

MODERATOR:

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.

We are fortunate to have Dr. Nikki Hawkins as today's presenter, she is a Behavioral Scientist on **the Applied Research and Translation Team**.

My name is Lauren Taylor and I am today's moderator. I am an ORISE Fellow on the Applied Research and Translation Team.

Before we begin

All phones have been placed
in SILENT mode.



Issues or questions:

- Q & A box on your screen
- AREBheartinfo@cdc.gov

MODERATOR:

Before we begin we have a few housekeeping items.

All participants have been muted. However, to improve audio quality please mute your phones and microphones.

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 on the chat box on your screen. We will address your questions at the end of the session.

Since this is a training series on applied research and evaluation, we do hope you will complete the poll and provide us with your feedback.

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.

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. **Dr. Hawkins** the floor is yours.

Today's Coffee Break Objectives

- ❑ **Introducing the Best Practices Guide for Cardiovascular Disease (CVD) Prevention Programs.**
- ❑ **Reviewing the background, development, and goals of the guide.**
- ❑ **Highlighting the best practice strategies and resources included in the guide.**

Thank you Lauren, and thank you all on the phone for joining us today for this coffee break that focuses on our best practices guide. The objectives for today's session are to:

1. Introduce the Best Practices Guide for Cardiovascular Disease (or CVD) Prevention Programs, that we have just launched in the Applied Research and Evaluation Branch.
2. To review the background, development, and goals of the guide; and,
3. To highlight the specific best practice strategies and related resources that are included in the guide.

Background



- ❑ **Heart disease is the leading cause of death in men and women in the United States.**
- ❑ **Each year, CVD claims 800,000+ lives and costs \$300 billion**
- ❑ **Treatments for hypertension and hyperlipidemia are effective and inexpensive.**
- ❑ **Most people do not have these risk factors under control.**

As many of you know, heart disease is the leading cause of death in men and women in the United States. It claims over 800,000 lives each year and costs the U.S. economy over \$300 billion annually in lost productivity and medical care costs. High blood pressure and high cholesterol are key risk factors leading to heart disease, and treatments for these conditions are known to be effective and relatively inexpensive. Despite the treatments available, most people do not have these risk factors under control. So, it's clear that more work is needed to help prevent and treat high blood pressure and cholesterol on multiple fronts to make progress against heart disease.



Samuel Siegfried Karl Ritter von Basch invented the first sphygmomanometer in 1881

It's often said that there's a significant lag time—up to 17 years or more--between the discovery of an effective practice and its widespread use in medicine. One of our main goals in the Applied Research and Evaluation Branch is to shorten this lag time. With the Best Practices Guide, we wanted to produce an informational resource to facilitate--and help speed up--the translation of research findings to practice.

The graphic is a light blue rectangle with a white border. On the left, there is a dark blue vertical bar containing two white icons. The top icon is a hospital building with a cross, and the bottom icon is three stylized human figures. To the right of this bar, the text 'Project Goal' is written in a bold, dark blue font. Below this, the project goal is stated in a bold, dark blue font. The text is: 'To produce a resource guide that summarizes scientific evidence behind effective CVD prevention and control strategies that can be implemented in health care systems (domain 3) and in communities, through community-clinical links (domain 4).'

