Scaling and Spreading an Intervention for Hypertension Control:
An Approach to Address Disparities

AREB Coffee Break 2021

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MODERATOR:

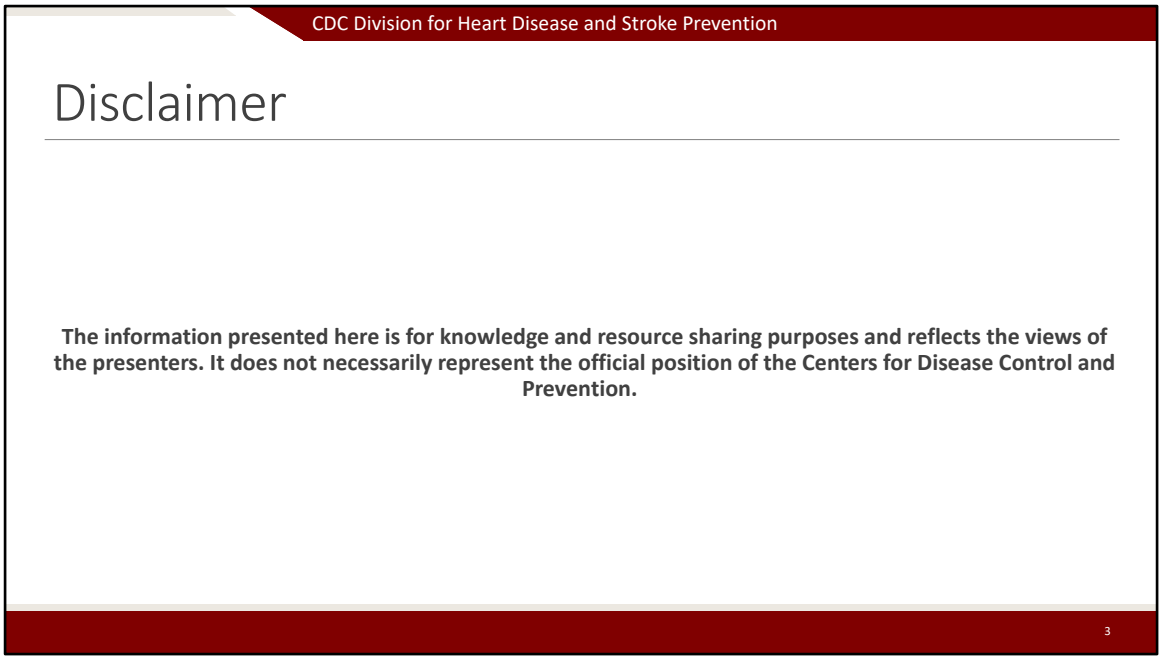
Welcome to today's Coffee Break presented by the Evaluation and Program Effectiveness Team in the Division for Heart Disease and Stroke Prevention at the Centers for Disease Control and Prevention. We are fortunate to have Aisha Tucker-Brown and Kincaid Lowe Beasley as today's presenters. Aisha is a Senior Evaluator and Kincaid is an Evaluator on the Evaluation and Program Effectiveness Team in the Division for Heart Disease and Stroke Prevention. My name is Allison White, and I will be acting as today's moderator. I am an ORISE Policy Research and Health Communications Fellow on the Applied Research and Translation Team in the Division for Heart Disease and Stroke Prevention.

Before we begin…

- All phones have been placed in SILENT mode.
- Any issues or questions?
  - Use Q & A box on your screen
  - Email AREBheartinfo@cdc.gov

MODERATOR

Before we begin, there are some housekeeping items. All participants have been muted; however, to improve audio quality, please mute your phones and microphones throughout the webinar until prompted. If you are having issues with audio or seeing the presentation, please message us using the chat box or send us an email at AREBheartinfo@cdc.gov. If you have questions during the presentation, please enter it in the Q/A box located at the bottom of your screen. Please hold your questions until we reach the end of the presentation until prompted. 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.



