Journey Wisely
A Process for Identifying Emerging Topics and Pursuing Knowledge Translation

AREB COFFEE BREAKS 2020

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Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
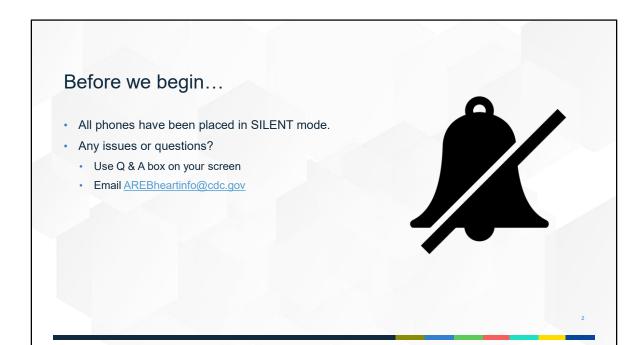Division for Heart Disease and Stroke Prevention

MODERATOR:

Welcome to today's Coffee Break presented by the Applied Research and Evaluation (ARE) Branch in the Division for Heart Disease and Stroke Prevention at the Centers for Disease Control and Prevention.

We are fortunate to have **Erika Fulmer** and **Rebecca Glover-Kudon** as today's presenters. Erika is a **policy analyst** with the **Applied Research and Translation Team or (ART Team)** within CDC's Division for Heart Disease and Stroke Prevention. And **Rebecca** is a **health scientist in** CDC's Office on Smoking and Health currently on detail with the ART Team.

My name is **Mallika Mahalingam** and I am today's moderator. I am **also on the ART team** within the Applied Research and Evaluation Branch.

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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 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 hope you will complete the poll at the end of the presentation 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.

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So, without further delay. Let's get started. **Erika,** the floor is yours.

Knowledge Translation: Rethinking Common Challenges

- Definition: The process of putting research into public health practice

- Process can be confusing as well as time and resource intensive

- Can lead to many different potential paths

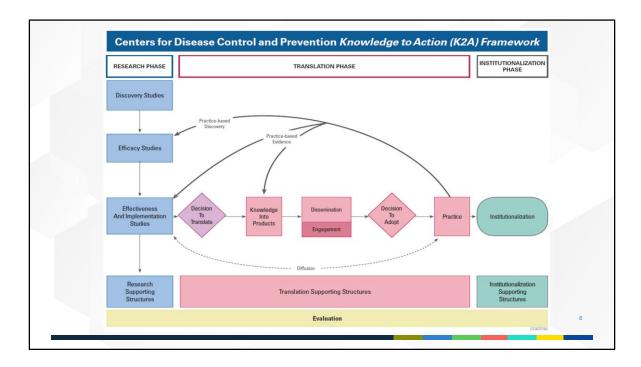- Need to consider standardized approaches to enhance efficiencies

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Thanks Mallika. On the Applied Research and Translation Team, we work collaboratively with partners and colleagues to conduct and translate applied research and evaluation. So knowledge translation is defined as the process and steps needed to ensure effective and widespread use of science-based programs, practices, and policies; it's a term for the entire process of putting research into practice. Our team has a robust portfolio of ongoing work across a number of topic areas and we are often called upon to address new and emerging topics, which can be challenging. The process for considering whether and how to pursue work in new areas is often lengthy and time consuming. To help address these challenges, our team developed a flexible approach to assess emerging public health topics, consider supporting evidence, and decide if and when to develop translation products.

Today's Objectives

- Describe the Knowledge to Action (K2A) Framework
- Discuss challenges of initiating translation work with emerging public health topics
- Learn 5-phase process for thinking through the steps in knowledge translation
- Demonstrate process using *community paramedicine* as an applied example

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As an overview of today's presentation: we'll describe the Knowledge to Action (K2A) Framework that was developed by CDC to move research into practice; we'll discuss our team's challenges of initiating translation work with emerging public health topics; then, we'll share a practical and structured 5-phase method for efficiently thinking through the steps in knowledge translation. We'll demonstrate the steps in the process using *community paramedicine* as an applied example.