Domain 3:
Effective Strategies in
Health Care System
Interventions

Domain 4:
Effective Strategies in
Community Programs
Linked to Clinical Services

Project Goal

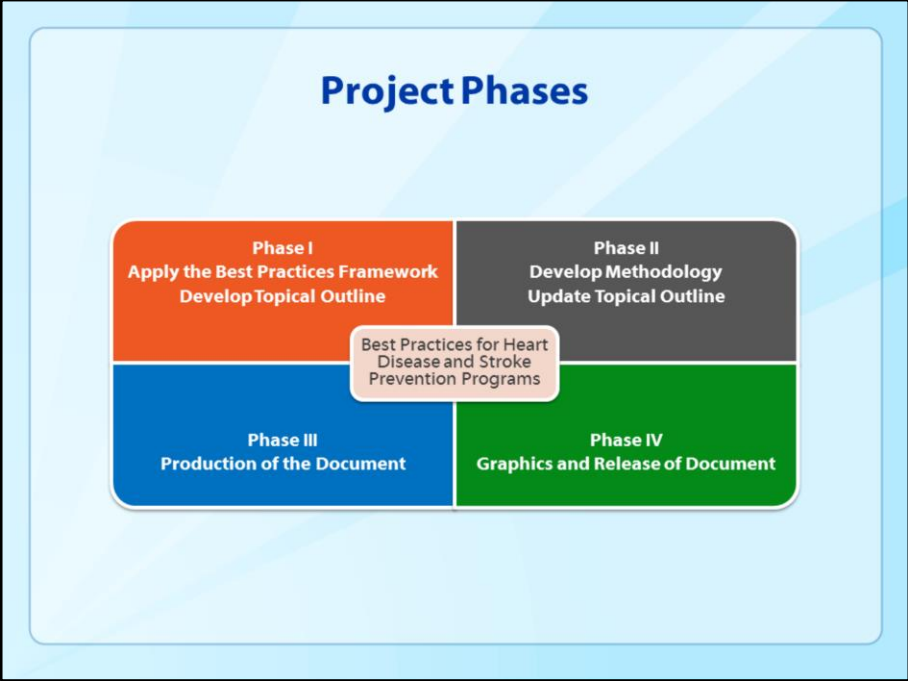
To produce a resource guide that summarizes scientific evidence behind effective CVD prevention and control strategies that can be implemented in health care systems (domain 3) and in communities, through community-clinical links (domain 4).

Our specific project goal was to produce a resource guide that summarizes scientific evidence behind effective CVD prevention and control strategies that can be implemented in health care systems (which is our National Center for Chronic Disease Prevention and Control’s domain 3 focus area) and in communities, through community-clinical links (which is our chronic center’s domain 4 focus).

Target Audience

- ❑ **Public health practitioners in state and local health departments**
- ❑ **Decision-makers**
- ❑ **Stakeholders interested in implementing strategies to improve cardiovascular health.**

The target audience for the best practices guide is public health practitioners in state and local health departments, decision-makers, and any stakeholders interested in implementing strategies to improve cardiovascular health. And, I should point out that the final destination for this document is on the CDC website, which is fully accessible to the public.



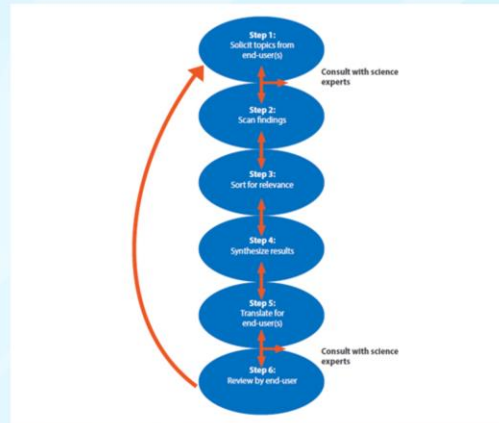
The project was divided into 4 main phases, which you can see here. In the 1st phase, we applied a theoretical framework and developed a topical outline, in phase 2, we developed the methodology that was used to review the topics and get input from reviewers. In Phase 3, we put all the pieces together in the production of the document, and in Phase 4, we focused on the final stages of production, review, and the guide’s launch on the CDC website.

