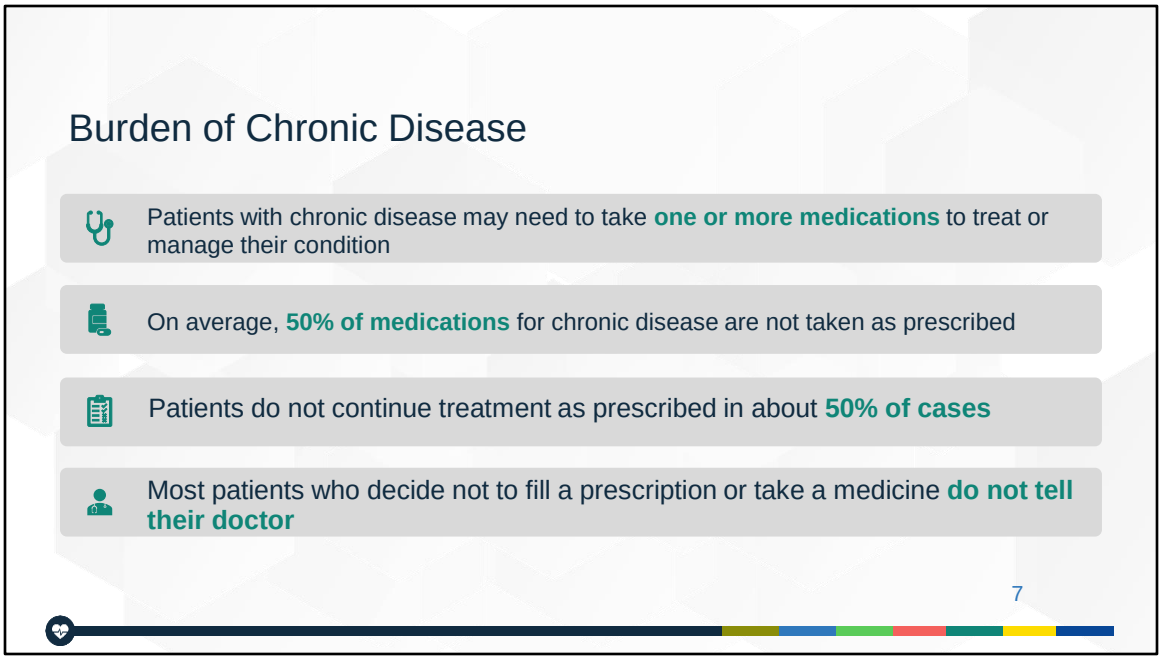
So, without further delay. Let's get started. Ikenna and Katrice, the floor is yours.

In today's presentation, we will provide an overview of pharmacist-led and pharmacy-based strategies and initiatives to advance health equity for patients with chronic disease. We will start off with background information on chronic diseases, followed by an overview and findings from the health equity study conducted by CDC's Division for Heart Disease and Stroke Prevention Applied Research and Translation Team. We will conclude with strategies for pharmacists to advance health equity, as well as challenges to advancing health equity. We will also share some valuable Health Equity Resources.

I will start off with background information on chronic diseases and the role of pharmacists in chronic disease management



Chronic disease is the leading cause of death and disability in the united states. Approximately 6 in 10 adults in the United States have a chronic disease, while 4 in 10 adults have 2 or more chronic conditions.



Patients with chronic disease may need to take one or more medications to treat or manage their condition.

On average, about 50% of medications for chronic diseases are not taken as prescribed. Additionally, in nearly 50% of cases, patients do not adhere to their treatment plan as prescribed.

Majority of patients who opt not to fill a prescription or adhere to their medication regimen choose not to communicate this decision to their doctor.

People from racial and ethnic minority groups, a term that encompasses African American or Black, Hispanic, Asian, Native Hawaiian, Pacific Islander, American Indian or Alaska Native, and other non-White persons experience significantly higher rates of chronic diseases compared to their White counterparts.

These health disparities are largely driven by inequalities in social, economic, and environmental factors that impact and influence health outcomes and access to quality care, commonly referred to as social determinants of health. These factors include lower rates of health insurance coverage, income, wealth, and access to transportation.

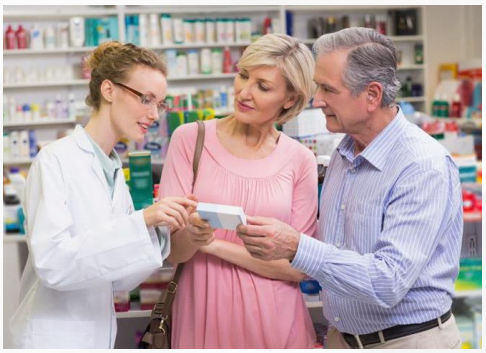
Nearly 90% of US residents live within 5 miles of a community pharmacy.

Pharmacists are highly trained professionals and readily accessible in their communities.

Patients visit pharmacists almost twice as frequently as they visit their primary care physician.

Research and evidence has shown that when pharmacists are integrated into the healthcare team, outcomes related to preventing or managing chronic disease and medication adherence improve.

Improved control of chronic disease requires an expanded effort from all healthcare professionals, **including pharmacists**