Centers for Disease Control and Prevention *Knowledge to Action (K2A) Framework*

The CDC's Workgroup on Translation developed the Knowledge to Action (K2A) Framework. The K2A framework is an organizing framework-it's not a theoretical model, it simply outlines the critical steps in translation. It captures processes at the 20,000' high level and attempts to show **all** the parts of translation, from discovery through institutionalization. The framework provides a common language and conceptualization that is applicable regardless of disease or health condition you're working on and provides space for more detailed approaches and methods that are likely to vary by intervention.

Translating research into practice is a long process—it can take several years and can be confusing and complex. This highlights the need for a convenient and organized way to do the work in a more timely way.

So, we developed a process that we call *Journey Wisely*.

Context

- Balance existing and emergent topics
- Prioritize projects in a context of limited resources
- Build capacity to respond quickly
- Optimize workload

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Like many of you, we balance being responsive to emerging topics while having to juggle an ongoing portfolio of work. We have to make strategic decisions as we navigate limited resources and often need to quickly develop project proposals to act on new opportunities fast. Additionally, we are fortunate to have a multi-disciplinary team with varied staff capabilities, but often need to consider issues of workload in our dynamic workforce context.

To juggle all of this, our team needed a way to quickly assess emerging public health topics and ultimately decide which types of products were most useful for the field.

Overarching Process for Identifying Emerging Topics & Pursuing Knowledge Translation

Evaluation

I. Problem Identification and Environmental Scan

II. Vetting the Issue and Obtaining Explicit Buy-in from Leadership

III. Decision to Translate

IV. Knowledge into Products

V. Dissemination

Stakeholder Engagement

The overarching process starts with problem identification and an environmental scan, including identifying the burden, frequency, severity, and scope. After this, we assess alignment with organizational priorities, internal strengths and challenges as well as external opportunities and threats. During this phase, it's important to engage primary decision-makers to determine if and how a translation effort should (or should not) proceed. Decision-making will be informed by strategic priorities, available resources, as well as contextual facilitators and barriers.

At a minimum during this second phase, you'll want to gather enough information to clarify what others have already done in this area, the identified gaps in understanding and primary facilitators and barriers to work in the area.

The third phase includes the decision to translate. This is the explicit decision to create an actionable product on the basis of existing science- or practice-based knowledge. It could also include deciding to initiate action toward putting an evidence-based program, practice, or policy into widespread use. As you'll see, this phase could take multiple paths depending on what specific needs and gaps are identified during the first two phases. Using information gathered during the environmental scan, the project team should think critically about the scope of both the initial problem as well as the

potential solutions. This critical element of the process is often complicated and may require input from a number of partners and stakeholders. How an issue is framed will play an enormous part in determining next steps and will influence the utility of the final product(s).

Which brings us to the fourth phase, Knowledge into Products. This is the systematic process of turning evidence into something useful for specific audiences--materials could include guidelines, messages, & toolkits that can be used to facilitate implementation.

Dissemination is the purposeful and facilitated process of distributing information and materials to organizations and individuals who can use them to improve health.
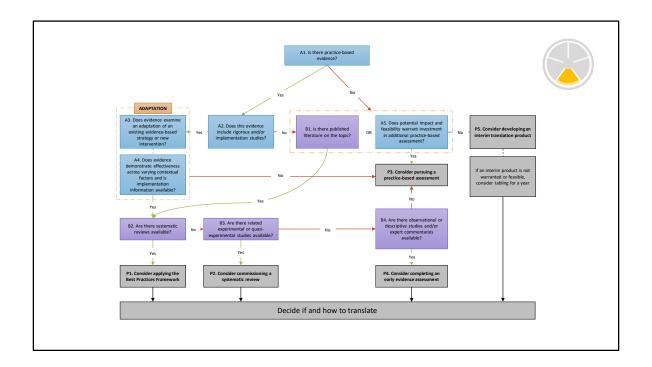
Throughout each of these processes and their associated steps, engaging stakeholders and assessing related outcomes are important. Stakeholder engagement is necessary to mobilize resources and influence systems to change policies, programs, and practices. Additionally, evaluation provides information needed to improve and account for public health actions, consider "best" activities, the subsequent impacts, and ultimately the effectiveness of the work.