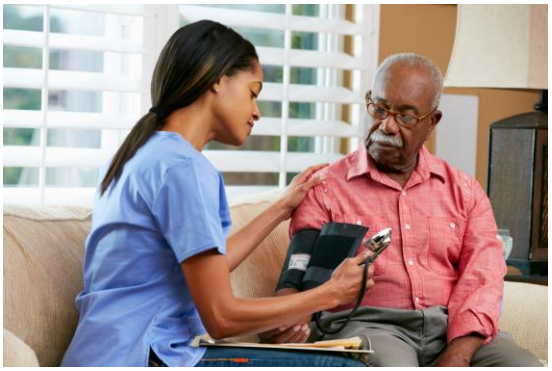
MODERATOR:

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. Kincaid, the floor is yours.

Thanks, Allison. Today, we will share findings from an implementation and evaluation of a Hypertension Management Program. We'll start by providing a project background, an introduction to our health system partner, a summary of the evaluation, impact, and lessons learned; and a demonstration of the Hypertension Management Program Toolkit.

CDC Division for Heart Disease and Stroke Prevention

Background

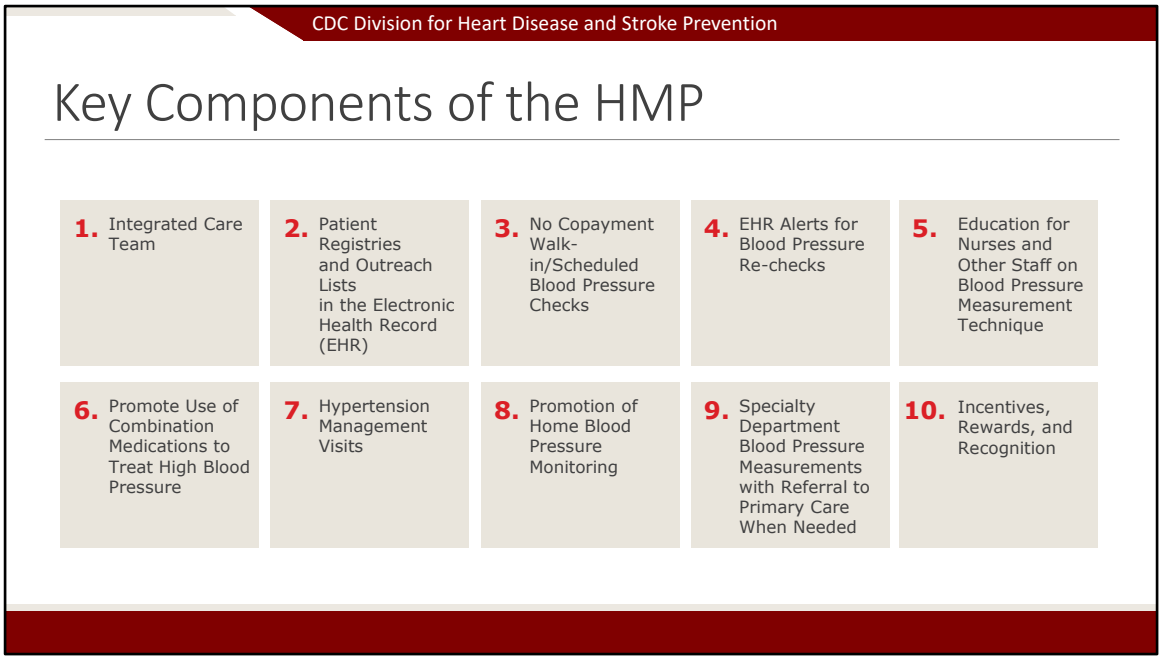


- **Goal**: Improve the quality and management of patient care and decrease the number of patients with uncontrolled hypertension.
- In 2009, the DHDSP rigorously evaluated Kaiser Permanente Colorado's (KPCO) Hypertension Management Program (HMP) and found that it had achieved improved control rates among their patients from **61% to 83%** over a four-year period.

Hypertension affects nearly one in two American adults and is a risk factor for cardiovascular disease and stroke. Hypertension disproportionately affects people with low-income and people without health insurance; people who are Black/African American; and people living in the southeastern region of the US. We know that there is a need for more evidence about interventions that are effective at improving blood pressure control in high-burden healthcare settings and among populations bearing disproportionate impact of hypertension.

In 2009, the Division for Heart Disease and Stroke Prevention evaluated a Hypertension Management Program that was implemented at Kaiser Permanente in Colorado. The program improved blood pressure control among patients from 61% to 83% over four years. Given the disparities in the impact of hypertension, we sought to replicate the HMP in high burden healthcare environments and demonstrate HMP's effectiveness.