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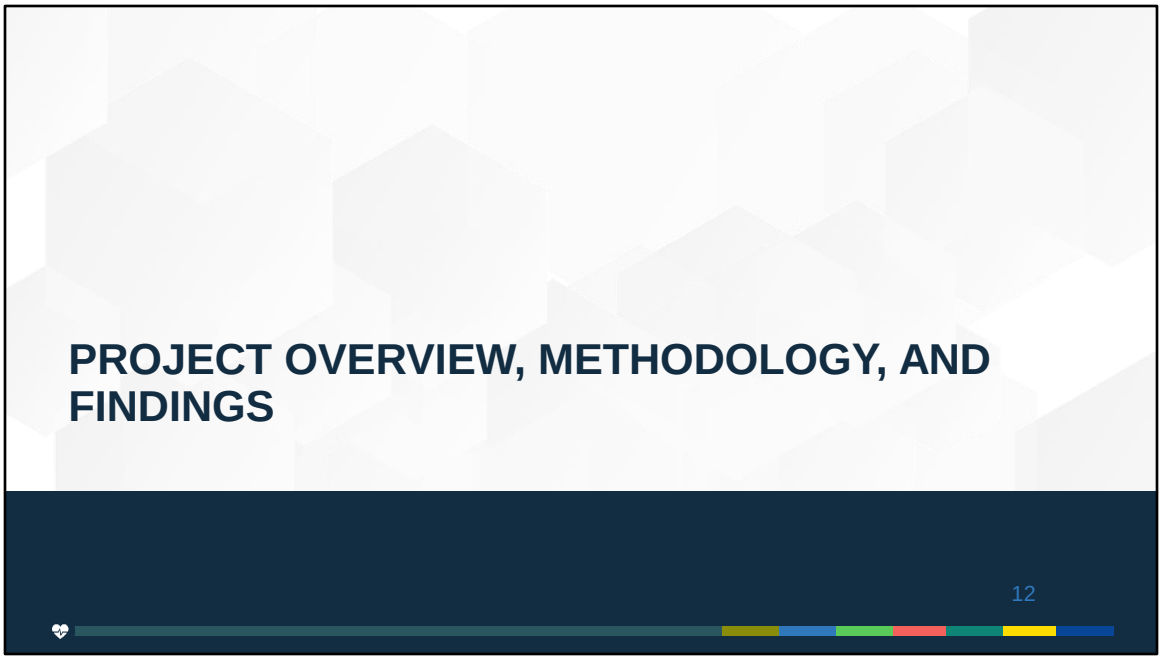
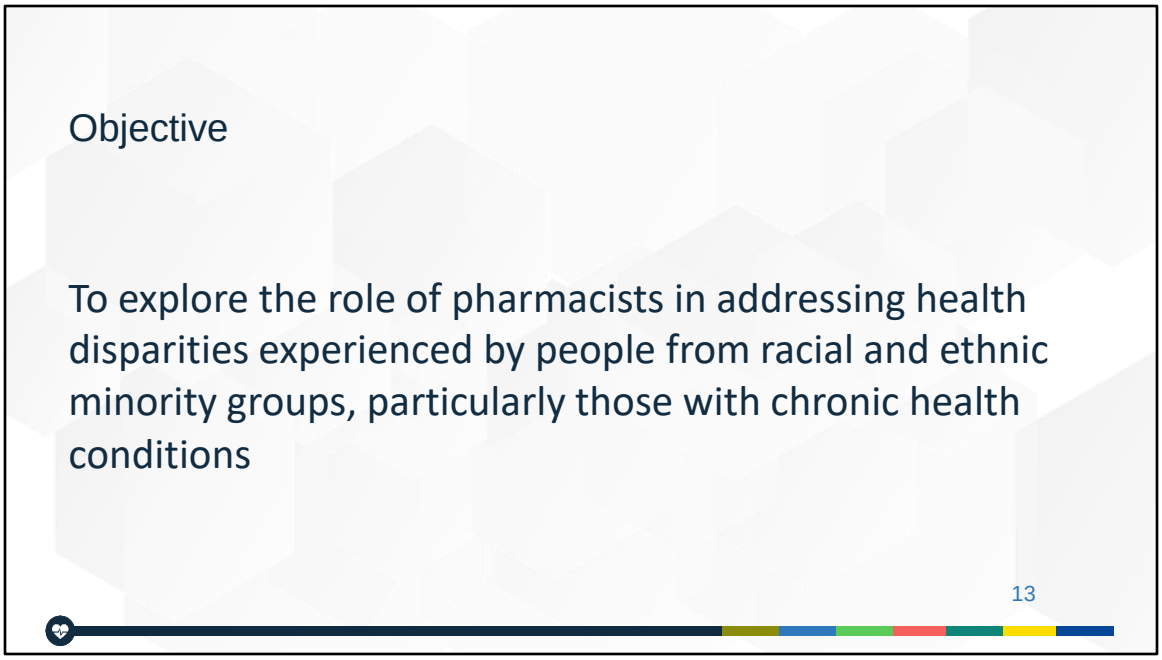
In summary, Improved control and effective management of chronic diseases requires an expanded effort from all health care professionals, including pharmacists.



I will now provide an overview of our division's health equity project in collaboration with George Washington and Changelab Solutions



This project explored the role of pharmacists in addressing health disparities experienced by people from racial and ethnic minority groups, particularly those with chronic health conditions.

Our methodology began with preliminary research that included a literature review of peer-reviewed articles published between 2017 and 2022 to help identify the role of pharmacists in addressing health disparities. The preliminary research also included a policy scan of policies in effect as of June 2022.

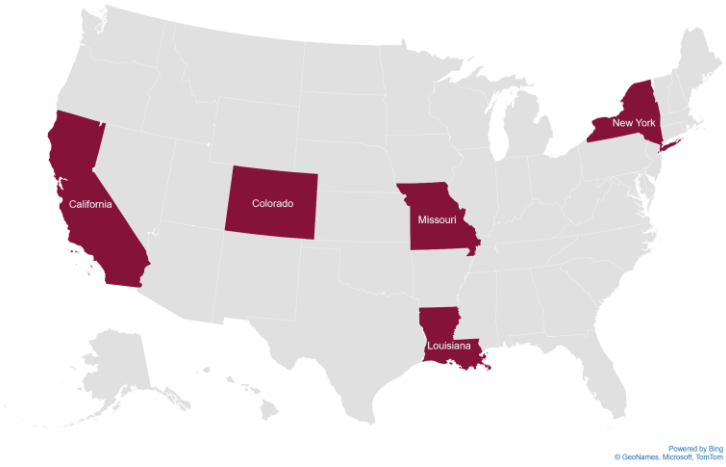
Following this, we convened two SME engagements with 13 pharmacy policy and practice SMEs. The main purpose of the engagements was to identify pharmacist-led initiatives that address health equity and ask for their feedback including recommendations for specific programs to consider for interviews.

Next, based on findings from the preliminary research, 6 programs and initiatives were invited to participate in a semi-structured interview. Programs were invited based on several criteria which I will go over in the next slide.

After program selection, we conducted six interviews with representatives from the programs, as well as interviews with three national experts to provide additional context on pharmacist-led initiatives and national trends and policies. These were one-hour semi-structured interviews using videoconference.

Lastly, we independently analyzed the interview transcripts and notes, systematically categorized relevant quotes into themes, grouped codes according to these themes, and met to reconcile the codes. This analysis led to the identification of the key findings.

Selected Programs



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Before discussing key findings we want to share some of the criteria for program selection. The selected programs:

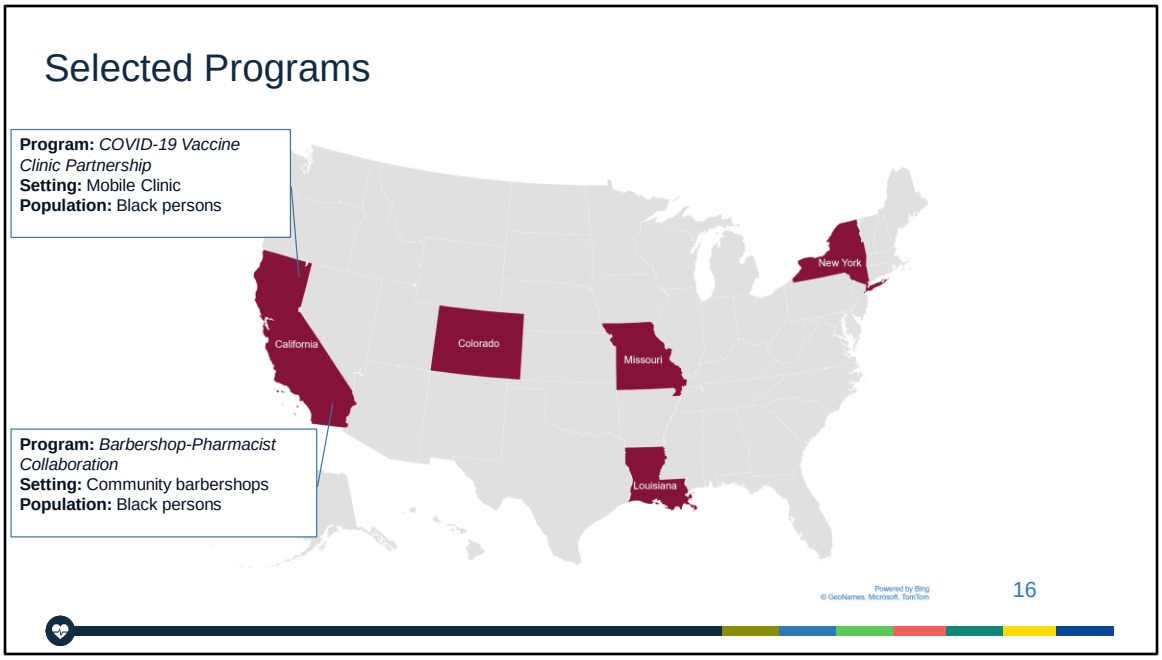
1. represent a variety of practice settings including federally qualified health centers (FQHCs), pharmacy schools, a community pharmacy, and community-based settings such as barbershops and a mobile clinic.

2. They engage pharmacists who collaborate with a variety of health care professionals and provide services related to the prevention, treatment, and management of cardiovascular disease and its associated risk factors.

3. The programs utilize a variety of funding sources, have been in existence for several years and serve a diverse array of racial and ethnic communities including Black persons, American Indian and Alaska Native persons, and Hispanic persons.

4. And lastly, the programs represent different geographic areas of the country. As you can see, we have representation from the East Coast, the Midwest, the

West, and the South.

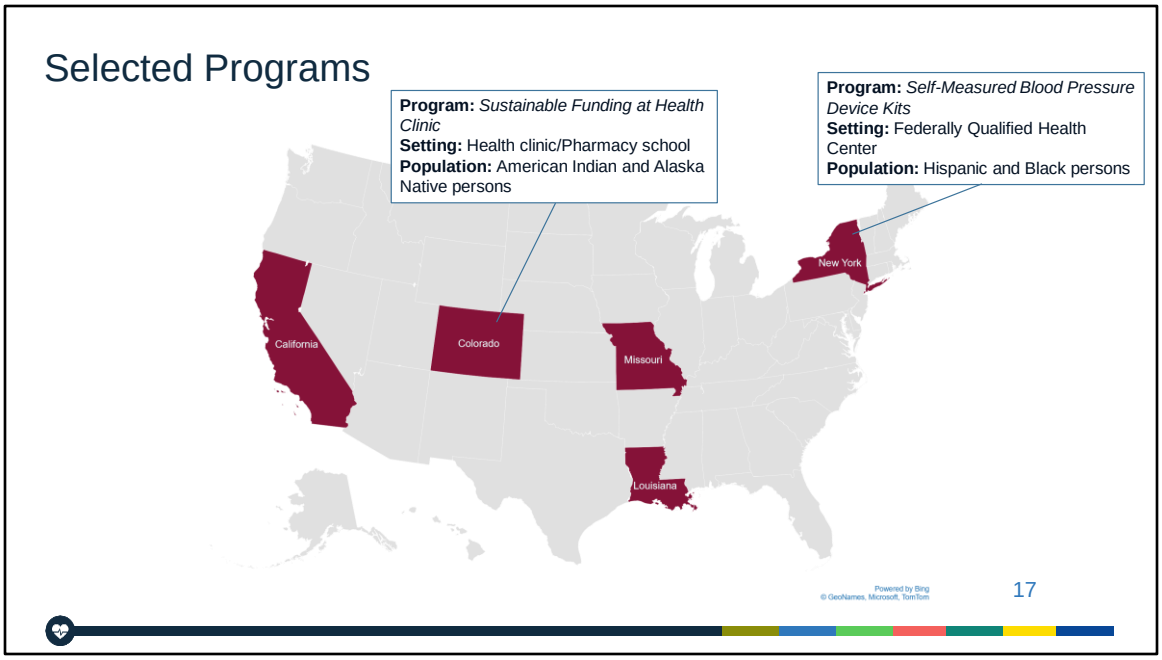


Now I am going to provide a brief overview of each individual program type:

1. The first program was a COVID-19 Vaccine Mobile Clinic Partnership that primarily serve black patients. This program was a partnership between a School of pharmacy and community and faith leaders, with a pharmacist providing COVID-19 vaccine education through webinars and "faith summits", as well as vaccine counseling, and vaccinations.

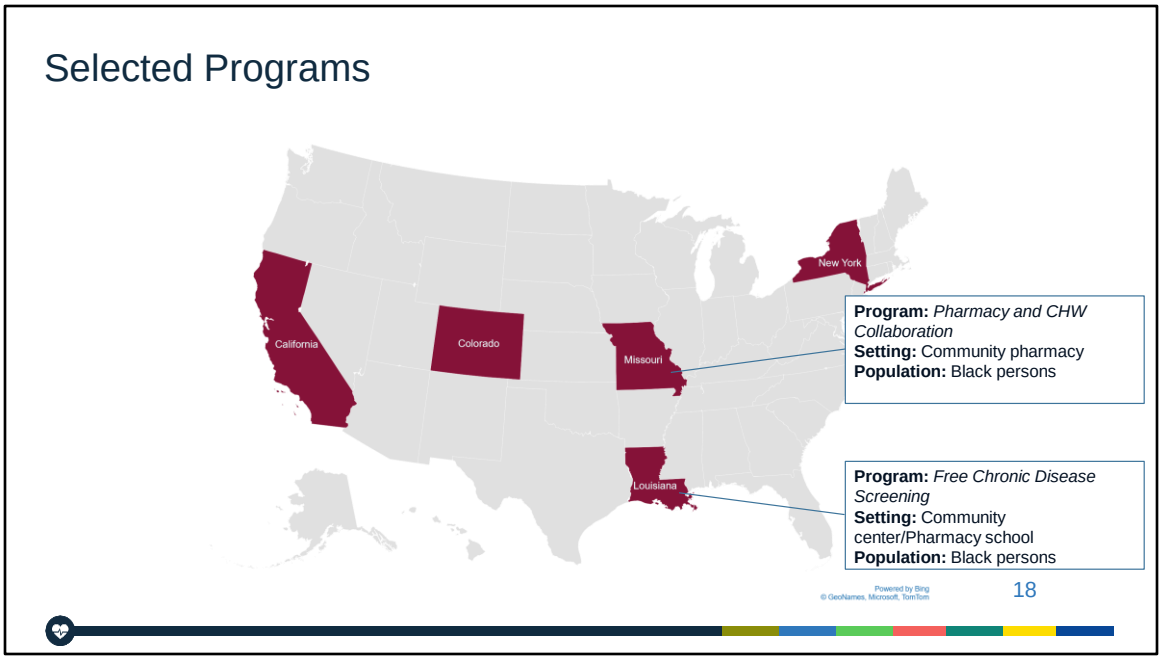
2. The second program was a collaboration between pharmacists, barbers, and male patrons with hypertension in a cluster randomized trial. The trial enrolled male patrons of Black-owned barbershops and randomly assigned them to either a pharmacist-led intervention group or a control group. In the intervention group, pharmacists met with the participants at the barbershop to measure their blood pressure, provide disease-specific education, conduct point-of-care labs, and prescribe or adjust their antihypertensive medications (under a collaborative practice agreement with the participants' primary care physician). Additionally, the barbers were trained to take blood pressure readings using an automated monitoring device that would send the readings

electronically to the pharmacists in-between visits. In the control group, barbers were trained to encourage lifestyle modification and doctor appointments.