Phase 3: Decision to Translate

- Use earlier phases to:
  - Determine what is already known
  - Identify gaps
  - Consider best products for informing public health practice
- Applying decision-tree questions to chart a path forward

In our work, the third phase., "Decision to Translate" can be a tricky business. When we're considering an emerging topic, especially one related to cardiovascular disease prevention policies, we frequently find a good bit of published as well as programmatic evidence and very little information directly related to policy. We often struggle with scoping as we consider differing translation paths. We definitely reach out and engage subject matter experts and partners early on to weigh-in on existing gaps and priorities which helps tremendously. However, our team also found a need to consider a more structured process when deciding how and when to translate. That is when the idea for a "decision tree" was born.

A1. Is there practice-based evidence?

Yes → No →

ADAPTATION

A3. Does evidence examine an adaptation of an existing evidence-based strategy or new intervention?

A2. Does this evidence include rigorous and/or implementation studies?

B1. Is there published literature on the topic?

A5. Does potential impact and feasibility warrant investment in additional practice-based assessment?

P5. Consider developing an interim translation product

Yes ← No ← OR No →

A4. Does evidence demonstrate effectiveness across varying contextual factors and is implementation information available?

No →

P3. Consider pursuing a practice-based assessment

If an interim product is not warranted or feasible, consider tabling for a year

Yes Yes No

B2. Are there systematic reviews available?

No →

B3. Are there related experimental or quasi-experimental studies available?

No →

B4. Are there observational or descriptive studies and/or expert commentaries available?

Yes Yes Yes

P1. Consider applying the Best Practices Framework

P2. Consider commissioning a systematic review

P4. Consider completing an early evidence assessment

Decide if and how to translate

Here is the decision tree that we developed. Although there are a number of elements and several possible end points that resonated with our work, the basic premise is that it is simply a stepped process for considering the information captured in the earlier problem identification and vetting phases. Although our attempt to streamline the steps make it appear as a linear, stepwise progression, the actual decision-making process may skip steps, backtrack, or require additional steps depending on the issue being considered. In practice, application will vary based on the types of knowledge translation activities you engage in and the criteria for determining "yes" or "no" will vary based on the intended purpose and topic area.

I think the best way to demonstrate the process is through an applied example so I will turn it over to **Rebecca.**
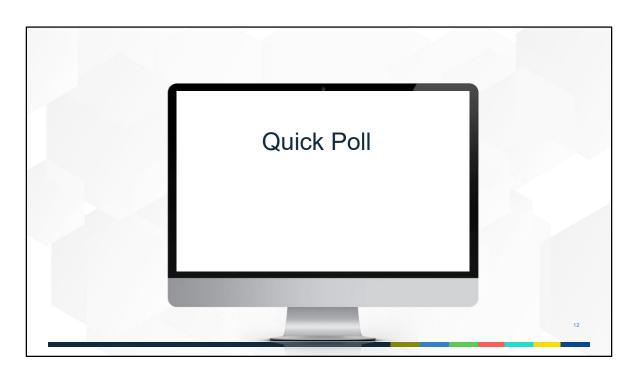
COMMUNITY PARAMEDICINE

Thanks, Erika.

Before I share my experience using the Journey Wisely process, I want to define community paramedicine and briefly describe the policy and programmatic landscape.

Community paramedicine programs use Emergency Medical Service (or EMS) providers in non-traditional ways to expand access and reduce barriers to care.

Working in coordination with other health care entities, community paramedics typically provide non-urgent home visits to deliver primary care services, assist patients with chronic disease management, and make connections with other non-emergency providers.

Community paramedicine programs may also serve higher risk patients, such as those recently released from the hospital, by providing post-discharge care assistance to prevent emergency department visits by ambulance and hospital re-admissions.

Quick Poll

Moderator presents poll question. Make sure to read the following.

The question should be showing, it reads **[is your state working on community paramedicine programs or policies?]**
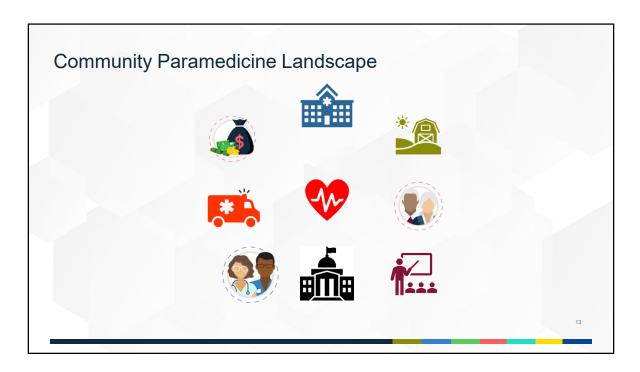
Please respond with the appropriate answer at this time.