Link to share in chat: DHDSP Field Notes for KPCO Hypertension Management Program



- The Hypertension Management Program has 10 key program components that together, contribute to improving blood pressure control at the health system level.

- Overall, these program components leverage team-based care, electronic health records, and pharmacists to addresses common barriers to managing hypertension, particularly among patients that experience barriers to care and a disproportionate burden of hypertension and cardiovascular disease outcomes.

- Specifically, program components included the use of an integrated care team; developing patient registries and outreach lists through the electronic health record, offering no copayment walk-in or scheduled blood pressure checks; establishing blood pressure alerts in the EHR to prompt re-checks when needed; providing education for medical staff on proper blood pressure measurement techniques; promoting the use of combination medications to treat high blood pressure; engaging clinical pharmacists to conduct hypertension management visits among patients with greatest need; establishing processes for specialty departments to conduct blood pressure measurements, referring to primary care when needed; and offering incentives, rewards, and recognition for accomplishing

quality improvement milestones.

- In an effort to translate knowledge into action, we sought to replicate Hypertension Management Program in a high-burden healthcare environment to determine whether the program could be implemented with fidelity in a different setting and contribute to improvements in blood pressure control.

CASE STUDY

Family Health Centers

South Carolina

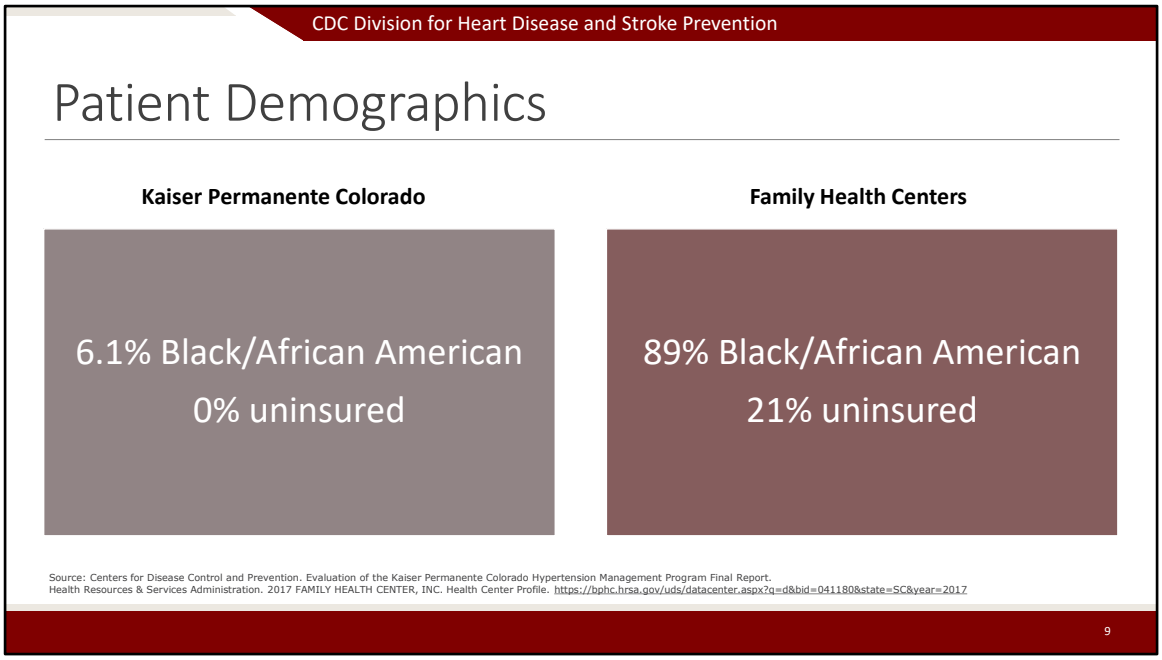
7

To accomplish this goal, we solicited nominations for and identified health systems sites that demonstrated they were ready to implement the Hypertension Management Program. Today we'll focus on one of the sites, Family Health Centers located in rural South Carolina.