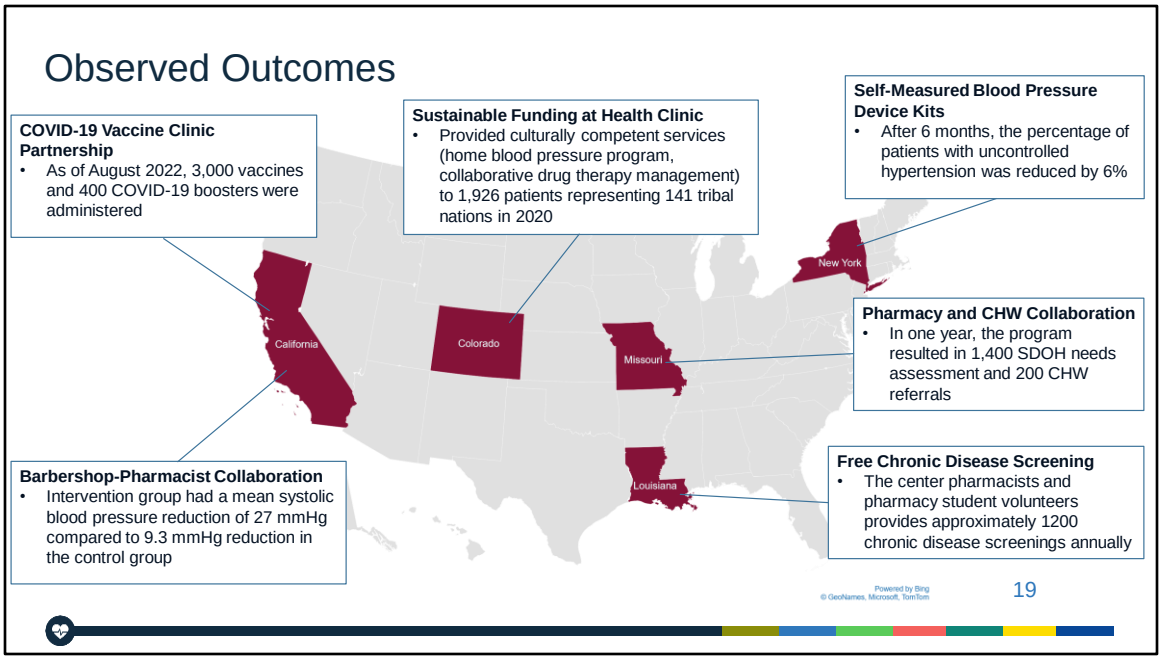
3. The third program was sustainable funding for a Health Clinic that primarily serve American Indian and Alaska Native persons. This program featured a partnership between a school of pharmacy and a pharmacy integrated into a health care clinic with a 340B program that offered a Home Insulin Titration Program, a Home Blood Pressure Program, and a Continuous Glucose Monitoring.

4. The fourth program was a federally qualified health center pharmacy that primarily served Hispanic and Black patients. This pharmacy partnered with a non-profit organization to distribute self-measured blood pressure device kits to patients with uncontrolled hypertension. The pharmacist encouraged patients to regularly take their blood pressure and the device automatically uploaded patient readings to a website where the pharmacist could track patients' blood pressure for several months.



5. The fifth program was a collaboration between a community pharmacy and Community Health Workers to address patients Social Determinants of Health needs. In this program, pharmacy technicians and community health workers collaborate with the pharmacy's home delivery drivers, who utilize a SDOH needs assessment tool when delivering medications to patients' homes. The pharmacy technicians and community health workers use the information gathered from the pharmacy delivery drivers to assess the referrals and follow-ups needed for individual patients AND then referred patients to pharmacy services or local community organizations to address food, housing, employment, loneliness, or other needs.

6. The sixth program was a free chronic disease screening partnership between a pharmacy school and a community center that primarily serve Black patients. The center provides free chronic disease screenings and health counseling sessions, including screenings for hypertension, blood sugar, lipid panels, and bone density.



Now that we have information on the programs, Here I am going to share the observed outcomes from each individual program,

1. In the COVID-Vaccine Clinic Partnership program, the vaccine clinic provided 3,000 vaccines and over 400 COVID-19 boosters for the community
2. In the Barbershop-Pharmacist Collaboration program, the intervention group had a mean systolic blood pressure reduction of 27 mmHg after 6 months, compared to 9.3 mmHg reduction in the control group. These results were sustained at 12 months.
3. In the sustainable funding at a health clinic initiative, the program provided culturally competent services, including a home blood pressure program and collaborative drug therapy management, to 1,926 patients representing 141 tribal nations.
4. In the self-measured blood pressure device kits program, six months after the initiative was implemented, the percentage of patients with uncontrolled hypertension was reduced by 6%
5. In the pharmacy and Community Health Worker collaboration program, the partnership resulted in 200 Community Health Worker referrals and 1,400 SDOH

needs assessments that were completed by pharmacy delivery drivers.