Is your state working on community paramedicine programs or policies?
Yes
No
Don't know

In reviewing the published and grey literature, I was better able to scope the topic.

Community Paramedicine is a relatively new field **in the U.S**. that is still working to establish:
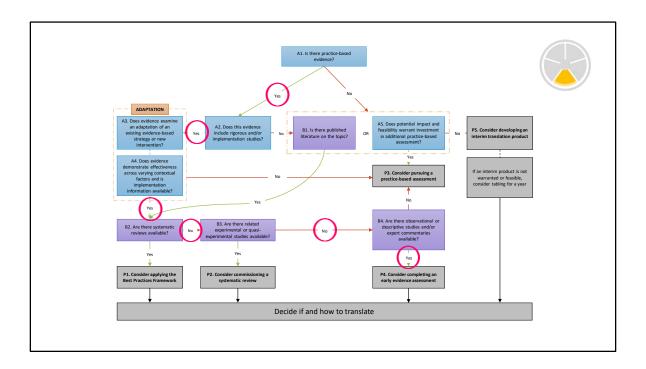
- A solid evidence base using rigorous research designs that demonstrate achieving health outcomes and cost-effectiveness
- Consistent, evidence-based training requirements
- Evidence-based models of care designed to meet community needs
- data/performance standards to allow comparisons across systems and models of care
- integration within clinical care teams involving emergency and primary care
- Stable funding streams from a variety of public and private payers

The **promise of community paramedicine** is that it will increase access to primary care (especially in rural areas), deliver improved health outcomes (such as better control of chronic disease, especially for frequent visitors to the emergency room), and reduce health care costs by averting expensive visits to the ER for low-acuity cases.

Major barriers to implementing and sustaining community paramedicine programs are around policy issues (that may require state legislation): establishing medical oversight & scope of practice, specifying education/training/and credentialing requirements, and providing avenues for reimbursement.

*click icons in turn
Therefore, **key stakeholders*** include: EMS agencies/funders, healthcare systems, payers (Medicare and Medicaid, commercial insurers), schools and training institutions, advocates for special populations (rural areas, elderly adults), policymakers, and other health care providers. Emergency room physicians & primary care providers are integral partners; because of potential overlap, home health agencies, nurse professionals, and Community Health Workers are important strategic partners for care coordination.

In assessing the current evidence around policy and programmatic approaches to Community Paramedicine, it immediately became clear that:

My original topic had to be narrowed. Community paramedicine was too broad, even with a relatively small body of literature. My initial choices for narrowing included examining evidence about health outcomes, different service models, or cost-effectiveness.

Given the importance of return on investment & reimbursement streams to implementation and sustainability of CP programs, I chose to focus on cost-effectiveness/cost savings for purposes of using the Journey Wisely process.

*click to show movement through decision tree

To proceed, I determined that the field of community paramedicine has advanced from theoretical models of cost savings to having accrued some practice-based evidence (found both in published and grey literature). In particular, I found examples of cost savings from state pilot or demonstration programs, typically using cost-avoidance formulas. So, I answered 'yes'***** to first question found in box A1---**is there practice-**

based evidence?

Next, in considering A2—**does this evidence include rigorous and/or implementation studies?** ---I answered 'yes'* here because I identified at least one case-control design in research involving a single urban area; I also located evaluation reports from multi-site pilot interventions that addressed barriers to sustaining community paramedicine programs.