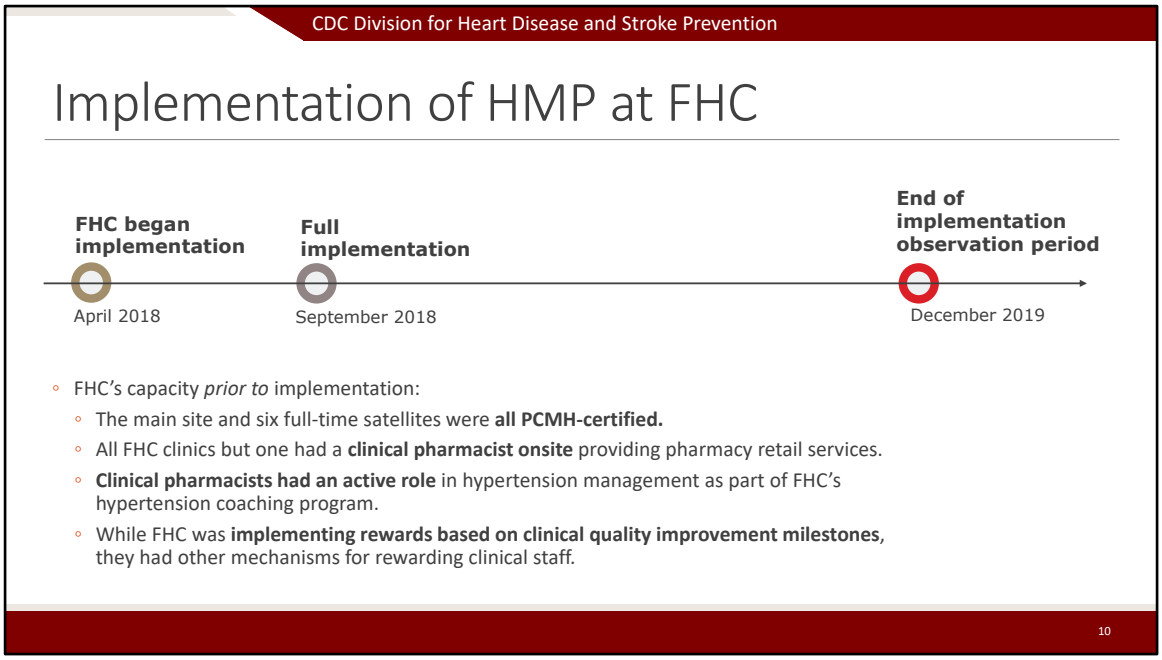
Key Features

- Federally Qualified Health Center (FQHC), accredited patient centered medical home (PCMH), participant in the Deep South Regional Accountable Care Organization (ACO).
- Sole provider of comprehensive primary health care in the 2,423 square mile service area.
- Its main site is in Orangeburg, South Carolina and has six full-time satellite sites.

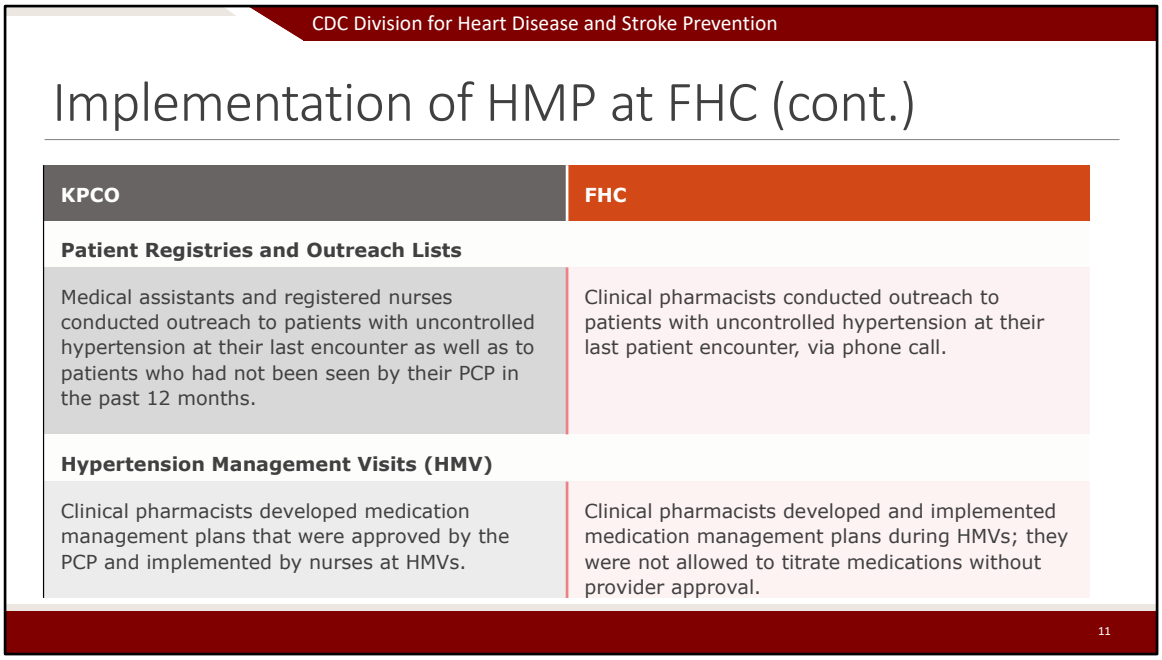
Family Health Centers (FHC), headquartered in Orangeburg, SC, consists of one main site and six full-time satellite sites. FHC is the sole provider of comprehensive primary and preventive health care services in the service area. FHC was selected for several reasons, including its use of integrated care, their existing hypertension activities, the presence of required infrastructure, and their leadership and staff buy-in.