The Best Practices Framework



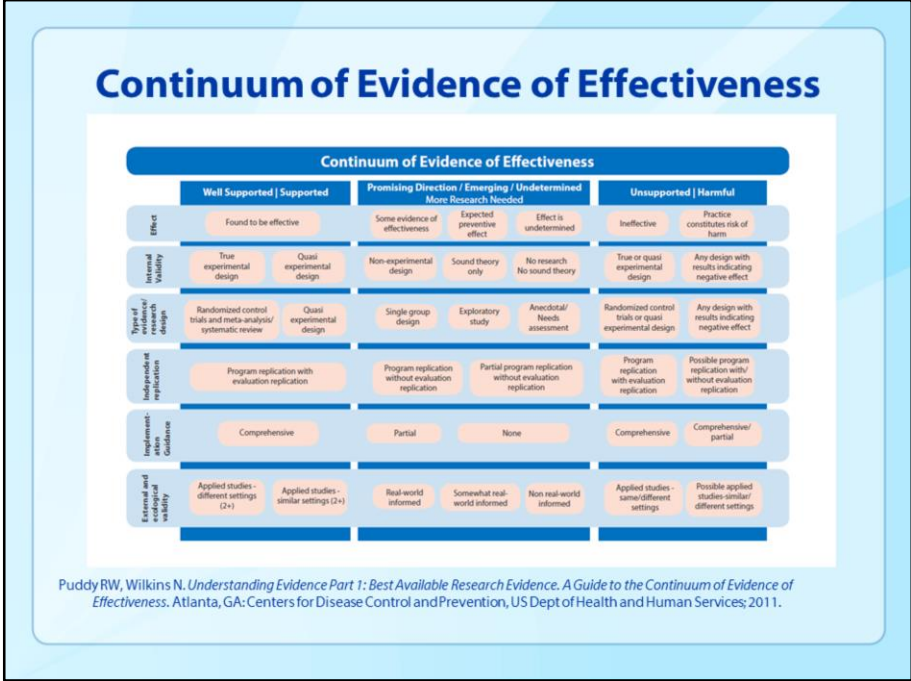
The theoretical framework we used to guide our thinking for this project came from the Best Practices framework, which was developed here at CDC and published in the *Preventing Chronic Disease* journal in 2013. According to this framework, “best” practices are those that have both the highest quality of evidence supporting them, which is on the x-axis here (this could be top notch research or evaluation), and they've shown a high potential for public health impact (which is on the y-axis here and conceptualized in terms of effectiveness, reach, feasibility, sustainability, and transferability).

Rapid Synthesis and Translation Process Framework

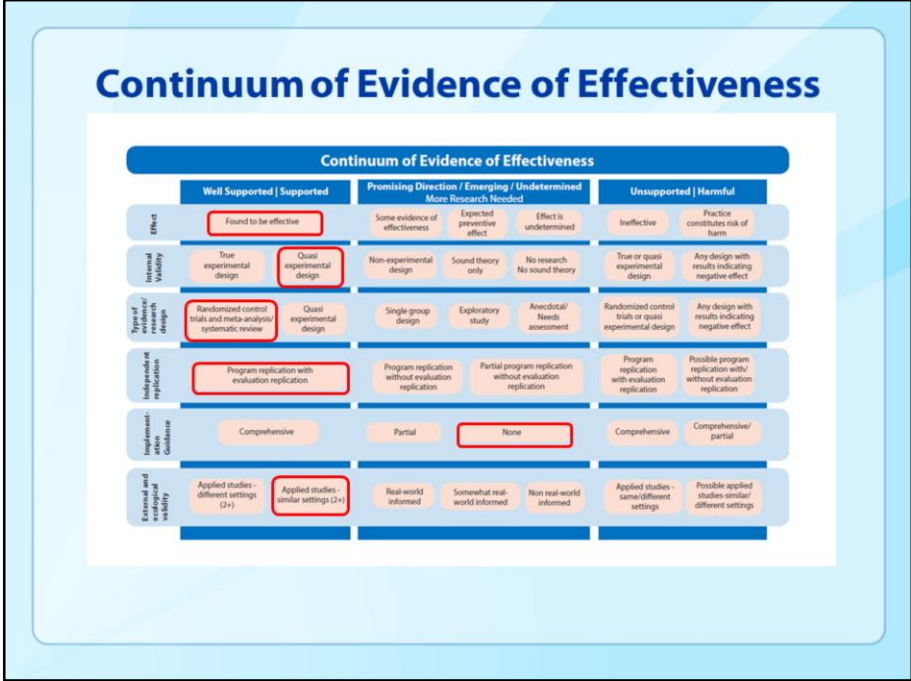


Thigpen S, Puddy RW, Singer HH, Hall DM. Moving knowledge into action: developing the Rapid Synthesis and Translation Process within the Interactive Systems Framework. *Am J Community Psychol.* 2012;50(3-4):285-294.

The RSTP process, which is shown here, guided our development of the BPG. This conceptual process was developed within CDC's National Center for Injury Prevention and Control and it consists of six fundamental steps, which roughly occur in this order. You can see we consulted with subject matter experts and end users at several places in the process, first in step 1 to solicit topics and get input on the content of the guide, and then again in step 6. One of the aspects unique to our particular project was that the best practices guide was identified early on as containing Influential Scientific Information (or ISI, which is a specific designation by our agency). So, when we engaged external reviewers toward the end stages of our project, we followed agency-wide protocols for conducting an ISI review process, which involving soliciting formal reviews and input from external subject matter experts.