Moving on, here, A4 is the more appropriate question---**Does evidence demonstrate effectiveness across varying contextual factors and is implementation information available?** I answered 'yes'* to this question but with greater uncertainty because program models vary so widely. Ideally, we'd want evidence about whether the same program, implemented in other contexts, produced similar results.
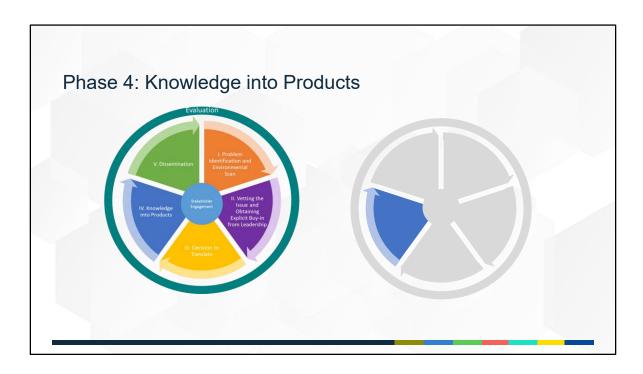
Next, we're at B2---**are systematic reviews available?** After reviewing this literature, my reaction was yes and no.....let me explain. I located a small number of systematic reviews –3 in 2019, only 1 was US based. That systematic review included only 8 studies, which authors found to be of low or moderate quality on rigor; and, these studies didn't include costs per se, but, rather, proxy measures such as reduced visits to the ER. So, I answered 'no'* to this question. As well, I knew 'yes' didn't seem to fit the level of research maturity (& funding levels) required for "best practice status."

The next question, B3, asks **are there <u>related</u> experimental or quasi-experimental studies available?** By and large, the answer is no* here. I did locate one randomized study from the U.K. that examined cost-effectiveness of community paramedicine for fall prevention, but that seemed not specific enough for our purposes; there was another RCT that examined health outcomes of proactive community paramedicine in Canada, but the sample size was small and the study did not examine costs. The quasi-experimental study I located was specific to a telehealth intervention that included direct contact with an ER physician –that program model may not apply across the board to most community paramedicine programs, so it seemed 'no' was the more appropriate answer here.

Whew—there's one more question to go, B4—**are there observational or descriptive studies and/or expert commentaries available?** Based on the grey and published literature, I'd say this categorizes the bulk of the current evidence on cost-effectiveness and cost savings of community paramedicine programs. This 'yes'* was determined a lot more easily.

This pathway pointed us in the direction of completing a more formalized early evidence assessment.

But what form should that take? What would be of most help to stakeholders that's also feasible to do? The next phase, which **Erika** will describe, helps us think that through.

Phase 4: Knowledge into Products
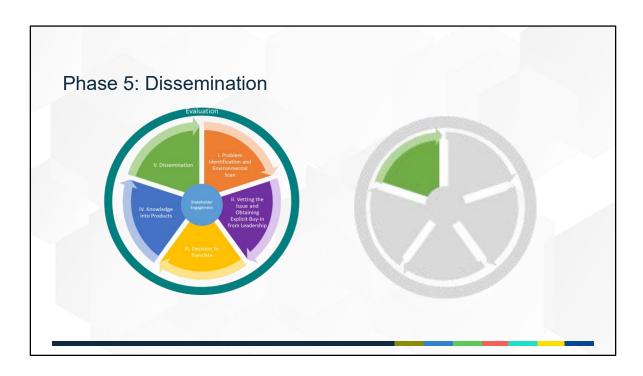
Thanks **Rebecca**.

The fourth phase of Journey Wisely addresses putting knowledge into products. If you have worked through the decision-tree, feel that you have a viable topic, and have gained buy-in to move forward, the next steps, as part of the project scoping process, are to clarify the specific objectives and methods of the project as well as the associated products.

The selected objectives and methods will be informed by existing evidence and identified gaps. In some cases, walking through the decision tree may lead you to conduct an effectiveness review or developing an interim product, like a factsheet. Whatever the course, determining the specific product is important in this phase.

When deliberating about **specific types of products**, it's important to consider audience, use and format. The primary audience includes individuals that the program or intervention is designed to affect. Think about how each priority audience will use the information and determine format based on this intended use. Part of this is understanding the needs and preferences of key stakeholders to ensure that translation materials are effectively disseminated and used by priority audiences.

Key questions include:

Which messages resonate?
Are there unique products that would be useful for specific stakeholders?
How can findings and lessons learned be presented to best inform future problem solving?

The final phase is Dissemination; it's the strategic process of diffusing information and products to organizations and individuals who can use them to help improve health outcomes of the population. As with the previous phases, establishing a strategy alongside stakeholders will help guide effective dissemination efforts. Stakeholder input is critical during dissemination. Early and continual stakeholder input promotes effective uptake of the final product.

And there you have it!---our tactical process for translation-related decision-making. We hope this process offers useful information as you work to scale and spread evidence-based programs.

It's important to emphasize that this process is decidedly broad-brush. It's intended to quickly scope a topic, assess current evidence, and make decisions about the best way forward to advance translation efforts.