In 2010, the original health system context served patients with a diagnosis of hypertension, of which 6.1% were Black or African American and all patients were insured. In 2017, Family Health Center's main site served 3,539 patients diagnosed with hypertension and each satellite clinic served 500-800 patients with hypertension. 89% of these patients were Black or African American and 21% were uninsured.



FHC began implementing some components of the Hypertension Management Program in April 2018 and by September 2018, they had fully implemented all key components. At baseline, FHC already had some HMP components partially or fully in place. For example, they had partially implemented having an integrated care team; promotion of home blood pressure monitoring; and incentives, rewards, and recognition. All FHC clinics except for one had a clinical pharmacist onsite providing pharmacy retail services; HMP was an expansion of their role, but within their expertise. At baseline, FHC had already fully implemented engaging their specialty departments in providing blood pressure measurements, with referral to primary care when needed.

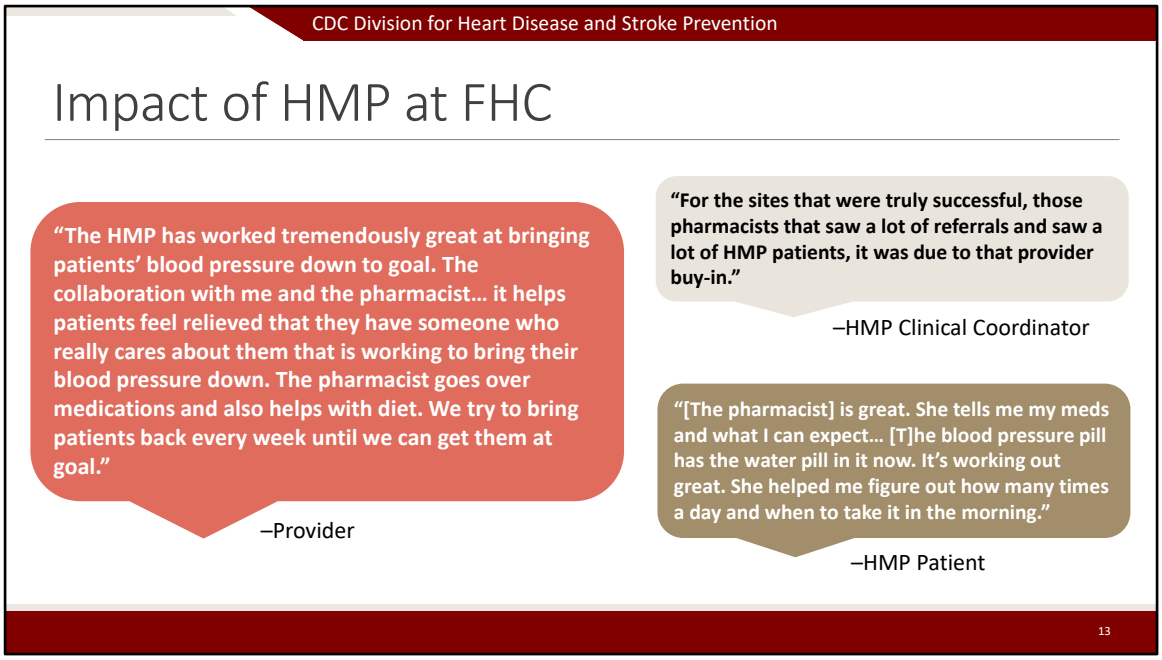


While FHC already had some components of HMP fully or partially in place prior to implementation, adaptations were necessary to ensure HMP was suitable for their population and organizational context. These adaptations allowed FHC to leverage their existing capacities and tailor HMP to fit their setting and patients' needs. These are two of the key components that FHC adapted to fit their setting. To implement