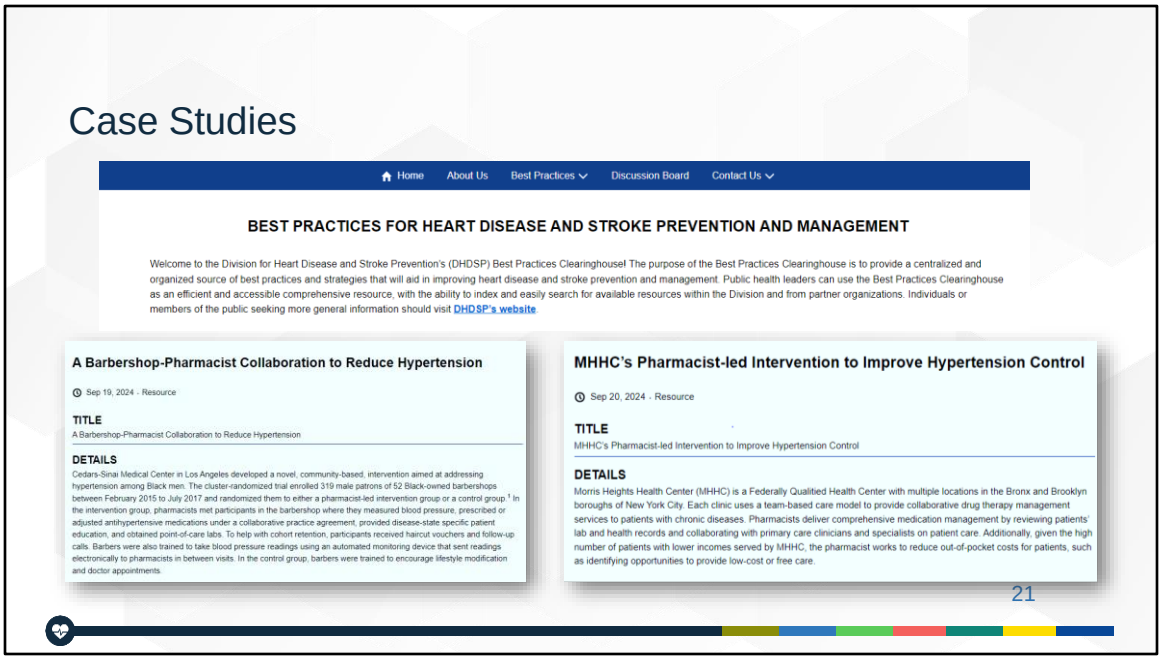
6. In the free chronic disease screening program, the initiative resulted in approximately 1,200 chronic disease screenings annually, provided by the center's pharmacists and pharmacy student volunteers

The analysis demonstrated that pharmacists are well positioned to serve as key partners in advancing health equity in chronic disease care. This can be done through several approaches:

1. tailored, culturally and linguistically appropriate patient care.
    a. Key informants discussed how pharmacists, due to their close geographic proximity to patients, are better able to understand patients' health-related social needs through community relationships and can collaborate with community partners to address these health-related social needs. Pharmacists can also work to reduce medical mistrust among patients, which can address health disparities and improve quality of care.
2. Another key finding is there are existing opportunities to leverage resources available to pharmacists through coordination with health care team members such as pharmacy technicians and community health workers. Pharmacists may coordinate with health care team members to:
    a. develop programs tailored to community needs that address health disparities. They can also leverage grants to implement new initiatives that advance health equity and can utilize pharmacy data to improve patient care, and program planning and implementation.
3. The third key finding is the need for training and resources to help pharmacists successfully

advance health equity and overcome barriers such as:

a. time and administrative barriers associated with scope of practice laws and developing collaborative practice agreements; a lack of universal pharmacist provider status across all payers, which reduces pharmacists' ability to receive reimbursement for providing services, including services that may address health disparities; and differing incentive structures for chain and independent pharmacies which can lead to time and capacity barriers to address health disparities.



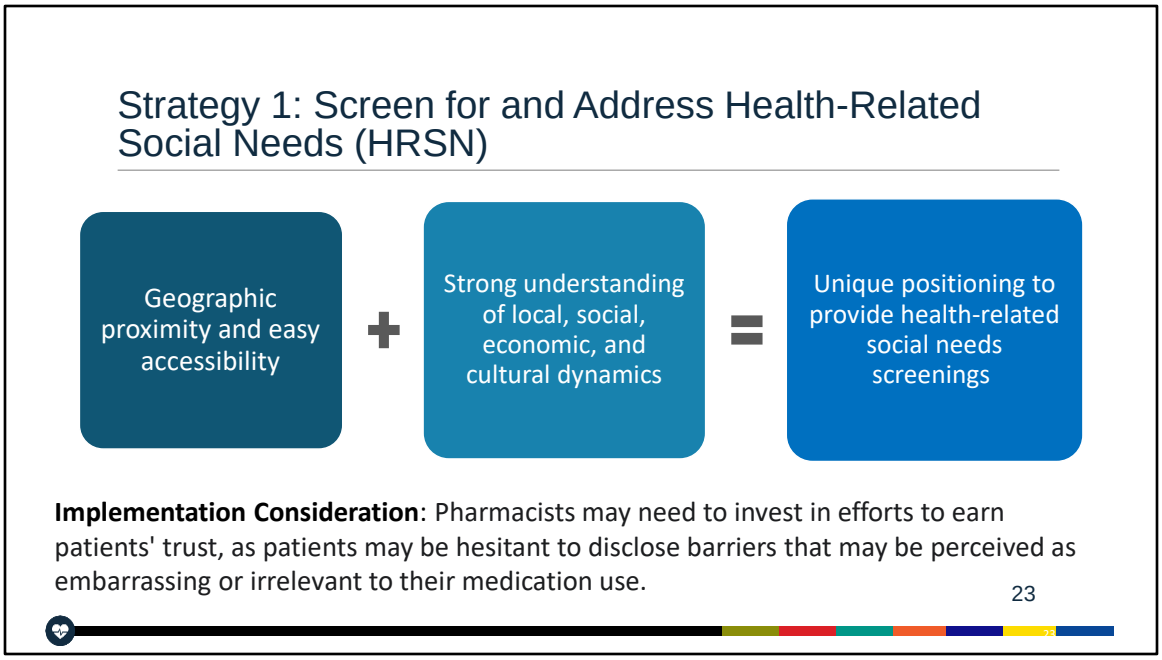
Here on this slide are two case studies and resources from this project on evidence-informed strategies for pharmacists to advance health equity in chronic disease prevention and management. These case studies can be found in the Division for Heart Disease and Stroke Prevention's (DHDSP) Best Practices Clearinghouse! We will drop the links in the chat for your reference.

A Barbershop-Pharmacist Collaboration to Reduce Hypertension - HEART DISEASE AND STROKE BEST PRACTICES CLEARINGHOUSE (cdc.gov)

MHHC's Pharmacist-led Intervention to Improve Hypertension Control - HEART DISEASE AND STROKE BEST PRACTICES CLEARINGHOUSE (cdc.gov)

I will now pass it to Katrice to go over strategies for pharmacists to advance health equity for patients with chronic disease

Next, I will discuss strategies that pharmacists and pharmacy staff may use to address health disparities and advance health equity in their communities. These strategies were informed by key findings from journal articles, publicly available information, and conversations with pharmacy subject matter experts, health equity subject matter experts, and staff from six programs that aim to advance health equity.