In developing the BPG guide, we went through several steps to evaluate and select the strategies for inclusion. To assess the quality of the evidence supporting the strategies, we had a team of reviewers use an interactive tool called the Continuum of Evidence of Effectiveness--which is what you see here. This tool is available online from CDC's injury center. To use this tool, a rater answers questions about the body of research available for a certain strategy, and then they answer questions about the research designs that have been used to study that strategy, including: the validity and reliability of findings, replication of findings, and other considerations that you can see on the tabs for each of the horizontal rows in this figure.



After answering the series of questions, this tool highlights the resulting categories for each row to indicate whether the practice is supported or well-supported, promising/emerging, or unsupported/harmful. For our best practices guide, we included only strategies that were in the supported/well supported category for most of these criteria.

The Best Practices Framework



So, the continuum tool (that we just discussed) nicely assessed the quality of evidence on the x-axis, and it touched on some of the elements of impact, but we wanted to go further in addressing impact, especially the reach, feasibility and sustainability.

The Best Practices Framework



So using the same literature base that we referenced for the strength of evidence, we went through some additional steps to specifically look at the impact of each of the strategies.



We didn't have a nifty online tool for this step but we did have reviewers assess the evidence and make ratings on potential public health impact in these 3 areas: 1. health impact—refers to the strategy's association with improvements in blood pressure or cholesterol levels, 2. health disparity impact--gets at "reach" and is a measure of whether the strategies have been effective with diverse or low-resource populations, and 3. economic impact--gets at feasibility & sustainability and is a measure of whether there's evidence that the strategy demonstrates any return on investment or cost-effectiveness.

Best Practice Strategies

Health Care Systems Interventions (Domain 3)

- Team-based care
- Pharmacy collaborative practice agreements (CPAs)
- Self-measured blood pressure (SMBP) with support
- Self-management support and education
- Reduced out-of-pocket costs for medication
- Clinical decision support systems (CDSS)

Community-Clinical Linkages (Domain 4)

- Community health workers (CHWs)
- Medication therapy management (MTM)

Fast-forwarding to our "results," this is a complete list of the strategies that are included in our final draft of the Best Practices Guide under the two different domains. This list could change and grow if/when we do an updated version of the guide but for now, in "Health Care Systems Interventions" we highlight: Team-based care, pharmacy collaborative practice agreements (or CPAs), self-measured blood pressure with support, self-management support and education, reduced out-of-pocket costs for medication, and clinical decision support systems.

Within "Community-Clinical Linkages" we highlight: Integrating community health workers within the care team and medication therapy management within community pharmacy.

Example Layout: Team Based Care

The screenshot shows a summary page for a health system intervention. At the top, it is titled "Domain 3 Health Care System Interventions" and "Team-Based Care". The main title is "Promoting Team-Based Care to Improve High Blood Pressure Control". Below the title is a paragraph defining team-based care as a strategy implemented at the health system level to enhance patient care by having two or more health care providers working collaboratively with each patient. It mentions that in the context of cardiovascular disease (CVD) prevention, it often involves a multidisciplinary team working in collaboration to educate patients, identify risk factors for disease, prescribe and modify treatments, and maintain an ongoing dialog with patients about their health and care. These teams may include doctors, nurses, pharmacists, community paramedics, primary care providers, community health workers, and others (e.g., dietitians).

The page is divided into three main sections:

- Summary:** Describes team-based care as involving collaboration between doctors, nurses, pharmacists, paramedics, and others, in a cost-effective strategy for increasing medication adherence and lowering blood pressure among diverse populations and in various settings. It includes a "Stories From the Field" section mentioning WeMed Health Services in Cincinnati, Ohio.
- Evidence of Effectiveness:** Includes a legend for evidence ratings (Not supported, Emerging, Unassessable) and a table of evidence ratings for various categories: Effect (Implementation Guidance, Research Design), Internal Validity (Independent Replication), and External & Ecological Validity.
- Evidence of Impact:** Includes a legend for impact ratings (Support, Moderate, Insufficient) and a table of impact ratings for Health Impact, Health Disparity Impact, and Economic Impact.