patient registries and outreach lists, FHC engaged their clinical pharmacists to reach out to patients with hypertension that might need a check up. Additionally, these pharmacists led hypertension management visits and implemented medication management plans.

Mixed Methods Evaluation Methods

- **Qualitative:** Thematic analysis of semi-structured interviews conducted with:
  - Staff (two rounds)
  - Patients (one round)
- **Quantitative:** Descriptive and inferential statistics using EHR data

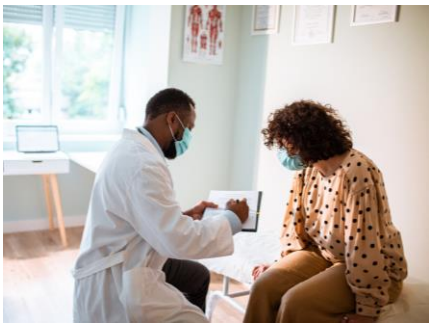
Using a mixed methods evaluation design, we used qualitative thematic analysis of semi structured interviews conducted with staff and patients. We also conducted descriptive and inferential statistics using secondary EHR data extracted from FHCs data systems.



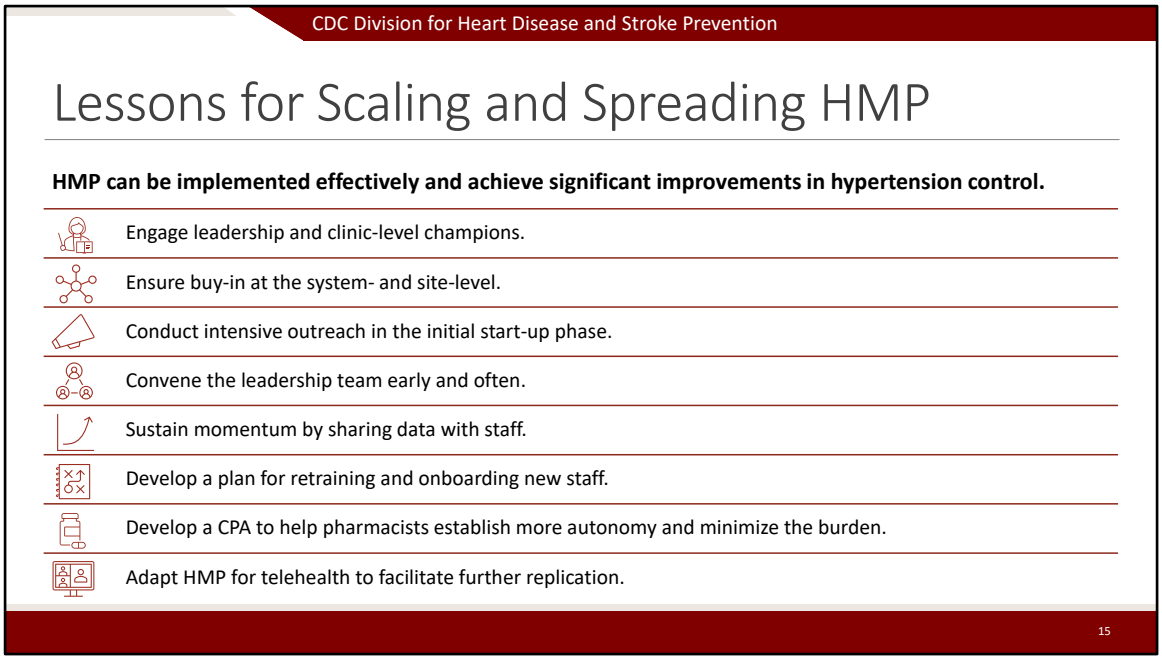
Our qualitative interviews with staff described a high level of satisfaction with HMP. The implementation went smoothly, despite some key staff turnover and the initial investment of time for program start up, especially for pharmacists conducting outreach. For example, a provider noted that the program helps patients, "feel relieved that they have some who really cares about them that is working to bring their blood pressure down." A patient noted that the pharmacist helped them figure out how to better take their blood pressure medication. In both early and final implementation interviews, FHC staff held positive views on how HMP had been implemented. There was improved collaboration and communication among staff, leading to improved care for patients.