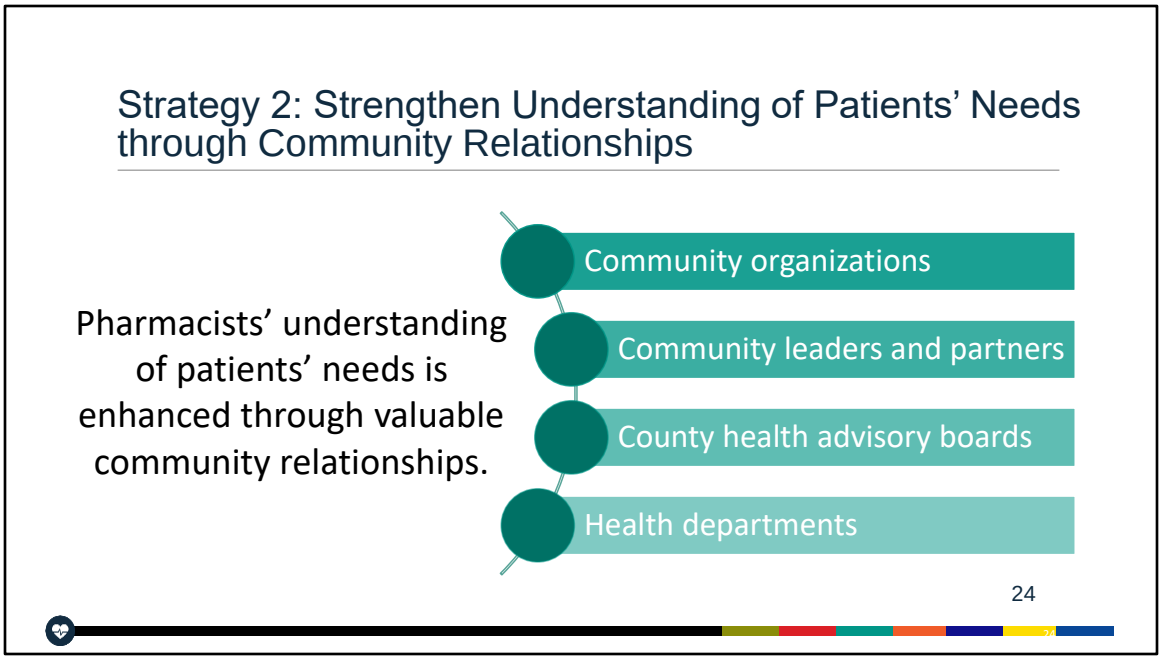


The first strategy identified through our findings is for pharmacists to Screen for and Address Health Related Social Needs. Due to their geographic proximity, easy accessibility, and strong understanding of local, social, economic, and cultural dynamics, community-based pharmacists can screen for and address social, economic, and environmental factors that impact and influence the health of people in their communities who have disproportionately higher rates of chronic disease.

Pharmacists are uniquely positioned to provide health-related social needs screenings (HRSN) that can help identify factors that can impact a patient's health such as limited health care access, transportation challenges, and food insecurity. After identifying these needs, pharmacists can refer patients to services and community organizations that can properly address individualized needs.

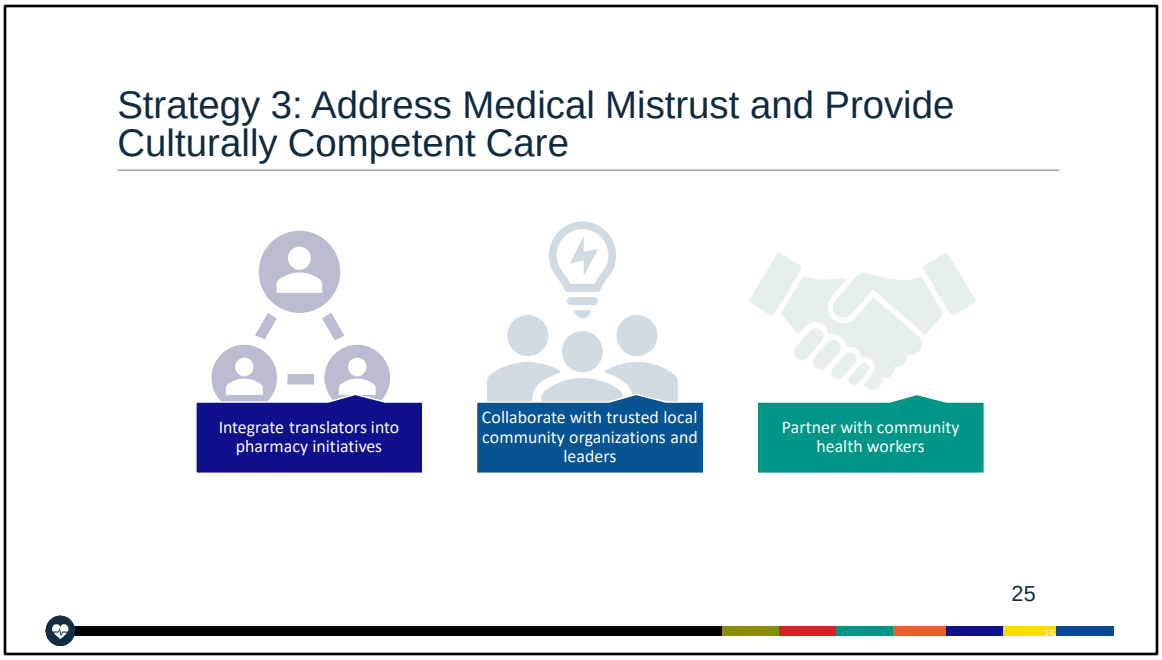
During screenings, pharmacists may also identify factors that affect a patient's medication adherence such as medication affordability and side effect challenges. Pharmacy-based interventions and cost mitigation strategies to properly address these challenges can be conducted by pharmacists. For example, pharmacists can address medication affordability challenges by 1) Recommending lower-cost alternative medications to patients' prescribing clinicians 2) Assessing eligibility for prescription discounts and patient assistance programs and 3) Providing sliding fee scales in the case of 340B entities such as federally qualified health centers, rural health centers, and community-based rehabilitation centers.

To effectively identify unmet needs, pharmacists may need to invest in efforts such as relationship building with community-based organizations to earn patients' trust, as patients may be hesitant to disclose barriers that may be perceived as embarrassing or irrelevant to their medication use. …which brings me to our next identified strategy to Strengthen Understanding of Patient Needs through Community Relationships