What we showed in this presentation is just one path you can take. The steps will vary based on your context, substantive area, and existing translation processes. We encourage you to take this information, keep what is useful and modify it to meet your unique needs.

References

1. Wilson KM, Brady TJ, Lesesne C, on behalf of the NCCDPHP Work Group on Translation. An organizing framework for translation in public health: the Knowledge to Action Framework. Prev Chronic Dis 2011;8(2):A46. http://www.cdc.gov/pcd/issues/2011/mar/10_0012.htm. Accessed November 11, 2019.
2. Morris ZS, Wooding S, Grant J. The answer is 17 years, what is the question: understanding time lags in translational research. *Journal of the Royal Society of Medicine.* 2011;104(12):510-520.
3. McGlynn EA, Asch SM, Adams J, et al. The quality of health care delivered to adults in the United States. *The New England journal of medicine.* 2003;348(26):2635-2645.
4. Tricco AC, Cardoso R, Thomas SM, et al. Barriers and facilitators to uptake of systematic reviews by policy makers and health care managers: a scoping review. *Implementation science : IS.* 2016;11:4.
5. Oxman AD, Lavis JN, Fretheim A. Use of evidence in WHO recommendations. *World hospitals and health services : the official journal of the International Hospital Federation.* 2007;43(2):14-20.

With that, I will turn it over to **Mallika**.

MODERATOR:

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

If we have questions ask the questions posed by the attendees to the presenter

*Staged Questions

Question 1: This process is described for emergent topics. Can this process also work for established topics?

Answer 1: Yes. The Journey Wisely process could help focus your thinking on a narrower topic. The process could help staff who are new to an established topic become more familiar with that topic in a structured way. The process may also help you decide when you're ready for a new type of translation product.

Question 2: How often do you need to refresh/review evidence during your research

and translation process?

Answer 2: Well, it depends. This may depend on how quickly the field is changing around your topic. It may also depend on the study design of the newly published work—is evidence of higher quality? You may also choose to refresh your literature review based on the release of a highly-anticipated study (e.g., when studies about CMS's Emergency Triage, Treat and Transport (ET3) program get released, that will likely make a big splash in community paramedicine.)

Thank you

Erika Fulmer

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Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

MODERATOR

Thank you for participating in today's coffee break. Please contact **Erika Fulmer** if you'd like more information on today's topic. Please stay with us for two short polling questions about today's coffee break.

Please stay with us for two short evaluation poll questions

Moderator present poll question. Make sure to read the following after presenting each.

The **[first, second]** question should be showing, it read **[read question and potential answers]**

Please respond with the appropriate answer at this time.

The level of information was
Too basic
About right
Beyond my needs

The information presented was helpful to me.
Yes
Somewhat
No not at all

Reminders

- All sessions are archived and the slides and script can be accessed at
https://www.cdc.gov/dhdsp/pubs/webcasts.htm
- If you have any questions, comments, or topic ideas send an email to AREBheartinfo@cdc.gov

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MODERATOR:

Thank you for your participation!

As a reminder, all sessions are archived and the slides and script can be accessed at our Division website at the link shown. Today's slides will be available in about 3 weeks.

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

Next Coffee Break

- **When**: Tuesday, March 10th, 2020
- **Topic**: Promoting Sodium Reduction Through Evidence-Informed State and Local Policy Interventions
- **Presenter**: Sharada Shantharam, MPH

MODERATOR:

Our next Coffee Break is scheduled for Tuesday, **March 10th** and will be focused on **Promoting Sodium Reduction Through Evidence-Informed State and Local Policy Interventions.**

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

Journey Wisely: A Process for Identifying Emerging Topics and Pursuing Knowledge Translation

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ADAPTATION

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P5. Consider developing an interim translation product

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If an interim product is not warranted or feasible, consider tabling for a year

B2. Are there systematic reviews available?

B3. Are there related experimental or quasi-experimental studies available?

B4. Are there observational or descriptive studies and/or expert commentaries available?

P1. Consider applying the Best Practices Framework

P2. Consider commissioning a systematic review

P4. Consider completing an early evidence assessment

Decide if and how to translate

CDC's Division for Heart Disease and Stroke Prevention, Applied Research and Evaluation Branch, Coffee Break Series, 2/11/2020

Copy of full decision tree

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