At the bottom, it is identified as a "Best Practices Guide for Cardiovascular Disease Prevention Programs".

Here, I've provided some screenshots to give an idea of how our summaries look for each strategy. The example I'm showing is the summary for "Team-Based Care." You can see on the first page that we have a brief overview of the strategy and a summary of the evidence. We also give the specific evidence ratings for effectiveness and public health impact.

Example Layout: Team Based Care

Domain 3: Health Care System Innovations
Team-Based Care

Evidence of Effectiveness

The evidence base for implementing team-based care in health care systems and practices is very strong. Solid evidence exists that this strategy achieves desired outcomes, with studies demonstrating internal and external validity. This strategy has also been independently replicated, which shows reliability of impact. Several randomized controlled trials, which are often considered the gold standard in research, have been conducted and demonstrate results from using multidisciplinary teams as a way to improve hypertension control. Various organizations, such as the American Medical Association and the Agency for Healthcare Research and Quality (AHRQ), have developed guidelines to help health care systems and practices implement this strategy as part of their policies and protocols.

Evidence of Impact

Health Impact

A systematic review by the Community Prevention Services Task Force concluded that team-based care can lead to significantly improved hypertension control, lowered systolic and diastolic blood pressure levels, overall medication use, self-management and self-monitoring, and improved patient adherence to hypertension medication.¹

The evidence base for implementing team-based care in health care systems and practices is very strong.

Health Disparity Impact

Team-based care has been found to be effective when used among diverse patient populations, including those with members of different racial and ethnic groups (e.g., whites, African Americans) and among patients with multiple health conditions.

Evidence also exists that this strategy is effective among low-income populations. Additional research is needed to measure effectiveness among populations that are primarily Hispanic and in communities with other minority populations.²

Economic Impact

Team-based care has proven to be cost-effective. The median total cost for providing team-based care for hypertension control was found to be \$155 per person per year. The median cost per quality-adjusted life year (QALY) gained over 20 years was \$69,312.1 (or \$15,131, depending on the QALY correction method used).³ Both estimates were well below the commonly used and conservative cost-effectiveness threshold of \$100,000 per QALY.

Researchers modeled the health and economic impact of nationwide adoption of team-based care for hypertension over 10 years and estimated a net cost savings to Medicare of \$2.8 billion (\$21.25 dollars) over this period. This model also estimates an overall national savings of \$2.3 billion in averted disease costs, which offsets an estimated \$1.2 billion cost of using this intervention to the health care system. Costs for patients over this period are estimated at \$15.8 billion, but are largely offset by an estimated \$11 billion in productivity gains.



Small Practice Guide for Childhood Lead Poisoning Prevention

On the 2nd page, we go into a little more detail about the strength of evidence behind the strategies, and what the evidence says about the strategy's ability to make a public health impact.

Example Layout: Team Based Care



Stories from the Field
Team-Based Care

Team-Based Care at WinMed Health Services

WinMed Health Services, an HMO in Cincinnati, Ohio, is a 2014 Million Hearts® Hypertension Control Champion that successfully incorporated team-based care to help achieve hypertension control among its patients. To ensure a continuum of complete patient care, WinMed's care teams include physicians, pharmacists, and behavioral and dental professionals. WinMed focuses on increasing health care providers' expertise and skills, providing opportunities for patient education, ensuring that patient care is team-based, and using registry-based information systems. The WinMed care teams use electronic health records to increase proper communication between patients and the different providers. By improving community ties and patient education, encouraging greater patient engagement, and adding pharmacists and patient assistants to the health care team, WinMed achieved a 7% increase in hypertension control among its patients from 2013 to 2014.

For more information,
visit www.winmedhs.org/index.htm

The 3rd page is dedicated to Stories from the Field, in which we highlight a specific setting where the strategy has been implemented with success. For each story, we provide follow-up or contact information where readers can go to learn more.