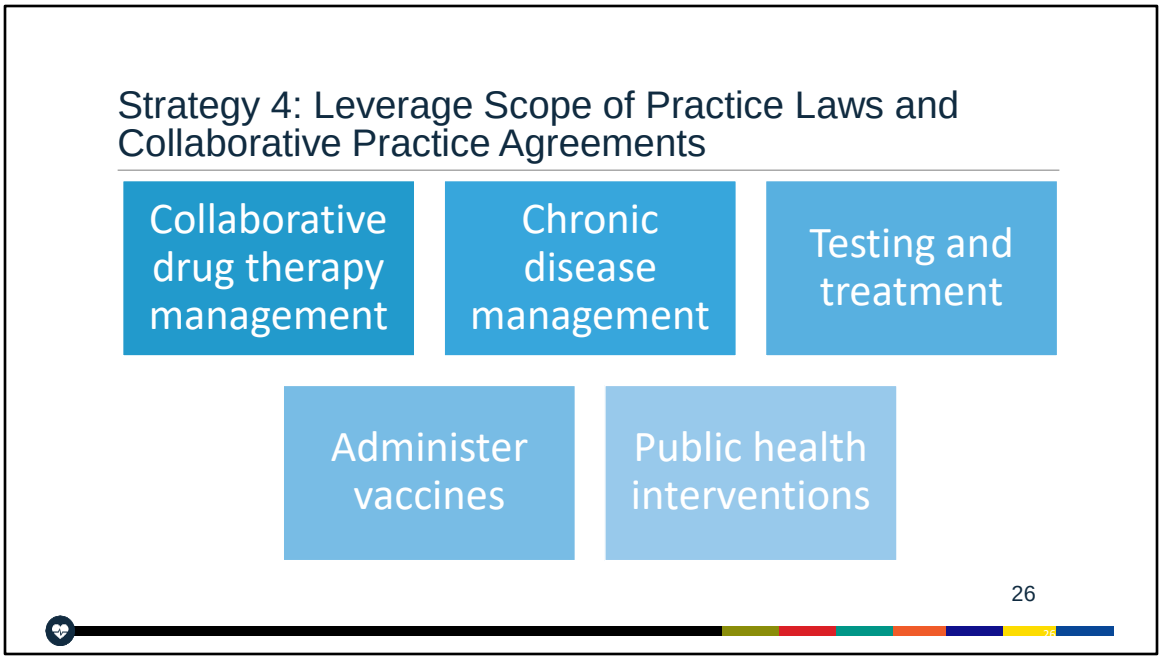
Pharmacists can strengthen their understanding of patients' needs through a variety of mechanisms such as being active and engaged members of the community and fostering relationships with community-based organizations. Working with community leaders and partners to help tailor initiatives that best fit the patient population's needs to address the varying factors contributing to health disparities within a community has proven to be a vital component for successful pharmacy initiatives.

In addition to partnering with local organizations and community leaders and partners, pharmacists can serve as members of county health advisory boards to enhance their understanding of their community needs. These actions provide pharmacists with a more holistic understanding of community-level disparities and position them well to coordinate with health departments to develop and implement programs that address health disparities and advance health equity.

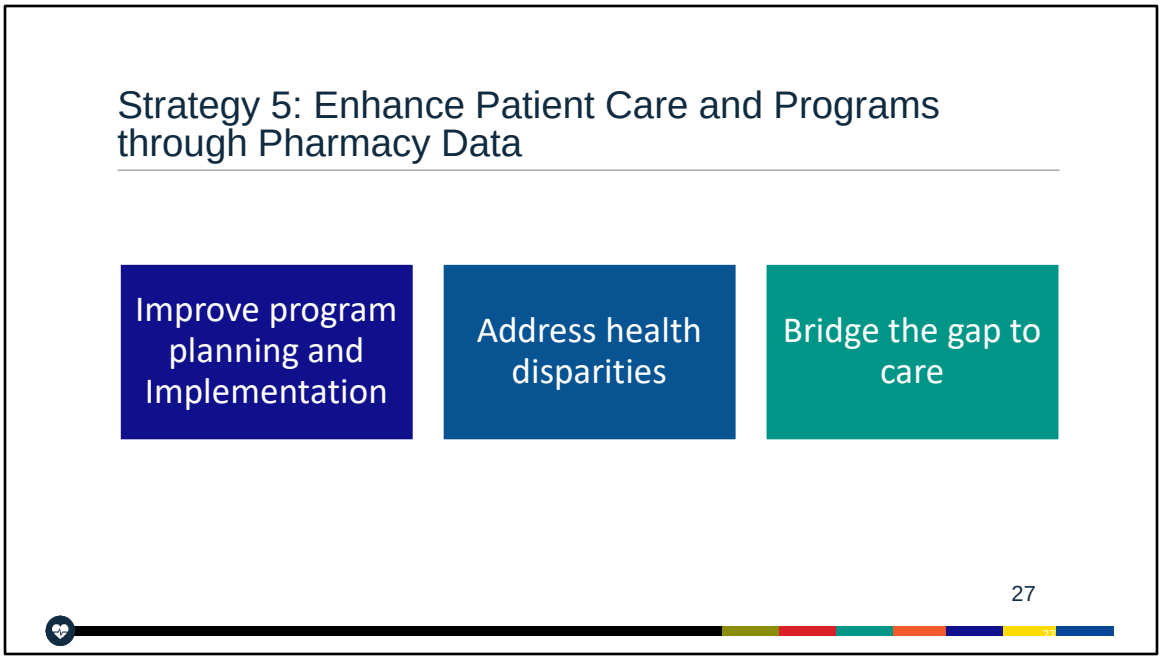


The third strategy pharmacists can use to advance health equity is to address medical mistrust and provide culturally competent care. Medical mistrust from ethnic and minority groups, particularly African American/Black, Hispanic, and Native American persons can hinder a trusting relationship between pharmacists and their patients.

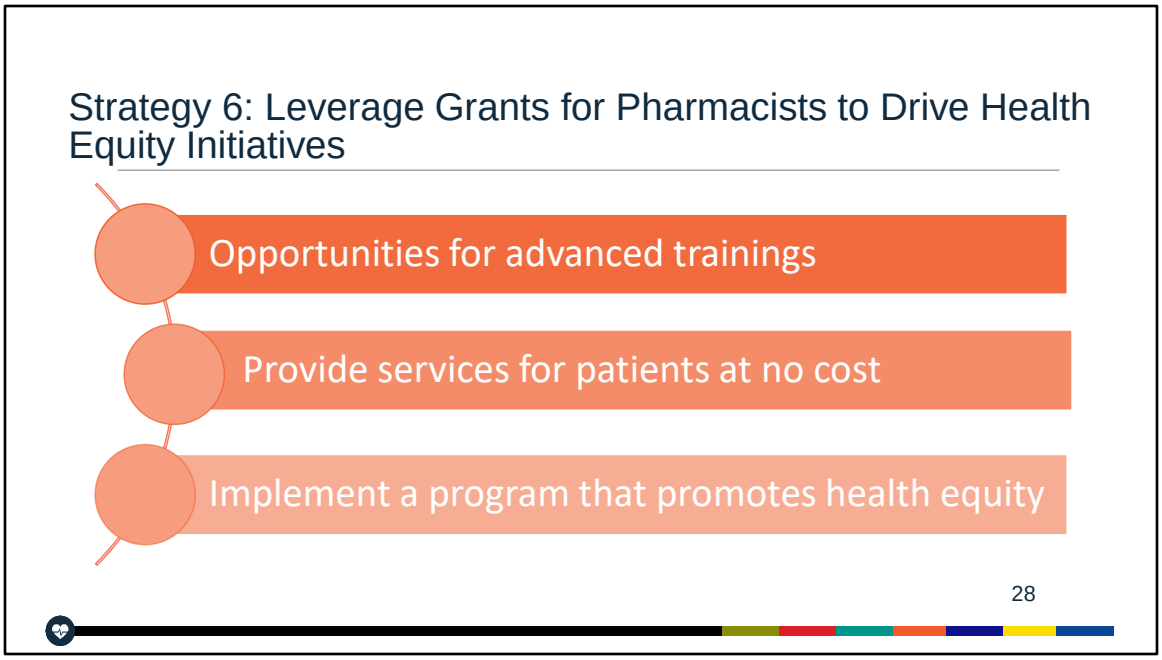
Pharmacists' efforts to reduce medical mistrust and provide culturally competent care can include:
1. Integrating translators into pharmacy initiatives
2. Collaborating with trusted local community organizations and leaders (e.g., community centers, barbershops, and faith-based organizations) to implement programs and initiatives to provide education and patient care services; and
3. Partnering with Community Health Workers (CHWs)) to help strengthen community outreach and engagement