Impact of HMP at FHC

- On average across all clinics and all months, **hypertension control rates increased by 3%** (p<.001) after HMP implementation, compared to before HMP implementation.
- There were statistically significant increases in hypertension control rates in **6 of the 7** clinics.
- The odds of controlled hypertension were **1.21 (95% C.I.: 1.15 to 1.28, p<.0001) times higher** after HMP implementation, compared to before HMP implementation.



Through our implementation and evaluation processes, we observed meaningful programmatic impact on blood pressure control. We observed 3,941 patients with a diagnosis of hypertension who met the eligibility criteria for inclusion in the analysis. The patient sample had a mean age of 60.8 years. Additionally, 64.7% of patients were female, 89.4% were Black/African American, and 41.8% of these patients with hypertension had a concurrent diagnosis of diabetes. On average across all clinics, **hypertension control rates increased by 3%** (p<.001) after HMP implementation, compared to before HMP implementation. There were statistically significant increases in hypertension control rates in **6 of the 7** clinics. Using a multi-level multivariable logistic regression model, we found that the odds of controlled hypertension were 1.21 times higher during the intervention period than during the pre-intervention period (p<0.0001). With these outcomes in mind, I will turn the discussion over to Dr. Aisha Tucker-Brown to discuss lessons learned as well as how you may be able to adapt and implement this approach in your health system settings.

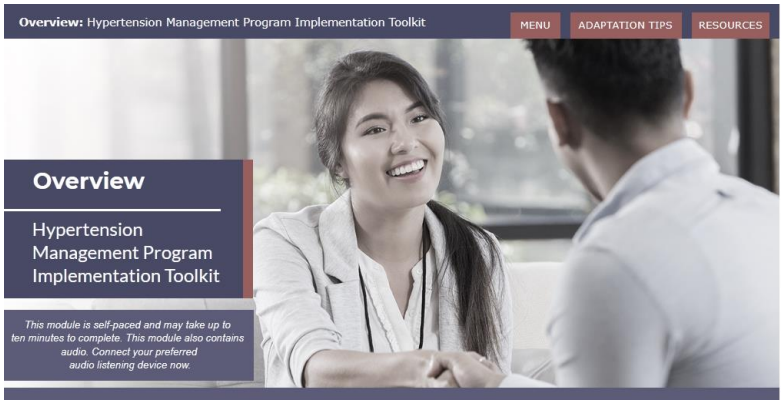


The biggest lesson learned, HMP can be implemented effectively in FQHC settings and achieve significant improvements in hypertension control rates. Other lessons include:

- Engaging leadership and clinic-level champions across pharmacy, provider, and nursing departments is important, especially at the outset.
- Ensuring buy-in at the system- and site-level for HMP roles and responsibilities is essential.
- Intensive outreach in the initial start-up phase is crucial while new roles and referral pathways become established.
- Convening the leadership team overseeing HMP implementation (i.e., Hypertension Management Council) early and often is a prerequisite.
- Feeding data back to staff on HMP program metrics may help sustain momentum at sites.
- Developing a plan for retraining and onboarding new staff can help sustain staff engagement and mitigate the impact of staff turnover.
- Developing a CPA (collaborative practice agreement) can help pharmacists establish more autonomy and minimize the burden of new workflows associated with HMP.
- Adapting HMP for telehealth could facilitate further replication given that

health systems have limited capacity for in-person visits amid the COVID-19 pandemic.

Dissemination: Web-Based Toolkit Demonstration



https://www.cdc.gov/dhdsp/pubs/toolkits/hmp-toolkit/index.htm

Copy and paste the following link and refer the talking points below to guide your understanding of the toolkit.

http://www.cdc.gov/dhdsp/pubs/toolkits/hmp-toolkit/index.htm

After promising results, DHDSP developed an online interactive training toolkit to provide healthcare organizations with the information needed to implement the HMP and improve hypertension control among their patients.