Example Layout: Team Based Care

Diagnosis & Health Care System Interventions
Team-Based Care

Four Considerations for Implementation

- 1 Settings**
Team-based care has been successfully implemented in multiple settings, including Federally Qualified Health Centers (FQHCs), patient-centered medical homes, and managed health care systems, in various locations throughout the United States.
- 2 Policy and Law Related Considerations**
Scope of practice laws and organizational policies that allow nurses, physician assistants, pharmacists, and other health care providers to practice to the full extent of their licensure and training can facilitate team-based care.
- 3 Implementation Guidance**
The American Medical Association and AHRQ have developed modules for implementing team-based care:
 - American Medical Association's 2012 Research: Implementing Team-Based Care¹
 - Agency for Healthcare Research and Quality's Practice Facilitation Handbook²
- 4 Resources**
Many federal initiatives and medical institutions support team-based care approaches. Examples include the following:
 - Centers for Disease Control and Prevention's (11A) Initiative³
 - National High Blood Pressure Educational Program, supported by the National Heart, Lung, and Blood Institute⁴
 - American Heart Association⁵
 - National Academy of Medicine⁶

Best Practice Guide for Cardiovascular Disease Prevention Programs

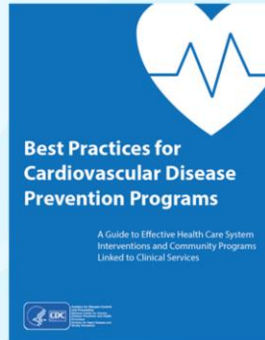
In line with our hopes that the BPG will actually facilitate the implementation of effective strategies, on the last page of each summary, we offer information in four areas that are relevant to implementation. First, we describe settings where the strategy has already been implemented successfully (such as Federally Qualified Health Centers or retail pharmacies). Second, we mention key policy & law-related considerations that could be important to address before implementation (such as scope of practice laws, or policies around reimbursement for various services). Third, we provide links to implementation guidance where you can find publicly-available resources and toolkits to assist with implementing each specific strategy. And, finally, we offer an "other resources" section that provides links to federal and organizational guidelines or statements of support for implementing each of the strategies.

Summary of Effective CVD Prevention Strategies

Strategy	Evidence of Effectiveness Dimensions						Evidence of Impact		
	Effect	Internal Validity	Research Design	Independent Replication	Implementation Guidance	External and Ecological Validity	Health Impact	Health Disparity Impact	Economic Impact
Domain 3: Health Care Systems	Team-Based Care to Improve Hypertension Control	Well supported/Supported	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Supported	Moderate	Insufficient
	Pharmacy Collaborative Practice Agreements to Enable Collaborative Drug Therapy Management	Well supported/Supported	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Supported	Moderate	Insufficient
	Self-Measured Blood Pressure Monitoring With Clinical Support	Well supported/Supported	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Supported	Moderate	Insufficient
	Self-Management Support and Education	Well supported/Supported	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Supported	Moderate	Insufficient
	Reducing Out-of-Pocket Costs for Medications	Well supported/Supported	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Supported	Moderate	Insufficient
	Implementing Clinical Decision Support Systems	Well supported/Supported	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Supported	Moderate	Insufficient
	Using Community Health Workers on Clinical Care Teams and in the Community	Well supported/Supported	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Supported	Moderate	Insufficient
Domain 4: Community Clinical Links	Community Pharmacists and Medication Therapy Management	Well supported/Supported	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Promising/ Emerging	Supported	Moderate	Insufficient

At the end of the best practices guide document, we've included this strategy summary table that provides a way to quickly look and compare the ratings for each strategy. For example, in this table, you can quickly see which strategies have the best implementation guidance available, and which ones are most lacking in evidence on their economic impact.