Pharmacists can leverage states' scope of practice laws and collaborative practice agreements that expand the scope of services that pharmacists can provide to address patients' needs. These agreements enable pharmacists to provide collaborative drug therapy management, chronic disease management, test and treat for certain illnesses, administer vaccines, and assist in other public health interventions. Ultimately, state scope of practice laws and agreements can help improve medication adherence, increase access to care, and enhance overall health outcomes.



Pharmacy data, such as prescription fill and pick-up information, can help improve patient care, program planning and implementation, and address health disparities. Physicians and other clinicians may not always have direct access to patient medication data and this lack of visibility can lead to fragmented care, medication errors, and missed opportunities to address health disparities. For this reason, pharmacists play a crucial role in accessing patient medication information to help bridge the gaps to patient care and identify patients that may benefit from a tailored intervention or program that addresses health disparities.



Grants provide pharmacists with the resources and flexibility needed to address the complex factors contributing to health disparities and improve patient outcomes. Pharmacists can leverage grants to support opportunities for advanced trainings to conduct health-related social needs screenings and supplement programs that provide free services for patients. Leveraging grants can also provide an opportunity to implement a program related to providing services that help address health disparities and promote health equity. This program can potentially be used to obtain more sustainable funding in the future.

Strategy 7 states that pharmacists can seek education and training to help identify health disparities to better serve diverse populations and address gaps in care. Pursuing education and trainings in this area can help empower pharmacists to:

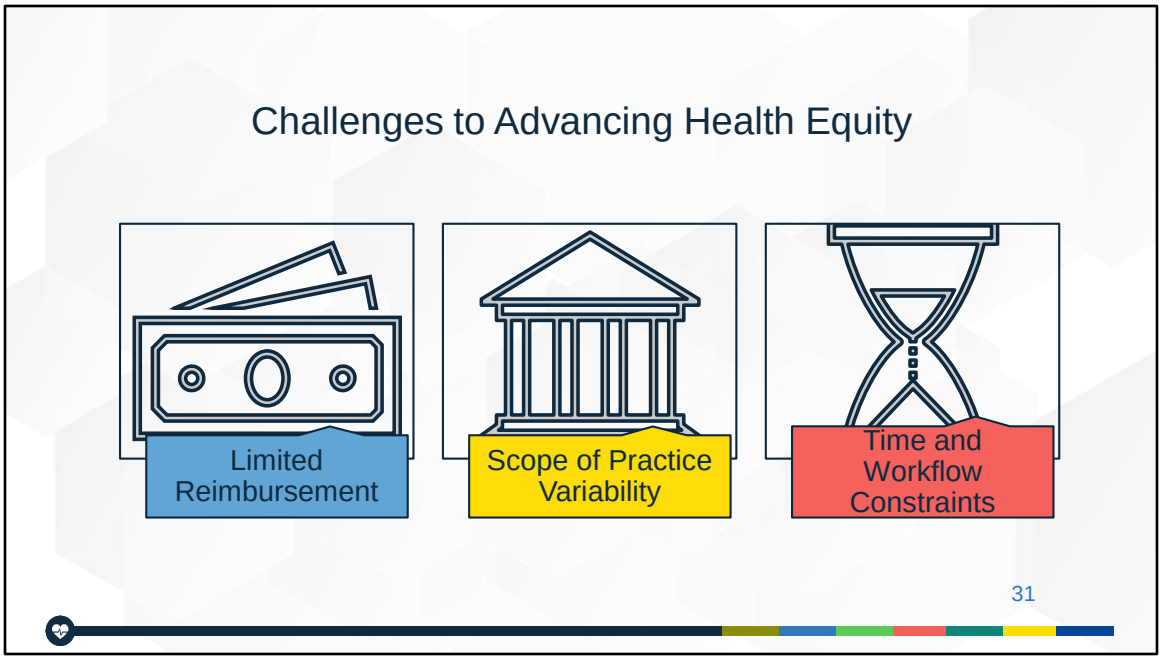
1. Gain awareness of health-related social needs
2. Training programs in cultural competency and health literacy can enable pharmacists to interact more effectively with diverse patient populations
3. Targeted outcome trainings can help pharmacists identify disparities in medication access and adherence
4. Collaborative practice toolkits and public health courses can provide pharmacists with the education to collaborate with other health care professionals to design and implement public health strategies into practice
5. And lastly, pharmacists can seek education on health equity policies so they can help contribute to pharmacy policy development that promotes equitable access to care

Resources such as the Health Equity Indicators for Cardiovascular Disease Toolkit may help pharmacists better understand health disparities, design initiatives to address health disparities, and measure efforts to reduce disparities in chronic disease prevention, care, and management among the population they serve.

Health Equity Indicators Toolkit | CDC

Pharmacists can also reference CDC's Health Equity Guiding Principles for Inclusive Communication to ensure that their communication products and strategies adapt to the specific cultural, linguistic, environmental, and historical situation of each population they serve. The CDC's Health Equity Guiding Principles for Inclusive Communication is a resource that emphasizes the importance of addressing all people inclusively and respectfully. By implementing these principles, pharmacists can communicate effectively with their patients and contribute to advancing health equity.

Health Equity Guiding Principles for Inclusive Communication | Gateway to Health Communication | CDC



As we mentioned earlier, these findings suggest that pharmacists are well-positioned to address health disparities which may advance health equity for persons with chronic disease. However, the findings from this project also note that pharmacists face several challenges in their efforts to advance health equity. These challenges can stem from receiving limited reimbursement for providing clinical services such as medication therapy management to patients that could benefit the most.

The scope of practice for pharmacists varies widely across states, legally limiting their ability to provide some patient care services that could potentially increase access to health care and help drive health equity initiatives.

Lastly, high prescription volumes, staffing shortages, other priorities, and the need for extensive documentation make it difficult for pharmacists to dedicate the necessary time to screen for and address health-related social needs and engage in other health equity-focused initiatives.

Overcoming these challenges may require better reimbursement models, expanding scope of practice laws, and increased integration into the health care team.

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- Liz Olsen

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Before we conclude, we would like to recognize and acknowledge the entire project team for their contributions and commitment to this work.

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Thank you, Ikenna and Katrice!