- Let's take a minute to briefly explore the toolkit.
- As an example, we'll browse through Component 7
- Audio from the Module
    - Overview
    - Module
    - Adaptations
    - Assessment

- All of the online toolkit components consist of interactive e-learning modules that are designed to guide learners through the key features of the ten HMP core

program components and prepare you for implementation at your health system.

- We have included a PDF version of the toolkit as an offline resource to support implementation.

- For more information regarding the implementation and evaluation that led to it development feel free to explore the executive summary. Link to share in chat: https://www.cdc.gov/dhdsp/pubs/toolkits/hmp-toolkit/overview.htm

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Learn More & Spread the Word

Read the evaluation executive summary.

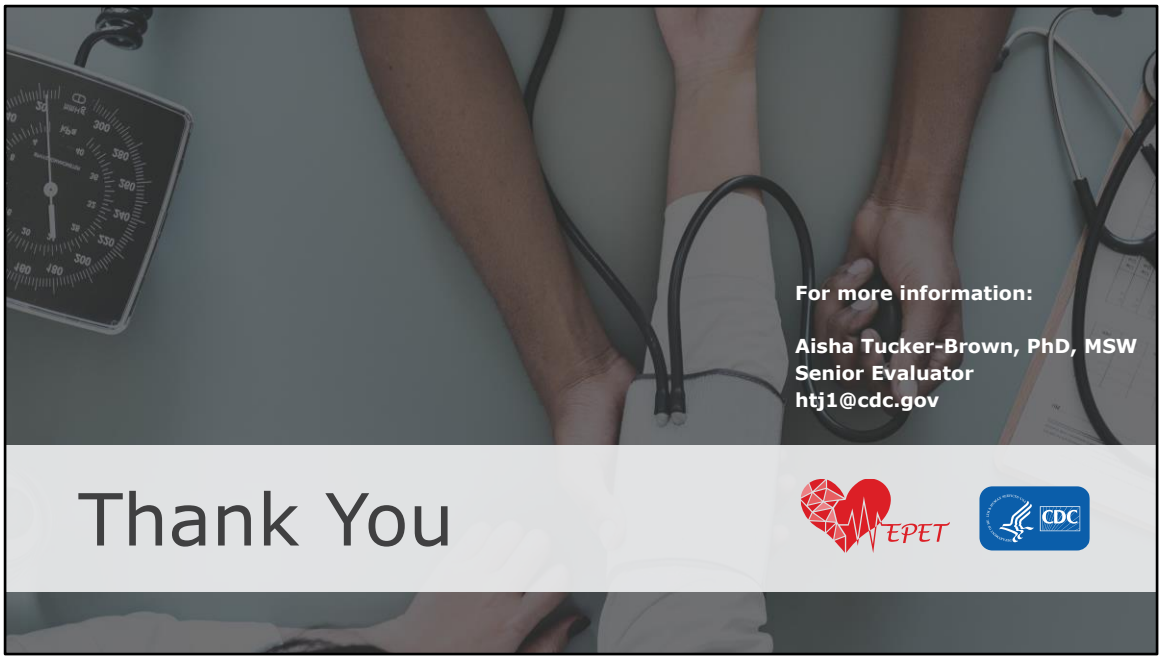
Visit the toolkit and share with your colleagues and networks.

Learn more at cdc.gov/dhdsp/pubs/toolkits/hmp-toolkit/.

We encourage everyone to explore the toolkit and share it with your colleagues and networks through your e-newsletters, listservs, social media, etc. Links to the Executive Summary and Toolkit are included below:

- Executive Summary: Scaling and Spreading an Intervention for Hypertension Control: An Approach to Address Disparities (cdc.gov)
- Toolkit: Overview | cdc.gov

As a reminder, to learn more about the evaluation approach, methods, and findings, please visit the website to read the executive summary.



MODERATOR

This concludes today's Coffee Break presentation. At this time we will take questions from the audience, please enter your question into the Q/A feature at the bottom of your screen. As we wait for questions from the audience, I'll ask our presenters a question to help start the discussion.

Question: How do I know if the HMP is a good fit for my health system?

Answer: It's important to assess what you do have. If you are already working as a team and are using electronic medical records HMP would be a great fit for you. Training staff to work at the top of their license and using the HMP toolkit to improve the workflow could improve

how you impact hypertension among your patient population.