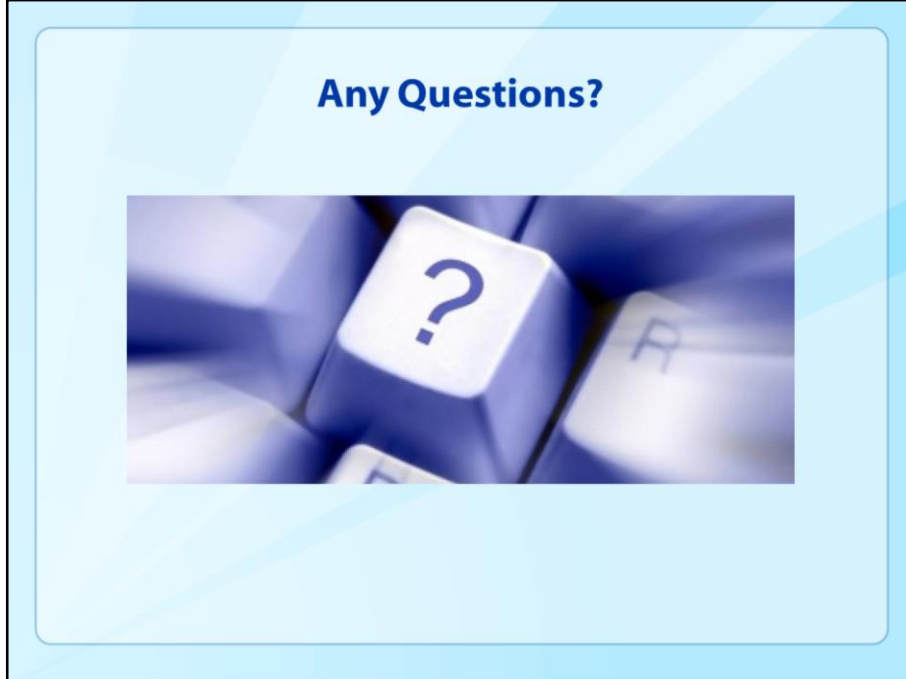
**The Best Practices Guide
for Cardiovascular Disease Prevention Programs**



<https://www.cdc.gov/dhdsp/pubs/guides/best-practices/index.htm>

Nikki Hawkins
nhawkins@cdc.gov

That brings my presentation to a close. You can find the Best Practices Guide for Cardiovascular Disease Prevention Programs on the CDC website at this link, or just go to the DHDSP website and find it under the “Publications and Research—Guides” section. Of course, if you have any questions or suggestions, you can reach out to me at nhawkins@cdc.gov



At this time, we'll take an questions but first we'll check to see if any questions have come in through the Q&A tab.

3 MOCK QUESTIONS:

1. How did you decide which strategies to include in the best practices guide? And, if a strategy isn't included here, what does that mean?

Thanks for that question. As I mentioned before, we went through several steps to select the strategies. Most of them had been reviewed favorably by the community guide or found effective in meta-analyses, so they had strong evidence behind them, but, at the same time, weren't considered standard practice in most settings. So, these are the low-hanging fruit so to speak; the ones that could make a big impact if they were implemented more widely. As far as what it means if a certain strategy isn't highlighted here, it doesn't mean the strategy isn't effective; it may just be that the strategy doesn't have quite enough evidence yet, or that the evidence is limited and it didn't meet our threshold for consideration as a best practice for public health. Things are always changing and new evidence pops up all the time, so we'd expect to see more promising strategies show up on this list in a few years from now.

2. Does the guide contain any information on the costs for implementing any of these

strategies? And if not, where could I find this information?

Unfortunately, we don't have cost information for all of the strategies. This information was usually missing from the literature. It's a topic that really needs more attention in the research and evaluation literature—so keep that in mind if you're involved in implementing any of these strategies. For the strategies that did happen to have good information available on costs, we tried to include it in the guide and you can look at the references for each section to learn more.

3. Should the best practices guide be considered official guidance for CDC funding?

No, thanks for asking about that. The best practices guide is NOT considered official guidance but rather an informational resource that simply reinforces strategies that the division is already prioritizing. There's no immediate effect on current reporting requirements for CDC funding or anything like that. It is just a translational and informational resource.



**Please stay with us for three short evaluation
poll questions**

Please stay with us a few poll questions.

The level of information was

Too basic
About right
Beyond my needs

The level of information fit my needs.

Yes
Somewhat
A little
No not at all

This coffee break was worthwhile for me.

Yes, very worthwhile
Somewhat
A little
No not at all

Reminders!

All sessions are archived and
the slides and script can be accessed at:

<http://www.cdc.gov/dhdsp/pubs/podcasts.htm>

If you have any questions, comments, or topic
ideas send an email to:

AREBheartinfo@cdc.gov

All sessions are archived and the slides and script can be accessed at our Division website. Today's slides will be available in 2-3 weeks.

If you have any ideas for future topics or questions, please contact us at the listed email address on this slide.



Finally, this is our last coffee break for 2017. We will be sending out a summary of all the topics we have covered in 2017 in the coming weeks and we will restart again in 2018. As such, please keep a watch on your emails for the next round of coffee breaks to come.

Thank you for joining us. Have a terrific day everyone. This conclude today's call.